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*"Rummaging in the government's attic"*

Description of document: Department of the Interior Office of the Inspector General (OIG) all records used to compile Audit Report CIN-MOA-0004-2007 titled Abandoned Mine Lands in the Department of the Interior, July 2008

Requested date: 24-December-2013

Released date: 11-March-2014

Posted date: 21-April-2014

Source of document: FOIA Officer  
Office of Inspector General  
U.S. Department of the Interior  
1849 C Street, NW  
MS-4428  
Washington, DC 20240  
Fax: 202-219-1944 (Attn: FOIA Officer)  
Email: [FOIA@doioig.gov](mailto:FOIA@doioig.gov)  
[Online FOIA Request Form](#)

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OFFICE OF  
**INSPECTOR GENERAL**  
U.S. DEPARTMENT OF THE INTERIOR

March 11, 2014

Re: OIG-2014-00016

This is in response to your letter dated December 24, 2013, which was received by the Office of Inspector General (OIG) on December 26, 2013. In your letter, you request the following information under the Freedom of Information Act (FOIA), 5 U.S.C. § 552: all records used to compile U.S. Department of the Interior -- Office of Inspector General Audit Report C-IN-MOA-0004-2007 dated July 2008 and titled "Abandoned Mine Lands in the Department of the Interior".

A search was conducted and enclosed are copies the supporting documents for the above audit. There are 1088 pages responsive to your request. Approximately 70 pages are being withheld in their entirety, 590 pages contain some information that is being withheld, and 428 pages are being released in their entirety

Deletions have been made of information that is exempt from release under the provisions of 5 U.S.C. §§ 552 (b)(5) and (b)(6). These sections exempt from disclosure items that pertain to: (1) inter-agency or intra-agency memoranda or letters which would not be available by law to a party other than an agency in litigation with the agency; and (2) personnel and other similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy. Exemption (b)(5) was used to protect four draft reports and memoranda. Exemptions (b)(6) was used to protect the personal privacy interests of witnesses, interviewees, middle and low ranking federal employees, and other individuals named in the file.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010)). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you disagree with this response, you may appeal the decision by writing to the following no later than 30 workdays after the date of the final response:

Office of the Solicitor  
FOIA Appeals Officer  
U.S. Department of the Interior  
1849 C Street, NW  
MS-6556  
Washington, DC 20240  
[foia.appeals@sol.doi.gov](mailto:foia.appeals@sol.doi.gov)

The FOIA Appeal Officer's facsimile number is 202-208-6677. Your appeal should be filed in accordance with the regulations set out in 43 C.F.R. §§ 2.57-2.64, a copy of which is enclosed.

As part of the 2007 FOIA amendments, the Office of Government Information Services (OGIS) was created to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation. If you are requesting access to your own records (which is considered a Privacy Act request), you should know that OGIS does not have the authority to handle requests made under the Privacy Act of 1974. You may contact OGIS in any of the following ways:

Office of Government Information Services  
National Archives and Records Administration  
8601 Adelphi Road  
College Park, MD 20740-6001  
E-mail: [ogis@nara.gov](mailto:ogis@nara.gov)  
Web: <https://ogis.archives.gov>  
Telephone: 202-741-5770  
Facsimile: 202-741-5769  
Toll-free: 1-877-684-6448

However, should you need to contact me, my telephone number is 202-208-0954, and the email is [foia@dojoig.gov](mailto:foia@dojoig.gov).

Sincerely,



 Kevin S. Krebs  
FOIA Officer

Enclosures (2)

(1) Demonstrate you paid prior fee within 30 calendar days of the date of billing; or

(2) Pay any unpaid amount of the previous fee, plus any applicable interest penalties (see § 2.53 of this subpart), and pay in advance the estimated fee for the new request.

(c) When the bureau notifies you that an advance payment is due, it will give you an opportunity to reduce the fee by modifying the request.

(d) The bureau may require payment before records are sent to you; such a payment is not considered an "advance payment" under § 2.50(a) of this subpart.

(e) If the bureau requires advance payment, it will start further work only after receiving the advance payment. It will also notify you that it will not be able to comply with your FOIA request unless you provide the advance payment. Unless you pay the advance payment within 20 workdays after the date of the bureau's fee letter, the bureau will presume that you are no longer interested and will close the file on the request.

#### **§ 2.51 What if the bureau needs clarification about fee issues?**

(a) If your FOIA request does not contain sufficient information for the bureau to determine your proper fee category or leaves another fee issue unclear, the bureau may ask you to provide additional clarification. If it does so, the bureau will notify you that it will not be able to comply with your FOIA request unless you provide the clarification requested.

(b) If the bureau asks you to provide clarification, the 20-workday statutory time limit for the bureau to respond to the request is temporarily suspended.

(1) If the bureau hears from you within 20 workdays, the 20-workday statutory time limit for processing the request will resume (see § 2.16 of this part).

(2) If you still have not provided sufficient information to resolve the fee issue, the bureau may ask you again to provide additional clarification and notify you that it will not be able to comply with your FOIA request unless you provide the additional information requested within 20 workdays.

(3) If the bureau asks you again for additional clarification, the statutory time limit for response will be temporarily suspended again and will resume again if the bureau hears from you within 20 workdays.

(c) If the bureau asks for clarification about a fee issue and does not receive a written response from you within 20 workdays, it will presume that you are

no longer interested and will close the file on the request.

#### **§ 2.52 How will you be billed?**

If you are required to pay a fee associated with a FOIA request, the bureau processing the request will send a bill for collection.

#### **§ 2.53 How will the bureau collect fees owed?**

(a) The bureau may charge interest on any unpaid bill starting on the 31st day following the billing date.

(b) The bureau will assess interest charges at the rate provided in 31 U.S.C. 3717 and implementing regulations and interest will accrue from the billing date until the bureau receives payment.

(c) The bureau will follow the provisions of the Debt Collection Act of 1982 (Public Law 97-365, 96 Stat. 1749), as amended, and its administrative procedures, including the use of consumer reporting agencies, collection agencies, and offset to collect overdue amounts and interest.

(d) This section does not apply if you are a state, local, or tribal government.

#### **§ 2.54 When will the bureau combine or aggregate requests?**

(a) The bureau may aggregate requests and charge accordingly when it reasonably believes that you, or a group of requesters acting in concert with you, are attempting to avoid fees by dividing a single request into a series of requests on a single subject or related subjects.

(1) The bureau may presume that multiple requests of this type made within a 30-day period have been made to avoid fees.

(2) The bureau may aggregate requests separated by a longer period only where there is a reasonable basis for determining that aggregation is warranted in view of all the circumstances involved.

(b) The bureau will not aggregate multiple requests involving unrelated matters.

#### **§ 2.55 What if other statutes require the bureau to charge fees?**

(a) The fee schedule in appendix A to this part does not apply to fees charged under any statute that specifically requires the bureau to set and collect fees for particular types of records.

(b) If records otherwise responsive to a request are subject to a statutorily-based fee schedule, the bureau will inform you whom to contact to obtain the records.

#### **§ 2.56 May the bureau waive or reduce your fees at its discretion?**

(a) The bureau may waive or reduce fees at its discretion if a request involves furnishing:

(1) A copy of a record that the bureau has reproduced for free distribution;

(2) One copy of a personal document (for example, a birth certificate) to a person who has been required to furnish it for retention by the Department;

(3) One copy of the transcript of a hearing before a hearing officer in a grievance or similar proceeding to the employee for whom the hearing was held;

(4) Records to donors with respect to their gifts;

(5) Records to individuals or private nonprofit organizations having an official, voluntary, or cooperative relationship with the Department if it will assist their work with the Department;

(6) A reasonable number of records to members of the U.S. Congress; state, local, and foreign governments; public international organizations; or Indian tribes, when to do so is an appropriate courtesy, or when the recipient is carrying on a function related to a Departmental function and the waiver will help accomplish the Department's work;

(7) Records in conformance with generally established business custom (for example, furnishing personal reference data to prospective employers of current or former Department employees); or

(8) One copy of a single record to assist you in obtaining financial benefits to which you may be entitled (for example, veterans or their dependents, employees with Government employee compensation claims).

(b) You cannot appeal the denial of a discretionary fee waiver or reduction.

### **Subpart H—Administrative Appeals**

#### **§ 2.57 When may you file an appeal?**

(a) You may file an appeal when:

(1) The bureau withholds records, or parts of records;

(2) The bureau informs you that your request has not adequately described the records sought;

(3) The bureau informs you that it does not possess or cannot locate responsive records and you have reason to believe this is incorrect or that the search was inadequate;

(4) The bureau did not address all aspects of the request for records;

(5) You believe there is a procedural deficiency (for example, fees are improperly calculated);

(6) The bureau denied a fee waiver;

(7) The bureau did not make a decision within the time limits in § 2.16 or, if applicable, § 2.18; or

(8) The bureau denied, or was late in responding to, a request for expedited

processing filed under the procedures in § 2.20 of this part.

(b) An appeal under paragraph (a)(8) of this section relates only to the request for expedited processing and does not constitute an appeal of the underlying request for records. Special procedures apply to requests for expedited processing of an appeal (see § 2.63 of this subpart).

(c) Before filing an appeal, you may wish to communicate with the contact person listed in the FOIA response, the bureau's FOIA Officer, and/or the FOIA Public Liaison to see if the issue can be resolved informally. However, appeals must be received by the FOIA Appeals Officer within the time limits in § 2.58 of this subpart or they will not be processed.

**§ 2.58 How long do you have to file an appeal?**

(a) Appeals covered by § 2.57(a)(1) through (5) of this subpart must be received by the FOIA Appeals Officer no later than 30 workdays from the date of the final response.

(b) Appeals covered by § 2.57(a)(6) of this subpart must be received by the FOIA Appeals Officer no later than 30 workdays from the date of the letter denying the fee waiver.

(c) Appeals covered by § 2.57(a)(7) of this subpart may be filed any time after the time limit for responding to the request has passed.

(d) Appeals covered by § 2.57(a)(8) of this subpart should be filed as soon as possible.

(e) Appeals arriving or delivered after 5 p.m. Eastern Time, Monday through Friday, will be deemed received on the next workday.

**§ 2.59 How do you file an appeal?**

(a) You must submit the appeal in writing by mail, fax or email to the FOIA Appeals Officer (using the address available at <http://www.doi.gov/foia/appeals.cfm>). Your failure to send an appeal directly to the FOIA Appeals Officer may delay processing.

(b) The appeal must include:

(1) Copies of all correspondence between you and the bureau concerning the FOIA request, including the request and the bureau's response (if there is one); and

(2) An explanation of why you believe the bureau's response was in error.

(c) The appeal should include your name, mailing address, daytime telephone number (or the name and telephone number of an appropriate contact), email address, and fax number (if available) in case the Department needs additional information or clarification.

(d) An appeal concerning a denial of expedited processing or a fee waiver denial should also demonstrate fully how the criteria in § 2.20 or §§ 2.45 and 2.48 of this part are met.

(e) All communications concerning an appeal should be clearly marked with the words: "FREEDOM OF INFORMATION APPEAL."

(f) The Department will reject an appeal that does not attach all correspondence required by paragraph (b)(1) of this section, unless the FOIA Appeals Officer determines, in his or her sole discretion, that good cause exists to accept the defective appeal. The time limits for responding to an appeal will not begin to run until the correspondence is received.

**§ 2.60 Who makes decisions on appeals?**

(a) The FOIA Appeals Officer is the deciding official for FOIA appeals.

(b) When necessary, the FOIA Appeals Officer will consult other appropriate offices, including the Office of the Solicitor for denials of records and fee waivers.

(c) The FOIA Appeals Officer normally will not make a decision on an appeal if the request becomes a matter of FOIA litigation.

**§ 2.61 How are decisions on appeals issued?**

(a) A decision on an appeal must be made in writing.

(b) A decision that upholds the bureau's determination will notify you of the decision and your statutory right to file a lawsuit.

(c) A decision that overturns, remands, or modifies the bureau's determination will notify you of the decision. The bureau then must further process the request in accordance with the appeal determination.

**§ 2.62 When can you expect a decision on your appeal?**

(a) The basic time limit for responding to an appeal is 20 workdays after receipt of an appeal meeting the requirements of § 2.59 of this subpart.

(b) The FOIA Appeals Officer may extend the basic time limit, if unusual circumstances exist. Before the expiration of the basic 20-workday time limit to respond, the FOIA Appeals Officer will notify you in writing of the unusual circumstances involved and of the date by which he or she expects to complete processing of the appeal.

(c) If the Department is unable to reach a decision on your appeal within the given time limit for response, the FOIA Appeals Officer will notify you of:

(1) The reason for the delay; and

(2) Your statutory right to seek review in a United States District Court.

**§ 2.63 Can you receive expedited processing of appeals?**

(a) To receive expedited processing of an appeal, you must demonstrate to the Department's satisfaction that the appeal meets one of the criteria under § 2.20 of this part and include a statement that the need for expedited processing is true and correct to the best of your knowledge and belief.

(b) The FOIA Appeals Officer will advise you whether the Department will grant expedited processing within 10 calendar days of receiving the appeal.

(c) If the FOIA Appeals Officer decides to grant expedited processing, he or she will give the appeal priority over other pending appeals and process it as soon as practicable.

**§ 2.64 Must you submit an appeal before seeking judicial review?**

Before seeking review by a court of the bureau's adverse determination, you generally must first submit a timely administrative appeal.

**Subpart I—General Information**

**§ 2.65 Where are records made available?**

Records that are required by the FOIA to be made proactively available for public inspection and copying are accessible on the Department's Web site, <http://www.doi.gov/foia/libraries.cfm>. They may also be available at bureau office locations.

**§ 2.66 What are public liaisons?**

(a) Each bureau has a FOIA Public Liaison that can assist individuals in locating bureau records.

(b) FOIA Public Liaisons report to the Department's Chief FOIA Officer and you can raise concerns to them about the service you have received.

(c) FOIA Public Liaisons are responsible for assisting in reducing delays, increasing transparency and understanding of the status of requests, and assisting in resolving disputes.

(d) A list of the Department's FOIA Public Liaisons is available at <http://doi.gov/foia/servicecenters.cfm>.

**§ 2.67 When will the Department make records available without a FOIA request?**

(a) Each bureau must:

(1) Determine which of its records must be made publicly available under the FOIA (for example, certain frequently requested records);

(2) Identify additional records of interest to the public that are appropriate for public disclosure; and

(3) Post those records in FOIA libraries.

(b) Because of these proactive disclosures, you are encouraged to review the Department's FOIA libraries

**Assignment Completion Table**  
Prepared by: John Illson 01/18/2007

<b>Assignment Number</b>	C-IN-MOA-0004-2007	<b>Fiscal Year</b>	2007
<b>Assignment Name</b>	C-IN-MOA-0004-2007-Audit of Public Safety Issues on Abandoned Mine Lands	<b>Bureau-Office</b>	Multi-Office Assignments Multi-Office Assignments
<b>Assignment</b>	Audit of Public Safety Issues on Abandoned Mine Lands		
<b>Assignment Type</b>	Internal Audit	<b>Program</b>	Health and Safety Programs
<b>Assignment Subtype</b>	Departmental Review	<b>Program Area:</b>	Abandoned Mines
<b>Assignment Category</b>	Discretionary	<b>Targeted Categories</b>	Health and Safety, Resource Protection and Restoration
<b>Assignment Origination</b>	Risk Assessment	<b>President's Management Initiative</b>	None
<b>GPRA Related</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No	<b>GPRA Related Work Performed</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No
<b>Office</b>	Central Region	<b>Office Location</b>	Central Region (Lakewood)
<b>Standards</b>	GAGAS		
<b>Assignment Status</b>	<b>Completed Audit</b>		
<b>Planned Start</b>	02/01/2007	<b>Planned End</b>	09/18/2007
<b>Manager</b>	Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI	<b>Team Leader</b>	John Illson/DEN/OIG/DOI
<b>Assistant Team Leader</b>	Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	<b>Staff</b>	Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI
<b>Independent Referencer</b>	Constance Wardle/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI		
<b>Related Assignment Number(s)</b>		<b>Final Report Title</b>	Abandoned Mine Lands in the Department of the Interior
<b>Final Report Issue Date</b>	07/24/2008	<b>Has assignment type changed?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>Estimated Staff Hours</b>	800	<b>Estimated Travel Budget</b>	
<b>Increase to Estimated Staff Hours</b>		<b>Increase to Travel Budget</b>	

Assignment Tasks	Auto Compose	Links	Status	Name	Date
<b>Overviews (select one)</b> Audits, Inspections and Evaluations CFO Audits Grants, Contracts, Verification Reviews and Other		-Planning Overview - Internal Audit	Complete	John Illson	08/04/2008
<b>Key Activities</b>		-Planning Key Activities	Complete	John Illson	08/04/2008
<b>Assignment Program(s)/ Summary Workpapers</b> Create Blank Create from Standard		A. Administration B. Background C. Survey-Inventory D. Survey-Fatalities at AML Sites E. Survey-Prioritization F. Survey-Mitigation G- Randsburg Mining District H- NPS (Overall) I- NPS (Site Visits) J- BLM (Overall) K- BLM (Site Visits) L. Best Practices M. BLM (Authorities)	Complete	John Illson	08/04/2008
<b>Workpapers, Comments &amp; Finding Outlines</b>		Workpapers are linked to the Assignment Program or other WPs.	Status is on each document.	Names are on each document.	Dates are on each document.
<b>Reporting</b> Draft Report Mgmt's Response to Draft Report		*Reporting Draft Report (Death Valley NPFR) *Reporting Management's Response to Draft Report (Death Valley)	Complete	John Illson	08/04/2008

Completion Table

		<p>*Reporting Draft Report (Barstow NPFR) [REDACTED]</p> <p>*Reporting Management's Response to Draft Report (Barstow) [REDACTED]</p> <p>*Reporting Draft Report [REDACTED]</p> <p>*Reporting Management's Response to Draft Report [REDACTED]</p> <p>*Reporting Management's Response to Draft Report [REDACTED]</p> <p>*Reporting Final Report [REDACTED]</p> <p>*Reporting Final Report [REDACTED]</p>			
<b>Quality Assurance Checklist</b>		<b>Quality Assurance Checklist</b> [REDACTED]	Complete	John Illson	08/04/2008
<b>Hardcopy File Index</b>			N/A	John Illson	08/04/2008
<b>Referencer Comments</b>		<p>*Reporting Referencer Comments [REDACTED]</p> <p>*Reporting Referencer Comments HQ Version [REDACTED]</p> <p>*Reporting Referencer Comments Final Report and Appendices [REDACTED]</p>	Complete	John Illson	08/04/2008
<b>Semi-Annual Summary</b>		*Reporting Semi-Annual Summary [REDACTED]	Complete	John Illson	08/04/2008
<b>Recommendation Tracking</b>		<b>Semi-Annual Summary Recommendation</b> [REDACTED]	Complete	Duane Albert	07/24/2008

**History**

**Status**  Approved  Request Review

**Confidentiality**  Standard  Sensitive but Unclassified  Restricted

**Add Assignment Readers** Scott Grace/DEN/OIG/DOI;

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List**

Submission: Submitted John Illson 08/04/2008 11:22 52 AM

Level 1 Approval:

Level 2 Approval: Approved Jack Rouch 09/02/2008 04:32:13 PM

**Key Activities**

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

Activity	Assigned	Status	Completed By	Date	Link
Prepare and Issue Announcement Memo	John Ilson	Complete	William McMullen	02/27/2007	<a href="#">A.02 Announcement Memo</a>
Conduct Pre-survey Story Conference	John Ilson, William McMullen, Stephanie Christian, Sean Pettersen	Complete	William McMullen	03/22/2007	<a href="#">A.06 Pre-Survey Story Conference</a>
Develop Survey Plan and Program Steps	John Ilson, William McMullen, Sean Pettersen, Stephanie Christian	Complete	William McMullen	03/22/2007	<a href="#">A.06 Pre-Survey Story Conference</a>
Schedule Entrance Conference	John Ilson	Complete	William McMullen	03/22/2007	<a href="#">A.03 Entrance Conference</a>
Conduct Post-survey Story Conference	Audit Team	Complete	John Ilson	04/30/2007	<a href="#">A.07 Audit Plan and Program</a>
Develop Assignment Fieldwork Plan and Program Steps	Team	In progress			<a href="#">A.07 Audit Plan and Program</a>
Conduct Report Writing Story Conference	Team	Complete	William McMullen	12/18/2007	<a href="#">A.09 Post field work story conference</a>
Prepare Draft Report	Team	Complete	William McMullen	02/22/2008	<a href="#">*Reporting Draft Report</a>
Reference Draft Report	Constance Wardle	Complete	William McMullen	02/22/2008	<a href="#">*Reporting Draft Report</a>
Send Draft Report to Headquarters	Jack Rouch	Complete	William McMullen	02/22/2008	<a href="#">*Reporting Referencer Comments</a> <a href="#">*Reporting Referencer Comments HQ Version</a>
Schedule Exit Conference	John Ilson	Complete	William McMullen	06/23/2008	<a href="#">*Reporting Draft Report</a> <a href="#">*Reporting Draft Report</a>
Obtain Auditee's/Client's Written Response to Draft Report	William McMullen	Complete	William McMullen	07/15/2008	<a href="#">A.33 AML Exit Conference</a> <a href="#">(BLM) *Reporting Management's Response to Draft Report</a> <a href="#">(NPS) *Reporting Management's Response to Draft Report</a>
Finalize Report	Jack Rouch, John Ilson, William McMullen	Complete	William McMullen	07/16/2008	<a href="#">*Reporting Final Report</a> <a href="#">(Final Report)*Reporting Final Report</a>
Reference Final Report	Constance Wardle	Complete	William McMullen	07/16/2008	<a href="#">*Reporting Referencer Comments Final Report and Appendices</a>
Send Final Report to Headquarters	Jack Rouch	Complete	William McMullen	07/16/2008	
Obtain Auditee's/Client's Written Response to Final Report		Not started			
Prepare and Issue PMB Referral Memo		Not started			
Prepare Summary for Semiannual Report		Not started			
		Not started			
		Not started			
		Not started			
		Not started			

**History**

**Status** Approved [Request Review](#)

**Confidentiality** Standard

**Add Document Readers** Bryan Brazil/SAC/OIG/DOI;

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List**

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                    Jack Rouch                    08/01/2008 03:06 09 PM

**Overview - Audits, Evaluations and Inspections**

Prepared by: John Ilson 02/22/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

**Key Dates**

Red = Required for All Black Bold = required for Audits, mark N/A if not required for assignment type

Milestones	Planned	Revised	Actual
Preliminary Work	02/01/2007		
Pre-Survey Story Conference	03/06/2007		03/06/2007
Entrance Conference (Start Date)	03/15/2007		03/13/2007
Post-Survey Conference	04/24/2007	05/11/2007	04/23/2007
HQ Post-Survey Decision Briefing			
Fieldwork Verification Conference	09/13/2007	12/03/2007	11/26/2007
Report Planning Conference	09/13/2007	12/17/2007	12/10/2007
Draft Report to RAM	10/20/2007	12/21/2007	12/21/2007
Draft Report to Headquarters	10/25/2007	03/28/2008	01/08/2008
Draft Report Returned to Region	11/09/2007	02/21/2008	
Exit Conference	12/04/2007	06/17/2008	06/17/2008
Draft Report Issued	12/04/2007		06/03/2008
Draft Report Response Received	01/03/2008	06/20/2008	07/11/2008
Final Report to Headquarters	01/18/2008		07/14/2008
Final Report Returned to Region	01/28/2008		
Final Report Issued (End Date)	02/11/2008	07/22/2008	07/22/2008
Assignment Closure Date	09/02/2008		09/02/2008

**Assignment Status**

Issued NPFR(s)  Yes  No

**Links to NPFRs**

Assignment Objective(s)

**Findings**

**Current Period Status**

**Survey Objective**

The Focus of the survey is to identify processes that the Department of the Interior, the Bureau of Land Management, the Fish and Wildlife Service, and the National Park Service have in place to identify, prioritize, and address safety hazards posed by Abandoned Mine Lands (AML) on DOI land.

Report Options Randsburg Flash Report, BLM Nationwide Report, NPS Nationwide Report, Department-wide Report

**Status Updates**

3/15/2007 - Entrance conference was held 3/13/2007 - survey on-site work performed in DC through the week. LMN 3/15/2007

## All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

### Overview - Audits, Evaluations and Inspections

3/23/2007 - Site visits to BLM and NPS sites in California during week.

3/31/2007- We went to various BLM sites in California two weeks ago and found BLM management has been discouraging through various means the formal identification of AML sites . The largest current BLM - AML site was discovered by a "Maverick" state office employee in late 2005. The sites sit in and around two small towns , Randsburg and Red mountain (Population 400). There is a 60 foot tall mountain of mine tailings which is used by thousands of out of town off road vehicle users to recreate on . These tailings and other sites have arsenic at levels hundreds if not thousands of times higher than EPA guidelines identify . We have pictures from a week ago of these ORVers riding up a tailings pile and creating dust so thick you can barely see them . These riders are using an authorized BLM road to cross the tailings pile. BLM plans to close the road sooon and open a new "family friendly" road. On site there are many other dangerous features including mine shafts all over the place . The preliminary estimated clean-up cost exceeds \$100 million. These towns are only 30 miles from BLM's Ridgecrest Office and the sites have apparently been hiding in plain sight for 60 years or more. Not last and probably not least is the fact that these towns were created by trespassers and in the 1980's and 90's. BLM with much fanfare sold the trespassers their homesites . BLM had the buyers sign a liability exclusion for HAZ-MAT and apparently failed to do an adequate environmental assessment to detect the arsenic . BLM may end up having to buy these folks out and face the furry of the inevitable lawsuits that will follow . We were told that many townspeople view BLM's motives with great skepticism.

With the failed inventory work that's been done over the years, there's a good chance there are other towns in the west with large AML sites close by . BLM's current inventory has little needed data and hence little value . We tentatively plan to recommend and have BLM support to organize small team of independent BLM experts who would perform a limited target inventory of the states worst sites . Perhaps the top hundred or so. We think with a limited amount of additional fieldwork we could issue separate reports on BLM and NPS California with additional work elsewhere to follow .

NPS has similar but not parallel problems. Sean visited some NPS parks and took pictures of a 4 year old boy walking out of a partially collapsed mine. The parents followed right behind the child . Sean was at the site looking at a shaft next to this one were a AML fatality occurred. We've also learned that at the same site, an NPS employee had a near fatal experience inside one of the mine shafts . He entered to shaft to record data from a water monitoring station at the bottom of the shaft . He suffered the effects of a lack of oxygen in the mine and doctors told him that he was only seconds from death . We will follow up with NPS to determine what has been done at this shaft to prevent public access .

NPS inventory is better than the inventories maintained by BLM . However, NPS inventories are still incomplete . Like BLM, funding to mitigate mine hazards is minimal which makes the program a low priority .

4/16/2007 - Guam auditor to join team which is when the post survey story conference begins .

4/30/2007: Post survey story conference conducted week of 4/23/2007. Briefing of IG scheduled for 5/11/2007. Will recommend four reports including Randsberg Flash , NPS Overall, BLM Overall and DOI Overall. DOI currently has no departmental program and we intend to comment on this as well as at least one other agency surveyed USFWS .

5/11/2007 - IG Briefing

5/15/2007: Audit reports will include flash reports for BLM Randsburg and NPS Death Valley National Park . Other flash reports will be issued as conditions warrant . At completion of fieldwork a Department-wide report will be issued Departmentwide report date will be dependent on the number of flash reports issued Randsburg travel scheduled for week of 5/21/2007 and for Joshua Tree National Park on 6/04/2007

5/21/2007 - Site Visit to Randsburg, CA

5/31/2007 Working on Flash reports for BLM Randsburg and NPS Death Valley N P.

6/04/2007 - Site visit to Johua Tree N.P.

6/30/2007 Working on Flash report for BLM Randsburg . NPS Death Valley N.P. Flash report posted to HQ's on 6/27/2007. Team will be preparing a flash report for AMKL sites in the Barstow field office . Site visits being planned for Nevada weeks of 7/23 and 7/30.

7/30/2007 - Site visit to Reno Nevada - Virginia City

7/31/2007 Trip of 7/23/2007 postponed due to training. Rescheduled for week of 8/20/2007. Randsburg flash report posted to HQ's on 7 20/2007.

Trip to Reno, Nevada (Virginia City) week of 7/31/2007. Death Valley and Barstow flash reports to be issued asw NPFR 's.

8/15/2007- Working on Randsburg District Flash Report and planning site visits for week of 8/27/2007 to BLM Nevada and NPS Grand Canyon

9/04/2007- Issued NPFR's for BLM Barstow Field Office and NPS Death Valley National Park

9/13/2007-Randsburg Flash Report signed and issued

9/15/2007- Field trips planned for AZ and Ely, NV for last two weeks of Fiscal Year. [REDACTED]

Sean and Greta to assist Albuquerque weeks of 9/24/2007 and 10/1/2007

9/30/2007-Completed year end field trips. BLM HQ's visit planned for week of 10/15/07 to perform field work and discuss audit findings .

11/15/2007- Completed scheduled trip to D.C. to visit BLM officials. Wrapping up field work. Field work verification story conference scheduled to begin 11/26/07. Will prepare outline to brief IG on 12/12. Will be meeting with BLM officials in D.C. that week to address their concerns.

12/01/2007 Post field work story conference conducted week 11/26/2007. Preparing briefing for IG on 12/12/2007.

12/15/2007- Briefed IG and HQ staff on findings. IG noted that photos, graphs and charts were excellent devices to communicate the importance of our findings . He also noted that we should limit our quotes or stories to a select few that really grab the reader's attention. IG noted that we found not just a lack of funding but that there were inefficiencies in how the current funding is being used . Discussed a DOI or BLM policy statement reiterating the importance of protecting the public from AML hazards and that placing warning signs or fences at sites does not increase federal liability for those sites (Bruce Delaplaine will get with Harvey Blank to discuss such a policy statement).

1/15/2008 Notified by HQ's of need to issue final draft report by 1/24/2008. Draft submitted to HQ's on 1/08/2008

2/15/08 Completed field office visits to 3 AML sites in Rosamond, CA under the Ridgecrest Field Office (Tropico, Golden Queen, Cactus mines). These sites had been part of the targeted inventory effort implemented by the BLM California State Office for the California Desert District. We concluded that the targeted inventory approach was working and we plan to endorse his approach in the report. We are still awaiting written comments from HQ's on the draft report submitted on 1/08/08.

2/21/2008 - Received preliminary markup of draft report from HQ. Still awaiting final comments before indexing and referencing can start.

2/29/2008 - Team provided a few comments on the report, have received no input on these. Still awaiting HQ's comments before indexing and referencing can start.

### Status History

### History

**Status** Approved **Request Review**

**Confidentiality** Standard

#### Add Document Readers

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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Submission:

Level 1 Approval:

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

Overview - Audits, Evaluations and Inspections

Level 2 Approval: Approved

Jack Rouch

09/02/2008 05:09:10 PM

**Assignment Program/Summary Workpaper**

Prepared by: William McMullen 02/23/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section A.  
 Assignment Program Name Administration

**Objective:**

Determine if DOI and the bureaus are protecting the public from the physical safety hazards at abandoned hardrock mines.

**Background:**

This survey and follow on audit were conducted to determine whether DOI and its bureaus (NPS and BLM) are adequately protecting the public from the physical safety and environmental risks of abandoned mines on federal lands. Specific audit steps are shown in the Assignment Summary workpapers.

**Assignment Steps:**

Survey Step	Staff	Work Paper Reference
<b>A. Administration</b>		
1 Prepare and issue an Announcement Letter	Bill	A.02 Announcement Memo
2 Conduct entrance conference with DOI and Bureau officials to explain the focus of our survey	Team	A.03 Entrance Conference
3 Prepare the Statement of Independence	Bill	A.01 Statement of Independence
4 Maintain a Contact Log Record the name, title, bureau/office, phone, email, and location for all individuals contacted during the audit	Team	A.05 Points of Contact
5 Document any information prepared for the Pre-Survey Story Conference, including minutes from the meeting	Sean/Bill	A.06 Pre-Survey Story Conference
6 Prepare the Survey Plan and Program, including milestones and travel estimates Obtain management approval	Team	A.06 Pre-Survey Story Conference
7 Maintain an ongoing log of team meetings and prepare a brief summary of any significant conclusions resulting from the meetings	Bill	A.06.01 Survey Team Meetings
8 Plan and arrange a post-survey story conference, including preparation of a briefing document summarizing the results of the survey	John	A.06.02 Survey Briefings and Memos
9 Hold post-survey story conference to summarize results of survey, make a go/no go decision, and identify additional work to be performed as well as timeframes and resources required to accomplish the work, if necessary	Stephanie/Team	A.06.02 Survey Briefings and Memos
10 Prepare a preliminary Audit Plan and Program, including milestones and travel estimates If applicable, present alternative approaches Obtain management approval Conduct a post-survey briefing with Headquarters Officials	Team	A.07 Audit Plan and Program
11 Complete the Quality Assurance Checklist	Bill	Quality Assurance Checklist
12 Summarize indicators of fraud or abuse and determine appropriate steps to address risk factors	Bill	None were noted
13 Prepare index of hard copy references	Bill	N/A
14 Flowchart the mitigation process for AML sites (from identification to closing)	Team	Step deleted during audit as not being relevant

**Conclusion:**

Based on field work done during the survey and audit,

We recommend that the BLM Director do the following:

1. Issue a clear policy statement that:

- Supports the abandoned mine lands program and its goals.
- Forbids retaliation against employees for identifying or reporting abandoned mine sites.
- Requires field-office management and staff to comply with all abandoned mine lands policies and procedures.

2. Employ experienced, trained, full-time staff dedicated to the abandoned mine lands program at the state- and field-office levels in California, Arizona, and Nevada and other states where appropriate.
3. Establish a specific line item in the budget for the abandoned mine lands program and request funding to accomplish project goals identified in the abandoned mine strategic plan.
4. Identify and resolve trespassing on abandoned mine sites and assess and mitigate hazards associated with these sites.
5. Validate existing inventory data and develop procedures for ongoing data collection to ensure that data in the inventory is complete, accurate, and consistent.

We recommend that the NPS Director do the following:

6. Request adequate funding to support program goals and to mitigate sites identified by the abandoned mine lands program.

We recommend that the BLM Director and NPS Director do the following:

7. Implement immediate temporary or permanent measures to mitigate known dangerous sites, including those identified in Appendix A of this report.
8. Explore and exploit opportunities for sharing resources, expertise, and best practices between the agencies to strengthen their abandoned mine lands programs.

Based on BLM "Reporting Management's Response to Draft Report" and NPS "Reporting Management's Response to Draft Report" responses to the draft report, we conclude the following regarding the status of recommendations and actions required.

Recommendations	Status	Action Required
1 through 5	Unresolved BLM concurred, additional information needed	BLM should provide additional information on actions taken or planned, including target dates and titles of officials responsible for implementation.
6	Unresolved NPS concurred, additional information needed	NPS should provide information on actions taken or planned, including target dates and titles of officials responsible for implementation.
7 through 8	Unresolved BLM concurred, additional information needed NPS concurred, additional information needed	BLM and NPS should provide additional information on actions taken or planned, including target dates and titles of officials responsible for implementation.

Assignment Program/Summary Workpaper A.

Submission: Submitted William McMullen 07/18/2008 09:32:12 AM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 07/21/2008 03:30 30 PM

**Linkage Information**

**History**

**Status** Approved **Request Review**

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

A 01 Statement of Independence

### Assignment Workpaper

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 01 **Subsection** Survey A.3

**Program Name** Administration

**Subject** Statement of Independence

**Origination Doclink** 

**Purpose:**

To ensure that staff assigned to this review have no personal, financial, or external impairments, in fact or appearance, that now affect or would affect opinions, conclusions, judgments, recommendations, impartiality, integrity, or objectivity on this assignment.

**Scope:**

Audit of Public Safety Issues on Abandoned Mine Lands. Statement of Independence.

**Source:**

Signed Statement of Independence (attached below).



Statement of Independence.PDF

**Conclusion:**

The staff members assigned to this audit have signed the Statement of Independence, attesting that they have no personal, financial, or external impairments that they are aware of, in fact or appearance, that now affects or would affect their audit opinions, conclusions, judgments, recommendations, impartiality, integrity, or objectivity on this assignment.

By signing the Statement of Independence, team members agreed to inform the Team Leader and/or Regional Audit Manager if there are any changes that affect their independence between the date of their signature and the date the Office of Inspector General issues its audit report.

**Details:**

Team members signed and dated the Statement of Independence for this audit.

**Methodology:**

Scanned in signed Statement of Independence.

Submission: Submitted William McMullen 08/08/2007 10:35:47 AM

Level 1 Approval:

Level 2 Approval: Approved Jack Rouch 07/21/2008 04:28:15 PM

**Linkage Information**

RAM NOTE: I did not sign the independence statement attached, however, I confirm that I have no impairments concerning this audit. JR

**History**

**Status** Approved **Request Review**

**In Progress Edit** William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 02 **Subsection** Survey A.1  
**Program Name** Administration  
**Subject** Announcement Memo

**Origination Doctlink** ■

### Purpose:

To document the announcement letter that was distributed to Department and Bureau officials. This workpaper documents the first activity in the Key Activities Table -**Planning Key Activities** ■.

### Scope:

Audit of Public Safety Issues on Abandoned Mine Lands. Announcement Memo.

### Source:

Announcement Letter and Distribution List (attached below)



C-IN-MOA-0004-2007 1-19-2007 Announcement Memo Abandoned Mine Lands.pdf

### Conclusion:

Jack Rouch, Central Region Audit Manager, distributed the announcement letter for Assignment No. C-IN-MOA-0004-2007 to Department and Bureau officials on January 19, 2007. The objective of the audit is to evaluate Departmental and bureau policies, procedures and actions taken regarding dangers posed by abandoned mines on federal property. We also included an information request as an attachment to the memorandum (see below). The request was for several items to be provided prior to the scheduled entrance conference.



United States Department of the Interior

OFFICE OF INSPECTOR GENERAL  
Central Region  
134 Union Blvd., Suite 510  
Lakewood, Colorado 80228

January 19, 2007

Memorandum

To: Assistant Secretary for Fish Wildlife and Parks  
Assistant Secretary for Land and Minerals Management  
Director, Bureau of Indian Affairs  
Director, Bureau of Land Management  
Director, Fish and Wildlife Service  
Director, National Park Service

From: *JR* Jack Rouch [REDACTED]  
Regional Audit Manager

Subject: Audit of Public Safety Issues on Abandoned Mine Lands Managed by the  
Department of the Interior (Assignment No. C-IN-MOA-0004-2007)

We would appreciate your cooperation as we begin our audit of Public Safety Issues on Abandoned Mine Lands. Specific audit objectives and the audit scope will be developed upon completion of the survey portion of the audit.

We plan to begin the audit in February 2007 and will be contacting the Department's Audit Liaison Officer to schedule an entrance conference. Prior to the entrance conference, please provide Mr. John Illson of my staff with the information requested in the attachment. If possible, please submit the information electronically to [John\\_Illson@doioig.gov](mailto:John_Illson@doioig.gov) and [Sean\\_Pettersen@doioig.gov](mailto:Sean_Pettersen@doioig.gov). If you are not able to e-mail this information, you can fax the information to (303) 236-8211 or mail any hard copy documentation to our Central Region Office at the above address.

Mr. John Illson of my staff will direct the audit. If you have any questions, please call Mr. Illson at (303) 236-9119 or me at (303) 236-9243.

Attachment

cc: Audit Liaison Officer, Department of the Interior  
Audit Liaison Officer, Assistant Secretary for Fish Wildlife and Parks  
Audit Liaison Officer, Assistant Secretary and Bureau of Indian Affairs  
Audit Liaison Officer, Assistant Secretary for Land and Minerals Management  
Audit Liaison Officer, Bureau of Land Management  
Audit Liaison Officers, Fish and Wildlife Service  
Audit Liaison Officers, National Park Service  
Focus Leader for Management Control and Audit Follow-up  
Associate Director for Finance, Policy, and Operations

Attachment

**Items to be Furnished Prior to the Entrance Conference**

For data requested, we would like to obtain both departmental and bureau/agency data.

1. Copies of all department and bureau policies, procedures, and regulations (citations are acceptable for regulations) relating to department/bureau responsibilities for abandoned mines.
2. All specific department and bureau policies, procedures, and regulations (citations are acceptable for regulations) related to prioritizing abandoned mines for mitigation.
3. The most current inventories (databases) of abandoned mines for all department/bureau lands with all data readily available. This includes both departmental and any bureau data bases at all bureau offices. Known examples include the following inventories.
  - BLM previously identified the creation of two new data bases (1) The Site Clean-up Module (SCM) and the (2) Abandoned Mine Module (AMM). These databases should identify separately abandoned mines that are contaminated sites and/or those that contain physical hazards on public lands.
  - On prior audits we have identified numerous field level inventories of abandoned mines not included on HQ level reports. Please provide all field level inventories.
4. Current lists of abandoned mines prioritized for remediation on all department/bureau lands with regard to mine contamination and physical safety hazards.
5. All lists (both department and bureau) of all known abandoned mines which have been remediated since 1997 to mitigate mine contamination and/or physical safety hazards.
6. All lists (both department and bureau) of all known incidents of personal injuries and fatalities on abandoned mines on department/bureau lands since 1990.

**Preliminary Definitions**

**Public Health and Safety Issue** – A condition that poses a threat to human health and safety that requires immediate interim mitigation and/or long-term mitigation (for example, accessible abandoned mine shafts that pose a significant risk of injury due to intentional or accidental entry or abandoned mines that pose a known or suspected significant risk to a public water supply).

**Details:**

The Announcement Memo was distributed by email ?? to the following DOI and bureau officials:

**Methodology:**

Documented announcement memo.

Submission:	Submitted	William McMullen	04/10/2007 10:28:14 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	05/02/2007 09:44 00 AM

**Linkage Information**

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

A 03 Entrance Conference

**Record of Discussion**

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 03 **Subsection** Survey A.2  
**Program Name** Administration  
**Subject** Entrance Conference

**Origination Doclink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader, Auditor	Lakewood, OIG	303 236 9139	john_illson@doioig.gov
William McMullen	Asst Team Leader, Evaluator	Lakewood, OIG	303 236 9123	william_mcmullen@doioig.gov
Stephanie Christian	Team Member, Evaluator	Lakewood, OIG	303 236 9112	stephanie_christian_doioig.gov
Sean Pettersen	Team Member, Auditor	Lakewood, OIG	303 236 9133	sean_pettersen@doioig.gov
James Tichenor	Economist	OSM	202-208-2716	Not provided
Andrea McLaughlin	Enviornmental Protection Specialist	FWS	703-358-2596	Not provided
Jake Lee	ALO	FWS	703-358-2233	Not provided
Deborah Williams	OIG Audit Liason	PFM	202-208-3963	Not provided
Kevin Tennyson for Jack Rener	ASA - Director Offecer	HQ	703-390-6437	Not provided
George Stone	Senior AML Specialist	BLM HQ	202-557-3573	george_m_stone@blm.gov
Nancy Dean	Division Cheief - Eng & Envt Services	BLM HQ	202-557-3585	Not provided
Andrea Nygren	BLM - ALO	HQ	202-452-5153	Not provided
Alen Sedik	NRDAR Program Manager	BIA	202-208-5474	Not provided
Dean Martin	NBC Denver	Denver, CO	Not provided	Not provided
Mike Alba	BIA	ABQ, NM	Not provided	Not provided
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Jim Woods	NPS Denver, Chief, Geoscience and Restoration Branch, Geologic Resources Division	Denver NPS	303-969-2635	jim_c_woods@nps.gov



Entrance Conference Sign In Sheet.pdf  
**Location** Main Interior Building - Room 7000A

**Date/Time**  
 03/13/2007 10 00 AM

**Purpose:**  
 To notify audit liaisons and the officials responsible for Abandoned Mine Lands on Department properties of the initiation of this audit.

**Scope:**  
 AML Entrance Conference

**Conclusion:**  
**AML Entrance Conference:**  
 The survey phase of the audit will include BOR, FWS, BIA, NPS and BLM. However, we believe that the bureaus with the largest programs are BLM and NPS, which will mean that these bureaus will be the primary focus. In addition, BIA may not be included due to their stance that unless AML sites were caused by or are on BIA property, BIA would not be responsible for the mitigation of the site. The audit survey phase will focus on the physical safety hazards, as opposed to environmental hazards. However, if sites contain both problems they will be included in the audit.

**Summary:**  
**Meeting Notes:**

John introduced the audit and the team.

Everyone in the room introduced themselves.

We are starting an audit on the AML program in DOI; we are going to be focusing on physical safety hazards as opposed to environmental hazards. If there are both at one site, we will look at both. We will look at all programs with AML. All AML agencies will be reviewed, but we will primarily focus on BLM and NPS. If there are any areas agencies would like us to look at feel free to bring those up. We are looking at inventories and cleanup and how sites are prioritized for cleanup. We will look at the mitigation efforts. We started at the department and we found that there are no departmental offices that oversee this program. The work that will be done will be primarily at bureaus. The survey begins today and will last for 30 days. We will then meet with the IG and decide for a go or no go. Site visits are planned for BLM and NPS in the survey plan. We don't develop our audit objective until after the survey phase of the audit. The audit is a standard audit with fieldwork going into August. The report will be out within a 1 year timeframe.

John stated that the audit team will be looking at CA in Ridgecrest for BLM and then for NPS in CA. There is no information from the Department or the bureaus on AML injuries or fatalities. There is a lack of databases for injuries or fatalities which prevents the bureaus from knowing where the most critical areas for mitigation are. The data that is being collected is also problematic. There is no common denominator on the naming for mines or locations for those mines. We will not be working on the overall inventory for all of the sites, so we are looking more at the priority of sites and then those where there are injuries. We will be looking at how sites are identified and then put into the inventory. We will be looking at the program from the ground up and looking at the process. We will also look at the injuries and fatalities and going through the reverse process. We will be doing work this week in BLM and the NPS we will work with in Denver. We will also look back for the data request from each of the bureaus. We are hoping to use that data to limit the scope of the bureaus that we audit. Concerning BIA, we may not do a lot because we found that the bureau's position on hazmat sites is that if the bureau did not create the hazard then they are not responsible for the sites that are created. We would be interested in looking to those sites, but only if BIA is able to remedy those sites. BIA has stated that unless they caused or contributed to the AML sites, BIA does not have the responsibility for the site. BIA does do work on the leases, but it does not do the site cleanup.

John stated that the audit team will be looking at abandoned mines only on bureau owned land. All of those lands are ones that the bureau has responsibility for. It is then the bureau responsibility to go back and do PRP searches for parties who contributed to the mines. There are a lot of mines out there, but it is difficult to identify all of the sites. There are some databases, but there is a range of data sources.

John stated that the audit team has not planned to do work with the OIG from the US Forest Service. BLM stated that what it does, may affect what the USFS does because there is some coordination. John stated that we are aware of the GAO report in 1996 where they looked at a number of agencies including USFS, NPS, BLM and FWS. John indicated that we will look at coordinating with USFS on their work in this area.

Submission:	Submitted	William McMullen	04/10/2007 10:28 51 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	05/02/2007 09:45:15 AM

**Linkage Information**

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Sean Pettersen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 03.01 **Subsection**  
**Program Name** Administration  
**Subject** Initial Discussion with OEPC

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Bob Wilson	Team Leader Environmental Cleanup and Liability Management Team (ECLM Team)	MIB	202.208.7556	Robert_M_Wilson@ios.doi.gov
John Illson	DOI-OIG Team Leader	Central Region Audits	303.236.9139	john_illson@doioig.gov
William McMullen	DOI-OIG Asst. Team Leader	Central Region Audits	303.236.9123	william_mcmullen@doioig.gov
Sean Pettersen	Auditor	Central Region Audits	303.236.9133	sean_pettersen@doioig.gov
Stephanie Christian	Evaluator	Central Region Audits	303.236.9112	stephanie_christian@doioig.gov

**Location** Teleconference for John Illson's office

**Date/Time**

02/23/2007 09 00 AM

**Purpose:**

To determine what role the DOI-Office of Environmental Policy and Compliance plays in inventorying and/or remediating physical hazards at AML sites. To gain an understanding of the AMLIS system

**Scope:**

AML inventories

**Conclusion:**

The keys points from the conversation relating to AML sites were:

- OEPC is not involved much with physical hazards at AML sites. OEPC only gets involved when there are environmental concerns at a site. When OEPC does get involved physical hazards are remediated during cleanup.
- There is no department-wide system, or function, for AML sites. Each bureau maintains their own inventories. The AMLIS is maintained by BLM and, according to Bob Wilson, it's a partial list at best. Like any database, the information is as good as the information that's entered and AMLIS suffers from the fact that BLM field offices haven't put in all the information.
- If there is a Department-wide policy it will come from BLM because they have the vast majority of AML sites.
- There could be two funding streams to remediate physical hazards at AML sites. AML funding is used where there are no environmental impacts or the Central Hazmat fund takes over and remediates the physical hazards as part of the overall environmental cleanup of a site. In addition, there could be funding available from States or private entities to remediate abandoned mines and protect wildlife habitat.
- AMLIS and the Resource Protection databases may be merged in the future to cut reduce overhead costs.
- We will have to contact the Solicitors Office to obtain information on contingent liabilities related to AML sites.

**Summary:**

Bob provided a list of contacts of personnel from DOI and other federal agencies who are involved with AML issues. See the e-mail (with attachment below). **NOTE: ONLY BLM IS ON THE LIST...THE OTHER BUREAUS ARE NOT REPRESENTED. BLM WAS THE ONLY DOI BUREAU THAT PARTICIPATED IN A MEETING WITH AML PERSONNEL FOR OTHER FEDERAL AND STATE AGENCIES.**

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A 03.01 Initial Discussion with OEPC

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fyi

----- Forwarded by Robert M Wilson/PEP/OS/DOI on 02/23/2007 12:03 PM -----

**George M Stone@blm.gov** To: Leslie\_Torrence@blm.gov, tbuchta@fs.fed.us, mahmud.shahid@epa.gov, fisk.joan@epa.gov, kimberlee.k.mulhern@usace.army.mil, john.husted@dnr.state.oh.us, karen.garcia@state.nm.us, acoynr@govmail.state.nv.us, kenyon\_larsen@sra.com, Pat\_Tallarico@sra.com, DLYTTON@osmre.gov, tbuchta@fs.fed.us, mgonzale@osmre.gov, Robert M Wilson/PEP/OS/DOI@DOI, jeffrey.goodman@usda.gov, william.brighton@usdoj.gov  
02/12/2007 09:14 AM  
cc:  
Subject: Updated Steering Group Contact Info file

Folks --

Sorry, but things hiccupped!

Let's try this again.

Kim, I plugged in your updated info.

G.



(See attached file: GMITW Steering Group Contact Info.xls) GMITW Steering Group Contact Info.xls

Note: Only BLM, none of the bureaus, were represented at the for the initial meeting with AML personnel from other state and federal agencies. See attachment to this e-mail below:

----- Forwarded by Robert M Wilson/PEP/OS/DOI on 02/23/2007 12:04 PM -----

**George M Stone@blm.gov** To: Leslie\_Torrence@blm.gov, tbuchta@fs.fed.us, mahmud.shahid@epa.gov, fisk.joan@epa.gov, kimberlee.k.mulhern@usace.army.mil, john.husted@dnr.state.oh.us, karen.garcia@state.nm.us, acoynr@govmail.state.nv.us, kenyon\_larsen@sra.com, Pat\_Tallarico@sra.com, DLYTTON@osmre.gov, tbuchta@fs.fed.us, mgonzale@osmre.gov, Robert M Wilson/PEP/OS/DOI@DOI, jeffrey.goodman@usda.gov, william.brighton@usdoj.gov  
02/13/2007 02:24 PM  
cc:  
Subject: Notes from 2/7 Kickoff Meeting/Conf Call

Folks --

Thanks for you time last week and for what I thought was a most successful kickoff! I am forwarding notes of the discussion and pending tasks. Also attached is a reformatted overview and planning structure for the event. Thanks to Pat Tallarico and Alison Wolfe at SRA for pulling these together.

I want to reiterate a couple of points and request your assistance in adhering to them. First, the overview/plan and meeting notes reflect the initial thinking about the workshop, and it will evolve as the steering committee gets into the details of the event and the topics to be discussed. Accordingly, please limit distribution to your internal offices and agencies as needed for discussion and for recruitment of volunteers for the issue coordination groups. For now, please do not distribute it beyond government circles.

A 03.01 Initial Discussion with OEPC

Your feedback is welcome on additional topics as well as specific questions or challenges associated with the currently listed topics. In particular, please reflect on topics you think would benefit from the unique opportunity provided by a gathering of representatives from multiple agencies across various levels of government.

Participation for this event will be broader than past similar events, but it is not necessarily open to everyone. We are not sure yet how participants will be selected, so Steering Committee members should be clear when circulating the document for review that everyone may not be able to participate due to space limitations, budgets, etc.

Feedback before our next Steering Committee session on Wednesday March 7 at 1 pm ET.

George Stone  
Senior Abandoned Mine Lands Specialist  
Division of Engineering & Environmental Services (WO-360)  
Bureau of Land Management  
v: 202.557.3573 f: 202.452.5046 c: 202.253.0061  
www.blm.gov/aml

(See attached file: GMTW-SCMeetingSum-2\_7\_07.doc)(See attached file:



Overview for Government Mining Issues Training Workshop 02-12-2007 .doc) GMTW-SCMeetingSum-2\_7\_07.doc Overview for Government Mining Issues Training Workshop 02-12-2007 .doc

Submission: Submitted Sean Pettersen 02/15/2008 03:18:14 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 01:41 00 PM

**Linkage Information**

**History**

Status Approved Request Review  
In Progress Edit Sean Pettersen/DEN/OIG/DOI  
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**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Sean Pettersen 02/26/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 03.02 **Subsection**  
**Program Name** Administration  
**Subject** Initial Discussion with George Stone

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	DOI-OIG Team Leader	Central Region Audits	303 236 9139	john_illson@doioig.gov
William McMullen	DOI-OIG Asst. Team Leader	Central Region Audits	303 236 9123	william_mcmullen@doioig.gov
Sean Pettersen	Auditor	Central Region Audits	303 236 9133	sean_pettersen@doioig.gov
Stephanie Christian	Evaluator	Central Region Audits	303 236 9112	stephanie_christian@doioig.gov
Zane Michael	Auditor	Central Region Audits	303 236 9128	zane-michael@doioig.gov
George Stone	Senior Abandoned Mine Lands Specialist	Bureau of Land Management - Washington Office	202 557 3573	
Leslie Torrence	Environmental Protection Specialist	Bureau of Land Management - Washington Office	202 557 3579	

**Location** Teleconference from John Illson's office

**Date/Time**

02/26/2007 09 00 AM

**Purpose:**

To gather initial background information about the AML program.

**Scope:**

AML inventories

**Conclusion:**

The key points from the conversation related to our audit are:

- There is no coordination or direction at the Department level for AML. The Department is generally not involved with safety mitigation at AML sites with the exception that DOI NEPA policy dictates what happens at a mitigation site.
- There are no regulations, policy, or Department Manual section for hardrock AML mitigation.
- According to Mr. Stone, the AML program is relatively small and the program is not a line item in the budget. There are four sources of funding, divided among 11 State Offices. The sources of funding are:

Source of Funding	Total Amount	Portion Related to AML
Soil, Water and Air Management	\$35 million	\$8.5 million
Hazard Management and Resource Protection (Hazardous Materials)	\$16 million	\$1.5-2 million (\$400k set aside for large physical safety projects e.g. > \$50K each; state offices compete for these \$)
Central Hazmat Fund (CHF)	\$ 3 million	\$2.5 million
Southern Nevada Public Lands Management Act (SNPLMA)	??	\$.5 million (Nevada Only)
Total (approximately)		\$13.5 million

- ■ The cells highlighted in yellow represent funding allocated to AML from BLM budget activities. The total annual allocation is about \$10 million (\$8.5 + \$1.5). (Math Verified - John Illson 7/19/07) These funds are those that are directly controlled by BLM HQ to support AML initiatives.

**Summary:**

**All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.**

A 03.02 Initial Discussion with George Stone

- According to Mr. Stone, only \$2.5-\$3 million is available to mitigate physical safety hazards at AML sites. The emphasis of the AML program is water quality and that's where a majority of the dollars are spent. State Offices compete for the funding. Reference AML National Strategic Plan and State Office Plans at [www.blm.gov/aml](http://www.blm.gov/aml).
- Accidents, injuries and fatalities drive prioritization of AML sites wrt physical safety. BLM however does not track these data as far as Stone knows.
- Dollars provided for site mitigation were to be used as leverage to form partnerships with States and private entities to cleanup watersheds. According to Mr. Stone, Colorado and Utah are doing very well at forming these partnerships, Montana has done well working with the State, and California has done "so-so". State Offices should be sitting with partners to cleanup key watersheds. Documentation for partnership agreements should be at the State Offices (ie. Who are the partners and how the decision was made to select sites). Stone thinks the degree of success in leveraging with partners is a good audit topic.
- Between the AML program and the CHF, BLM knows where the major sites are.
- In BLM, AML duties are collateral; training is uncertain, effect of EPA's "All Appropriate Inquiry" rule uncertain (rule relates to requirements that must be followed to qualify for some protection from CERCLA responsibility for cleanup of hazardous sites).
- Quote relating to not inventorying all known sites, "So what? We certainly have enough to do already." George Stone.
- Stone does think the fact that feds "invite" visitors via recreation areas, trails, fees, etc increases the need to mitigate physical safety issues in these areas. Encroachment is also driving increased risks due to physical safety hazards.
- BLM's inventory consists of 11,500 sites with 45,000 mine features. There are a significant number of sites where a mine feature is labeled "other" and Mr. Stone doesn't know what these are.
- Scope Limitation: Mr. Stone does not believe that we should include Hazmat sites in the scope of this audit since our office has recently issued a report addressing Hazmat sites.

**Sites of Concern:**

California Desert: As many as 100,000 users in the area and there have been several incidents over the past couple of years. This area, once remote, is accessed by people on ATVs and motorcycles where they encounter numerous mine features.

Kelly Mine, near Ridgecrest CA: According to Mr. Stone, "BLM blew it" with this site because BLM thought the mines were on private property when in fact they were on BLM land. This site has become a top priority for cleanup because of a combination of physical hazards and contamination issues. BLM estimates that it could cost as much as \$100 million to cleanup and Mr. Stone stated that BLM will not get the funding needed for the cleanup. Funding for the site will more than likely come from the CHF and there is a 50/50 chance that BLM transferred the land to the public and now there are people living on the contaminated soil.

Submission: Submitted William McMullen 07/23/2007 10:25:17 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 01:41 25 PM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/07/2008 01:32:54 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Mon 01/07/2008 01:32 PM. For original text, refer to the field(s) above.

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AML inventories

**Conclusion:**

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Summary:  
N/A

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

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**Assignment Workpaper**

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 04 **Subsection**  
**Program Name** Administration  
**Subject** Audit Standards

**Origination Doclink** ■

**Purpose:**  
To identify the standards we used for this review and to document our compliance with these standards.

**Scope:**

**Source:**

**Conclusion:**

**Details:**

**Methodology:**

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/07/2008 09:37:46 AM

**Linkage Information**

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

A 05 Points of Contact

National Park Service Death Valley National Park	Resource Mangement	David Ek Asst. Chief Resource Management 760.786.3258
National Park Service Grand Canyon National Park	Earth Science Program	John R. Rihs Earth Science Program Manager / Geologist / Hydrologist  v: 928.638.7905, f: 928.638.7755
National Park Service Joshua Tree National Park	Resource Mangement	Paul DePrey Asst. Chief Resource Mangement v: 760.367.5560  Luke Salbala Branch Chief Physical Scientist v: 760.367.5563 c: 310.528.5117
National Park Service Lake Mead National Recreation Area	Natural Resource Mangement	Brian Moore Biologist v: 702.293.8901 c: 702.249.6181
National Park Service Mississippi River Recreation Area	Park Superintendent	Paul Labovitz Park Superintendent v: (651)290-4160
National Park Service Pacific West Regional Office (Seattle, WA)	Natural Resource Mangement AML Coordinator	Marsha Davis Geologist 206.220.4262
National Park Service Pacific West Regional Office (Oakland, CA)	Natural Resource Mangement AML Coordinator (Funding)	Jay Goldsmith Asst. Team Leader for Natural Resources 510.817.1429
National Park Service Intermountain Regional Office (Santa FE, NM)	Natural Resource Mangement AML Coordinator	Linda Dansby Program Manager, Office of Minerals Regional Minerals Coordinator 505.988.6095
<b>Other</b>		
DOI-Office of Environmental Policy and Compliance Washington, D.C.	Central Hazmat Fund	Bob Wilson v: 202.208.7556 f: 202.208.6970
Office of the Solicitor	General Law	Alton Woods Branch Chief-General law v: 202.208.3769 f: 202.208.6475
		Michael Walker v: 415.393.0716
Mine Safety and Health Administration (MSHA) Washington D.C.	Program Education & Outreach Services	Amy Louviere Program Information Specialist v: 202.693.9423 c: 571.215.4497

**Details:**

N/A

**Methodology:**

Compiled a list of relevant points of contact in a table.

A 05 Points of Contact

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                    John Illson                    01/07/2008 09:38 02 AM

[Linkage Information](#)

**History**

**Status**                    Approved                    **Request Review**  
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## Assignment Workpaper

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 06 **Subsection** Survey A.5 and A.6  
**Program Name** Administration  
**Subject** Pre-Survey Story Conference

**Origination Doclink** ■

### Purpose:

To develop an audit plan for assessing public safety issues on Abandoned Mine Lands.

### Scope:

Audit of Public Safety Issues on Abandoned Mine Lands.

### Source:

Pre-Survey Story Conference held 3/6-7/2007. Those present:  
John Illson, Team Lead  
Bill McMullen, Asst Team Lead  
Sean Pettersen, Auditor, Team Member, Meeting Facilitator  
Stephanie Chris ian, Evaluator, Team Member  
Holly Snow, Evaluator, Recorder

Recorder notes attached:



AML Survey Plan and Program 3-6-07A.doc

### Conclusion:

See Survey plan below.

### Details:

The following Survey Plan was developed during the Pre-Survey Conference by the team and recorded by the Recorder. The meeting was facilitated by Sean Pettersen and involved discussions among all parties regarding the survey focus, steps, assignments, resources and schedule. The Plan was also developed considering the needs of the potential users of the audit report. Input from the key user, BLM's AML Program Lead, was obtained during an initial conversation **A.03.02 Initial Discussion with George Stone** ■ on 2/26/07.

## Survey Focus:

Identify processes that the Department of the Interior, the Bureau of Land Management, the Fish and Wildlife Service, and the National Park Service have in place to identify, prioritize, and address safety hazards posed by Abandoned Mine Lands (AML) on DOI land. Specifically, what processes do DOI and its Bureaus have for:

### **SECTION C:** Identifying AML sites with significant safety hazards on DOI lands.

- Obtain inventories and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.
- Determine how bureaus ensure that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)

### **SECTION D:** Identifying and tracking fatalities and injuries occurring on AML sites.

- Obtain data for fatalities and injuries on DOI land from sources including the following:

1. DOI and its Bureaus, including the Safety Management Information System (SMIS) and the Abandoned Mine Module (AMM)
  2. Mine Safety Health Administration (MSHA)
  3. States
  4. Internet Searches and prior audits
- Summarize fatality and injury data to identify overall statistics and compare the lists to identify inconsistencies.

**SECTION E:** Prioritizing AML sites for mitigation based on safety risks.

- Obtain criteria for prioritizing AML sites.
- Obtain the prioritized list of AML sites from each bureau and relevant field offices and parks.

**SECTION F:** Mitigating known AML safety hazards on DOI lands.

- Obtain a list of all known abandoned mines that have had safety hazards mitigated over the past 10 years.
- For known injuries and fatalities, what have the bureaus done to mitigate safety risks at the site?

**Milestones:**

Entrance Conference	Tuesday, March 13, 2007
Complete Survey Work	Thursday, April 12, 2007
Post-Survey Story Conference	Tuesday, April 24, 2007
Region Complete Fieldwork	Thursday, August 30, 2007
Fieldwork Verification and Report Writing Story Conference	Thursday, September 13, 2007
Region Completes Draft Report	Thursday, October 25, 2007
HQ Completes DR Review	Friday, November 09, 2007
Region Completes Changes to Report, Hold Exit Conference, and Distribute Report	Tuesday, December 04, 2007
Region Receives Response from Auditee	Thursday, January 03, 2008
Region Completes Review of Response and Prepared Final Report	Friday, January 18, 2008
HQ Final Review and Approve	Monday, January 28, 2008
IG Signs Final Report	Monday, February 11, 2008

**Budget Estimate:**

**Survey Phase Travel Budget Estimate:**

Entrance Conference in Washington D.C.: \$7,000  
 Potential Site Visits: \$5,000

**Training Estimate:** \$ 0

**Estimated Staff Days:** 4 FTE's, 30 calendar days

**Staff Assignments:**

Unless a specific team member is specified, team members are responsible for completing each survey step for their assigned bureau(s) or office(s):

DOI: Sean Pettersen  
 SOL: Sean Pettersen  
 FWS: Sean Pettersen  
 NPS: Sean Pettersen

BLM: Stephanie Christian, Bill McMullen, and John Illson  
 BOR: Stephanie Christian  
 USGS: Stephanie Christian  
 BIA: Bill McMullen

**Survey Steps:**

Survey Step	Staff	Work Paper Reference
<b>A. Administration</b>		
1. Prepare and issue an Announcement Letter	Bill	A.02 Announcement Memo
2. Conduct entrance conference with DOI and Bureau officials to explain the focus of our survey.	Team	
3. Prepare the Statement of Independence.	Bill	A.01 Statement of Independence
4. Maintain a Contact Log. Record the name, title, bureau/office, phone, email, and location for all individuals contacted during the audit.	Team	A.05 Points of Contact
5. Document any information prepared for the Pre-Survey Story Conference, including minutes from the meeting.	Sean/Bill	See This Workpaper
6. Prepare the Survey Plan and Program, including milestones and travel estimates. Obtain management approval.	Team	See This Workpaper
7. Maintain an ongoing log of team meetings and prepare a brief summary of any significant conclusions resulting from the meetings.	Bill	A.06.01 Survey Team Meetings
8. Plan and arrange a post-survey story conference, including preparation of a briefing document summarizing the results of the survey.	John	
9. Hold post-survey story conference to summarize results of survey, make a go/no go decision, and identify additional work to be performed as well as timeframes and resources required to accomplish the work, if necessary.	Stephanie/Team	
10. Prepare a preliminary Audit Plan and Program, including milestones and travel estimates. If applicable, present alternative approaches. Obtain management approval. Conduct a post-survey briefing with Headquarters Officials	Team	
11. Complete the Quality Assurance Checklist	Bill	
12. Summarize indicators of fraud or abuse and determine appropriate steps to address risk factors.	Bill	
13. Prepare index of hard copy references	Bill	
14. Flowchart the mitigation process for AML sites (from identification to closing).	Team	
<b>B. Background</b>		
1. Review past OIG, PART, and GAO reports and summarize the results of any prior audit coverage of safety risks related to AML sites.	Stephanie	
2. Review bureau budget justifications for FY 2005 & FY 2006 to identify AML issues.	Sean	
3. Identify funding sources available addressing Bureau AML issues (e.g. Fee Demo Funds, Central Hazmat Funds, Soil and Water Appropriations etc.)	Team	
4. Obtain and review department and bureau strategic plans. Identify any strategic goals related to the review. (GPRA)	Team	
5. Obtain DOI Accountability Report for FY 2005 & FY 2006 and identify any reported weaknesses that relate to the audit. (FMFIA)	Sean	
6. Determine whether any applicable internal reviews or assessments have been performed on safety-related AML issues (e.g. Management Control Reviews)	Team	
7. Obtain and evaluate regulations and laws related to safety on Abandoned Mine Lands.	Team	
8. Identify DOI and Bureau organizational structures related to AML, and obtain and review mission statements. Identify responsible officials and their duties (e.g. are AML positions collateral or full time? What are position descriptions and qualifications for these officials?)	Team	

9. Determine bureau responsibilities for mitigating safety hazards resulting from abandoned hard rock mines and other mining activities (quarries) on DOI land.	Team	
10. Contact the Solicitor's Office and: <ul style="list-style-type: none"> <li>Identify claims settled, and the amounts paid, for injuries or fatalities that occurred on AML sites since 1990.</li> <li>If available, obtain estimates of contingent liabilities resulting from injuries or fatalities that occurred on AML sites since 1990.</li> </ul>	Sean	
11. Identify OSM allocations to states for AML sites.	Bill	
<b>C. Identify AML sites with significant safety hazards on all DOI lands.</b>		
1. Obtain inventories and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.	Team (Stephanie will compile)	
2. Determine how bureaus ensure that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)	Team	
<b>D. What processes do DOI and its Bureaus have for Identifying and tracking fatalities and injuries resulting from AML sites.</b>		
1. Obtain data for fatalities and injuries on DOI land from sources including the following: <ul style="list-style-type: none"> <li>DOI and its Bureaus, including the Safety Management Information System (SMIS) and the Abandoned Mine Module (AMM)</li> <li>Mine Safety Health Administration (MSHA)</li> <li>States</li> <li>Internet Searches and prior audits</li> </ul>	Stephanie	
2. Summarize fatality and injury data to identify overall statistics and compare the lists to identify inconsistencies.	Stephanie	
3. Contact selected field offices and parks where fatalities and injuries have occurred to identify potential site visits.	Stephanie & Sean	
<b>E. What processes do DOI and its bureaus have for Prioritizing AML sites based on safety risks?</b>		
1. Obtain criteria for prioritizing AML sites.	Team	
2. Obtain the prioritized list of AML sites from each bureau and relevant field offices and parks.	Team	
<b>F. What processes do DOI and its bureaus have for mitigating known AML safety hazards on DOI lands.</b>		
1. Obtain a list of all known abandoned mines that have been mitigated over the past 10 years	Team	
2. For known injuries and fatalities, what have the bureaus done to mitigate safety risks at the site?	Team	

Work Papers will be numbered sequentially in AutoAudit. Team members will indicate the bureau in the number (e.g. A.NPS.01). Team Members will indicate the Survey Step Number in the "subsection" and may include the step being addressed in the WP purpose.

**Methodology:**

Pre-survey story conference held 3/6-7/2007 at Lakewood OIG office. Survey Plan was reviewed by RAM with team on 3/8/07 and approved.

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/07/2008 09:38 24 AM

[Linkage Information](#)

**History**

**Status** Approved **Request Review**  
**In Progress Edit** John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: William McMullen 03/08/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 06.01 **Subsection** Survey A.7  
**Program Name** Administration  
**Subject** Survey Team Meetings

**Origination Doctlink** ■

**Purpose:**  
 Document team meetings.

**Scope:**  
 Audit of Public Safety Issues on Abandoned Mine Lands

**Source:**  
 Notes from team meetings as recorded below.

**Conclusion:**  
 See table below.

**Details:**  
 Who: J= John Illson  
 B= Bill McMullen  
 St= Stephanie Christian  
 Se= Sean Pettersen

Date	Who	Key Issues Discussed	Decisions/Actions/Conclusions	Input By:
3/9/07	J, B, St, Se	<p>NPS (Sean): Denver is lead for all NPS on AML. John Burkhardt is contact; inventory is incomplete, done in early 1980's, now using interns to update; Death Valley estimates 10,000 openings whereas NPS inventory lists around 9,000 total, so big disconnect</p> <p>CA BLM (Steph): talked to all field offices, only 1 updates AMM, most don't know what AMM is or how to update; offices have their own priority lists, highest priority sites sent to State offices; no offices knew IG had requested a priority list for this audit; USGS dug many test holes (150' deep), took the tailings and never filled holes (? why didn't BLM require USGS to do this mitigation)</p> <p>No reqmts found so far for bureaus to report and track visitor injuries and fatalities; how can BLM Strat Plan prioritize AML using injuries/fatalities if this data is not tracked?</p> <p>Overall, inventory is inconsistent, fields not defined to track key parameters (e.g., where the site is) lack of bureau direction regarding consistent inventories may be a key <b>cause</b></p>	<p>Team members start keeping a list of the various <b>conditions</b> we are finding regarding inventories, injuries/fatalities, prioritization and mitigation</p> <p>Illson sent email to George Stone regarding inventory issues we are beginning to discover</p>	WHM
3/19/07	J, B, St, Se	<p>Discussed NPS incidents in Death Valley and Lake Mead; Sean focusing Survey trip on those sites</p> <p>Discussed BLM sites in CA for Survey visit, esp Ridgecrest FO, Barstow FO</p> <p>J. reiterated that we need to focus on key conditions in the field, e.g. areas where physical safety issues have resulted in incidents</p>	None	WHM
3/22/07	J, B, St, Se	<p>Disc memo to RAM on status of survey and possibility of preparing several separate audit reports.</p> <p>Disc. Kelly Mine in CA, a likely separate report, and apparent lack of attention over the years paid</p>		WHM



**Assignment Workpaper**

Prepared by: William McMullen 03/22/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 06.02 **Subsection** Survey A.7  
**Program Name** Administration  
**Subject** Survey Briefings and Memos

**Origination Doclink** [Redacted]

**Purpose:**  
 Document Survey briefings and memos.

**Scope:**  
 Audit of Public Safety Issues on Abandoned Mine Lands

**Source:**  
 See links in Details Section.

**Conclusion:**

**Details:**

Date	Type	Subject	From	To	Document Link
3/22/07	email	AML	J. Illson	J. Rouch	[Redacted] Email
5/10/07	powerpoint	OIG Observations to date	J. Illson	BLM AML/HazMat Workshop in Lakewood	 Abandoned Mines Power Point 5-09-07.ppt
5/11/07	handout	Post Survey Briefing	J. Illson	IG	 Survey Briefing for IG.PDF
5/14/07	word document and PDF document	BLM - AML / Haz Mat Workshop: Discussion Write-Up	T. Gumataotao	J. Illson	 BLM AML workshop- Discussion.doc  Attendance - BLM AML workshop.pdf
5/14/07	word document	Post Survey Briefing: Discussion Write-Up	T. Gumataotao	J. Illson	 Survey Briefing.doc

**Methodology:**  
 Catalogued emails, briefings and memos regarding AML audit.

Submission: Submitted William McMullen 01/23/2008 08:07:40 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 01:41 51 PM

[Linkage Information](#)

**History**

**Status** Approved **Request Review**

**In Progress Edit** Guest\_Theresa Gumataotao/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: William McMullen 02/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 07 **Subsection**  
**Program Name** Administration  
**Subject** Audit Plan and Program

**Origination Doctlink** ■

**Purpose:**  
Prepare audit plan and program with milestones and travel estimates.

**Scope:**  
DOI Abandoned Mine Land Activities.

**Source:**  
Abandoned Mine Land Audit Team Members.

**Conclusion:**  
The conclusion and the links to work papers will be done in the individual Assignment Program/Summary Work Papers.

**Details:**

■ **C-IN-MOA-0004-2007**  
**Audit of Public Safety Issues on Abandoned Mine Lands**  
**Audit Plan and Program**

**Audit Objective**

Do DOI and its bureaus have an adequate AML program to protect public health and safety? Specifically, do DOI and its bureaus:

- Identify inventory, and prioritize high priority sites
- Have adequate program funding

■ During the post field work report writing story conference, the Audit Objective was restated as follows:  
■ To determine if the DOI and its bureaus are effectively protecting the public from physical safety and environmental hazards at abandoned hardrock mine sites (**Non-Coal Sites**) located on federal lands.

For the Draft Report, the phrase (Non-Coal Sites) was removed from the objective for simplicity since hardrock implies non-coal sites. The AML Program Handbook **J.BLM.13 BLM AML Program Policy Handbook** ■ defines hardrock as follows on page 83:

**Hardrock:**  
This term is used here strictly in the context of the AML program and has traditionally been used by the BLM and other agencies to apply to non-coal mining environments where environmental risks such as acid-mine drainage, heavy metal contamination, and threats to water quality and the environment are of concern. Hardrock minerals in this context, generally include, but are not limited to gold, silver, copper, lead, zinc, magnesium, nickel, molybdenum, tungsten, uranium, and select other minerals where priority AML problems may occur. Most hardrock minerals are locatable under the Mining Law of 1872. Non-hardrock minerals include coal (which is addressed by the Office of Surface Mining and State coal reclamation programs) and some common variety mineral materials, such as sand and gravel.

**Audit Scope**

The audit will include abandoned mine lands on federal property managed by BLM, NPS, **U S Fish and Wildlife Service** ■ (**FWS**), and the **Bureau of Indian Affairs** ■ (**BIA**). The audit will focus on physical safety issues due to public access to abandoned mines. Environmental contamination issues associated with abandoned mine lands will not be an audit focus; if such issues occur at mines where public safety issues are discovered, they will be noted.

Audit Scope below was written for Draft Report:

"Our audit focused on abandoned hardrock mine lands on federal property in the Western U.S. We concentrated on lands in California, Nevada and Arizona, three states with a significant mining legacy **G.02 Legacy of Hardrock Mining** that receive no funds collected for reclamation of abandoned mines under the Surface Mining Control and Reclamation Act **G.01 SMCRA**. This Act primarily supports reclamation of abandoned coal mines. In addition, population growth **G.03 Population Growth** and wider recreational use **G.04 OHV Use** of federal land in these states is increasing the risks from AML hazards. After reviewing AML issues and inventories for NPS **C.NPS.01 NPS AML Inventory**, BLM **F.BLM.03 BLM AMM Data - Mitigated Sites** **F.BLM.04 BLM AMM Data - Remediated Sites**, USFWS **C.FWS.01 FWS AML Inventory** and BIA **C.BIA.01 BIA AML program**, we limited our field work to lands managed by the NPS and BLM. We also evaluated Departmental programs and efforts to deal with abandoned mine lands." **A.03.01 Initial Discussion with OEPC** **G.DOI.04 Discussion with CHF and AML staff**

The Department-wide audit will be done in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States.

**Audit Steps**

<b>G - Audit Background</b>			
<b>Audit Step</b>	<b>Staff</b>	<b>Justification for Step Addition or Removal</b>	<b>Work Paper Reference</b>
1. Document the justification for performing the AML audit.	Stephanie		Work paper references are shown in the individual assignment summary work papers for each section of the audit.
2. Determine the background of the AML program in DOI <del>and its bureaus.</del>	Stephanie		
3. Document relevant information putting the AML program and AML hazards in perspective	Team	Added to include basic information about population, land use, etc that highlights growing hazards of AML sites.	

<b>H – National Park Service (Overall)</b>		
<b>Audit Step</b>	<b>Staff</b>	<b>Work Paper Reference</b>
Obtain inventories from NPS and Parks and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.	Sean	Work paper references are shown in the individual assignment summary work papers for each section of the audit.
Determine how NPS ensure that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)	Sean	
Determine if the NPS has a specific AML policy for staff and visitor safety.	Sean	
Obtain NPS criteria for prioritizing AML sites.	Sean	
Does NPS adequately inform the public about abandoned mine hazards at the visitor centers, in literature, or on the websites?	Sean	

<b>I – National Park Service (Site Visits)</b>		
<b>Audit Step</b>	<b>Staff</b>	<b>Work Paper Reference</b>
Obtain the prioritized list of AML sites from each Park visited and obtain any supporting documentation for the prioritization, location and characterization of all known mine openings at sites visited (i.e. Randsburg).	Sean	Work paper references are shown in the individual assignment summary work papers for each section of the audit.
Determine why prioritized, mitigated or other sites are not entered into the Park inventory. (i.e. don't ask - don't tell, training, other priorities or other reasons). Estimate number of known sites not entered into the Park inventory.		
Obtain an inventory of all known abandoned mines that have been mitigated and details on the mitigation performed over the past 10 years at each Park visited. Mitigation includes temporary and permanent closures, fences and signs posted at the site.	Sean	
For known injuries and fatalities, what have the Parks done to mitigate safety risks at the site?	Sean	
Determine if NPS performs and maintains documentation on site inspections and re-inspections of high priority sites including those with prior mitigation.	Sean	
Has NPS closed public roads or trails to limit public access to dangerous old mining structures and mine openings.	Sean	
Discuss and evaluate the methods available and used for temporary and permanent closure of mines.	Sean	
Determine if NPS has requested specific funding for mitigating high risk sites including those with high mitigation costs. If so, obtain all documentation supporting prior funding requests.	Sean	
Determine if Parks have any documented plans to mitigate the highest risk sites? (i.e. risks assessment, mitigation required and cost estimates). If not, why not?	Sean	

Have Parks designated or determined whether any mine openings have historic value? What is the criterion for designating an opening as historic?	Sean	
Does NPS take any action to encourage site visits (i.e. site identification on visitor publications) and do they ever mitigate hazards at those sites?	Sean	
Aside from on site warnings does NPS have any documented warnings to the public on the dangers of AML sites (i.e. public brochures or internet access provided by BLM)?	Sean	
Do Parks have any realistic plans to mitigate the highest priority sites? If not, why not?	Sean	
Obtain details on Mike Ward's experience (Keene Wonder Mine).	Sean	
Have Parks requested specific funding for mitigating sites?	Sean	

**J – Bureau of Land Management (Overall)**

Audit Step	Staff	Justification for Step Addition or Removal	Work Paper Reference
1. Document BLM AML program (policy, procedures, budget, authorities)		Added this step to adequately describe BLM's AML program.	Work paper references are shown in the individual assignment summary work papers for each section of the audit.
2. Document injuries or fatalities at abandoned mine sites on BLM land.		Added this step, in addition to work done in Survey, to describe health and safety issues related to AML sites.	
3. Obtain inventories from BLM and Parks and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.			
4. Determine how BLM ensures that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)			
5. Determine if the BLM has a specific AML policy for staff and visitor safety.			
6. Obtain BLM criteria for prioritizing AML sites.			
7. Does BLM adequately inform the public about abandoned mine hazards at the visitor centers, in literature, or on the websites?			
8. [REDACTED]		[REDACTED]	

<del>dedicated funding.</del>	evolved.
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**K – Bureau of Land Management (Site Visits)**

Audit Step	Staff	Justification for Step Addition or Removal	Work Paper Reference
1. Provide background information on sites visited.		Added step to adequately describe AML sites visited by OIG.	Work paper references are shown in the individual assignment summary work papers for each section of the audit.
[REDACTED]		[REDACTED]	
3. What are the safety and environmental hazards at sites visited?		Added to further describe specific hazards at sites visited by OIG.	
4. What is the process by which sites with safety and environmental hazards are prioritized for mitigation.		Added to describe how sites are prioritized for mitigation.	
5. What has BLM done to address safety and environmental hazards at sites visited?		Added to provide information of what BLM is doing to mitigate hazards at sites visited by OIG.	
6. Obtain the prioritized list of AML sites from each BLM office visited and obtain any supporting documentation for the prioritization, location and characterization of all known mine openings at sites visited (i.e. Randsburg).			
7. Determine why prioritized, mitigated or other sites are not entered into the AMM inventory. (i.e. don't ask - don't tell, training, other priorities or other reasons).		[REDACTED]	
8. Obtain an inventory of all known abandoned mines that have been mitigated and details on the mitigation performed over the past 10 years at each BLM office visited. Mitigation includes temporary and permanent closures, fences and signs posted at the site.			
9. For known injuries and fatalities, what have BLM offices done to mitigate safety risks at the site?			
10. [REDACTED]		[REDACTED]	
11. Has BLM closed public roads or trails to limit public access to dangerous old mining structures and mine openings.			
12. Discuss and evaluate the methods available and used for temporary and permanent closure of mines.			
13. Determine if BLM has requested specific funding for mitigating			

high risk sites including those with high mitigation costs. If so, obtain all documentation supporting prior funding requests.			
14. Determine if BLM offices have any documented plans to mitigate the highest risk sites? (i.e. risks assessment, mitigation required and cost estimates). If not, why not?			
15. [REDACTED]		[REDACTED]	
16. [REDACTED]		[REDACTED]	
17. Aside from on site warnings does BLM have any documented warnings to the public on the dangers of AML sites (i.e. public brochures or internet access provided by BLM)?			

<b>L. Best Practices</b>		
<b>Audit Step</b>	<b>Staff</b>	<b>Work Paper Reference</b>
1. Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.  a. Identify potential best practices to suggest to the Department to use in its abandoned mine land program.	Team	Work paper references are shown in the individual assignment summary work papers for each section of the audit.

<b>M. BLM Authorities</b>		
<b>Audit Step</b>	<b>Staff</b>	<b>Work Paper Reference</b>
1. Determine the authority, if any, for BLM to mitigate immediate hazards at abandoned mines where there is an inactive claimant who objects to mitigation that would limit access to minerals.	Marsh	Work paper references are shown in the individual assignment summary work papers for each section of the audit.
2. Has BLM developed policy and procedures that address the mitigation of immediate hazards at abandoned mines with inactive claimants?	Marsh	

3. When immediate hazards exist on an abandoned mine site, has BLM contacted current mining claimants to inform them of BLM's intention to perform mitigation?	Marsh	
4. Has BLM performed hazard mitigation at any abandoned mine site with an inactive claimant? (I.E. Saginaw). If so, document these efforts.	Marsh	
5. Has BLM taken any mitigation action over any inactive claimant's objection that the action limited the claimant's access to minerals? If so, document these efforts.	Marsh	
6. To protect the public health and safety from immediate hazards, what authority does BLM have to restrict the filing of claims on abandoned mine lands (i.e. withdrawal, or other).	Marsh	
7. Has BLM developed policy and procedures for restricting the filing of claims at abandoned mines when such claims would jeopardize public health and safety?	Marsh	
8. Has BLM ever actually prohibited the filing of a new claim on disturbed lands to prevent further degradation and thereby protect the public health and safety? If so, document these efforts.	Marsh	

**Staff Assignments:**

Unless a specific team member is specified, team members are responsible for completing each survey step for their assigned bureau(s) or office(s):

- DOI: Team
- SOL: Sean Pettersen
- NPS: Sean Pettersen, Greta Bloomfield
- BLM: Stephanie Christian, Greta Bloomfield, Bill McMullen, Dennis Marsh and John Illson
- BIA: Bill McMullen, Stephanie Christian
- FWS: Sean Pettersen

**Travel Estimate:**

**Audit Phase Travel Budget Estimate:**  
 Potential Site Visits: \$50,000

**Milestones:**

Entrance Conference	Tuesday, March 13, 2007
Complete Survey Work	Thursday, April 12, 2007

Post-Survey Story Conference	Tuesday, April 24, 2007
Region Complete Fieldwork	Thursday, August 30, 2007
Fieldwork Verification and Report Writing Story Conference	Thursday, September 13, 2007
Region Completes Draft Report	Thursday, October 25, 2007
HQ Completes DR Review	Friday, November 09, 2007
Region Completes Changes to Report, Hold Exit Conference, and Distribute Report	Tuesday, December 04, 2007
Region Receives Response from Auditee	Thursday, January 03, 2008
Region Completes Review of Response and Prepared Final Report	Friday, January 18, 2008
HQ Final Review and Approve	Monday, January 28, 2008
IG Signs Final Report	Monday, February 11, 2008

### Audit Methodology

The following methodology was used during the audit, which was conducted between March 2007 and January 2008:

Our audit was conducted between March 2007 and January 2008.

To accomplish the audit objective, we:

1. Conducted the audit in accordance with Government Auditing Standards issued by the Comptroller of the United States. (See audit Scope above)
2. Included tests of records and other audit procedures that were considered necessary. [F.02.01 Red Mountain land conveyances](#) (see blue highlighting) [C. Survey-Inventory](#) [J.BLM.02 BLM AMM Data - AMM Deficiencies](#)
3. Gained an understanding of applicable laws and regulations and the Department's and bureaus' abandoned mine lands (AML) programs. [G.01 SMCRA](#) [G.DOI.03 FLPMA](#) [B.BLM.08 BLM Manual 3720 Abandoned Mine Land Program Policy](#) [B.BLM.04 Federal Authority to Close Lands](#) [B.BLM.10 BLM Post FLPMA Sites](#) [B.NPS.04 NPS Policy and Procedure for AML](#) [G.08 EPA AML Reference Notebook](#) [J.BLM.25 Surface Management under Mining Laws](#) [J.BLM.26 Use and Occupancy under Mining Laws](#) [J.BLM.27 Trespass under FLPMA](#) [C.NPS.05 NPS Roles and Responsibilities for Disturbed Land Restoration](#)
4. Conducted a limited review of data to identify accidents resulting in fatalities or injuries at AML sites. [G.07 MSHA Incident Data](#) [F.NPS.01 Fatality at Death Valley National Park](#) [F.NPS.02 Fatality at Joshua Tree National Park](#) [F.NPS.03 Fatality at Lake Mead Recreation Area](#) [K.BLM.American Flat.01 Safety Issues](#) [K.BLM.Virginia City.03 AML deaths](#) [K.BLM.Arizona.08 ATV Death](#) [D.BLM.04 Fatality near Beaty, NV](#) [D.BLM.02 Utah Injuries and Fatalities](#) [D.BLM.03 Fatalities and Injuries in the Safety Management Information System \(SMIS\)](#) [D.BLM.CASTOffice.01 BLM CA State Office Injuries/Fatalities](#)
5. Reviewed Department, bureau and other systems used to report on accidents at AML sites resulting in fatalities or injuries. [D.NPS.01 NPS- Injuries and Fatalities](#) [D.BLM.01 DOI and BLM Incident Reporting](#) [D.DOI.01 SMIS Reporting Requirements](#)
6. Analyzed management processes for identifying, reporting, prioritizing, and mitigating physical safety and environmental hazards at AML sites. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) [I.NPS.04 Mitigation at fatality sites](#) [I.NPS.JOTR.03 Mitigation Efforts Performed Over the Years](#) [F.BLM.03 BLM AMM Data - Mitigated Sites](#) [F.BLM.04 BLM AMM Data - Remediated Sites](#)  
[\\*Reporting Management's Response to Draft Report](#) See also individual workpapers referenced in site visits as cross indexed in [I. Assignment Program/Summary Workpaper](#) and [K. Assignment Program/Summary Workpaper](#)
7. Interviewed Departmental and bureau officials at the headquarters, regional, and field office levels. [I. Assignment Program/Summary Workpaper](#) [J. Assignment Program/Summary Workpaper](#) [K. Assignment Program/Summary Workpaper](#)
8. Visited selected bureau offices to review records and AML sites to assess the nature of safety and environmental hazards. We selected sites based on knowledge gained from bureau officials, prior accident locations, and priority of hazards as identified in bureau plans or by bureau officials. [J. Assignment Program/Summary Workpaper](#) [K. Assignment Program/Summary Workpaper](#)
9. Identified best practices within bureaus and from outside entities for mitigation of AML hazards. [L. Best Practices](#)

**Methodology:**

The audit team met and prepared the above audit plan and program.

Submission:	Submitted	William McMullen	05/05/2008 03:23 58 PM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	06/02/2008 01:43:13 PM

[Linkage Information](#)

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**In Progress Edit** Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Assignment Workpaper**

Prepared by: William McMullen 01/23/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 07.01 **Subsection**  
**Program Name** Administration  
**Subject** Audit Team Meetings

**Origination Doclink** ■

**Purpose:**  
 Document audit team meetings.

**Scope:**  
 AML audit

**Source:**  
 Notes from team meetings as summarized below.

**Conclusion:**  
 See Table below.

**Details:**

KEY:  
 J: John Illson  
 W: Bill McMullen  
 SE: Sean Pettersen  
 ST: Stephanie Christian  
 G: Greta Bloomfield  
 T. Theresa Gumataotao

Date	Who	Key Issues Discussed	Decisions/Actions/Conclusions	Input By:
4/11/07	J, W, Se, St	quarries and whether they should be included in audit  post FLPMA sites that have inadequate bonds are really abandoned but are not included in BLM's AML program.  Dedicated team to inventory sites is attractive for BLM.	Decided not to include quarries in audit.  Need for targeted inventory is paramount since all previous attempts to obtain a comprehensive inventory have failed.  Focus of audit is on "dry" sites not normally addressed by the soil, air and water pollution \$\$\$. Most mercury contaminated sites funded by air, soil and water \$\$ are "wet" sites.	McMullen
5/16/07	J, W, Se, St, G	Flash report for Death Valley, Keane Wonder Mine would also include issues at Greenwater results of survey briefing to IG possible sites in Virginia City and Tonopah SMCRA states and who gets funding need population of towns in Rand Mining District Sean, Theresa and Greta to Joshua Tree in early June per Dick Forester, mining claims are saleable even if not patented, e.g. 999+ in Red Mountain can buy claims from Mines Explor. Bill and John to Ridgecrest in late May		McMullen
5/31/07	J,W,T, Se,St,G	staffing of team and potential unavailability of Greta due to other audits reviewed John and Bill trip to Ridgecrest and Rand Mining District Sean has finalized a draft Flash Report for Death Valley Stephanie continued work to evaluate inventory and latest attempts (Saginaw IM) to identify most		McMullen

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

A 07.01 Audit Team Meetings

		important sites		
6/13/07	J,W,Se, St,G,T	BLM NV has six field offices Death Valley Flash Report is in final review by Jack Randsburg Flash Report is in process George Stone briefed Secty Allred and noted that we should focus on critical issues related to AML, e.g., not just safety issues BLM NV has no inventory and thinks this is a state function	Decided to visit AML sites and BLM NV field offices at Elko, Las Vegas and Carson City (later decided to visit Ely instead of Las Vegas because the Las Vegas office gets substantial funds from SNPLMA for AML issues.  Expanded audit scope to include both safety and environmental issues at AML sites	McMullen
6/20/07	J,W,Se,T	reviewed status of audit		McMullen
7/26/07	J,W,Se, St, G,T	HQ view that too many flash reports were being issued Stephanie reviewed her calls to AZ, status of AMM and steps taken to mitigate Saginaw AMM: poor data quality, cannot be used for prioritization, not all sites in AMM, sites that are mitigated are not being put into AMM by all field offices	Decided to prepare NPFR's for Death Valley and Barstow	McMullen
8/8/07	J,W,Se,St	trips: Sean and Greta to AZ in late August to visit NPS (Last Chance and Grandview mines at Grand Canyon) and BLM sites John and Bill to Ely and Elko NV field offices in late August Rand Flash Report is drafted and got Jack's comments Greta reviewed status of Site Cleanup Module		McMullen
8/23/07	J,W,Se,St,G	should we recommend BLM send letters to claimants to warn of hazards and encourage mitigation Greta found a database of claimant names Stephanie will finish the inventory workpaper before maternity leave Stephanie calls to AZ: field offices not real cooperative, AZ doen not inventory sites but had previously contracted with State Mine Inspector to do this: about 2000 sites in AMM but this is not all sites in AZ Ely had examples of sites were claimant went bankrupt and left BLM holding the bag; BLM now trying to negotiate with new potential claimants for cleanup under a Brownfields approach		McMullen
9/6/07	J,W,G	site where girl died near [REDACTED] should we visit the site? called George Stone for suggestions on sites to visit in AZ Grand Canyon sites with radon had low readings but the headframe on top of he canyon had high radiation readings	Decided to visit Kingman AZ and the area near Chloride where the fatality occurred	McMullen
10/10/07	J,W,Se,G	reviewed photos of Sean/Greta trip to Kingman reviewed photos of John and Bill trip to NV and AZ (Elko, Ely, Phoenix, Quartzsite)		McMullen
11/14/07	J,W,Se,G	status of field work NPS: finish Joshua Tree writeup Greta is finishing best practices writeups outline of audit report and relevant sections Sean and Greta to work on "photo book" for IG post field work briefing		McMullen
12/5/07	J,W,Se,St	presentation to AMM users' group photo book for IG briefing audit report format	Sean to take lead on formatting report in Word	McMullen
1/22/08	J,W,Se	noted hat Greta and Stephanie have been reassigned to RIK job no word yet from HQ re. comments on report Connie con inues to reference draft report and all her comments so far have been addressed (not all cleared by Connie yet)		McMullen

**Methodology:**

Documented meetings of audit team in table above.

Submission: Submitted William McMullen 05/05/2008 03:24 55 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 01:44:46 PM

**Linkage Information**

**History**

**Status** Approved **Request Review**

**In Progress Edit** William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: Greta Bloomfield 06/25/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 08 **Subsection**  
**Program Name** Administration  
**Subject** DOI Org Chart/OIG Contacts

**Origination Doclink** ■

### **Purpose:**

To determine the correct title for the Assistant Secretary of Land and Minerals Management

### **Scope:**

Key officers of the U.S. Department of the Interior

### **Source:**

[http://www.doi.gov/secretary/officials\\_orgchart.html](http://www.doi.gov/secretary/officials_orgchart.html)

Names of DOI officials found at <http://www.doi.gov/secretary/officials.html> and shown below.

OIG contacts found at <http://www.doioig.gov/index.php?menuid=428&viewid=567&viewtype=PAGE> and shown below:

OIG contact phone number found at <http://www.doioig.gov/> and shown below:

Address of OIG found at <http://www.doioig.gov/index.php?menuid=403&viewid=539&viewtype=PAGE> and shown below:

OIG reporting to Congress found at <http://www.ignet.gov/igs/faq1.html> and shown below:

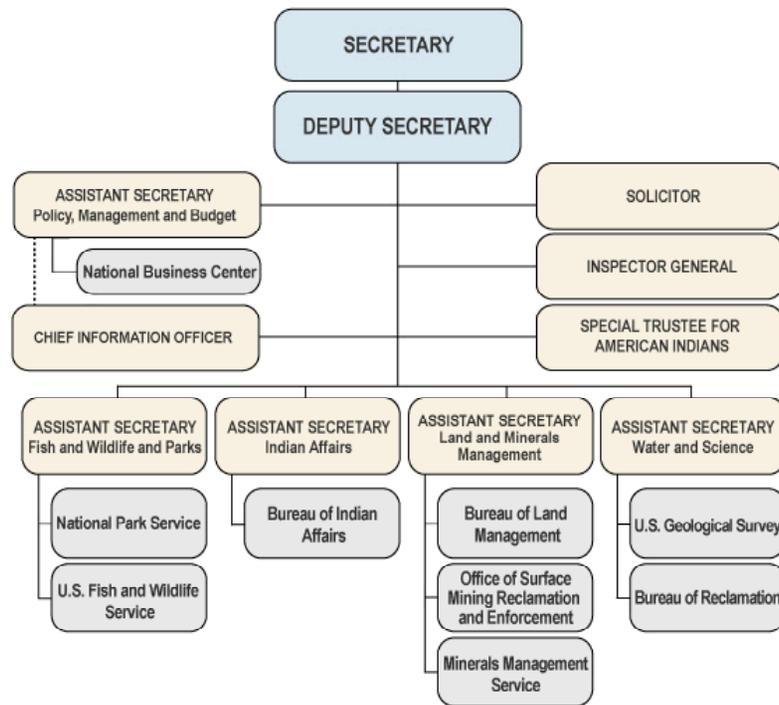
### **Conclusion:**

The Assistant Secretary Land and Minerals Management is the correct title for this position, as noted in the organizational chart on [www.doi.gov](http://www.doi.gov).

### **Details:**

## U.S. Department of the Interior

Click on the office for more information



### DOI Key Officials

The Department of the Interior is managed by Dirk Kempthorne and Deputy Secretary P. Lynn Scarlett, five Assistant Secretaries, and eight Bureau Directors. All of Interior's Presidential appointees confirmed by the Senate have significant experience managing federal and state agencies, and/or non-profit associations. Several of these appointees also have significant private sector experience.

#### DOI's Leadership Team

- **Dirk Kempthorne** - Secretary of the Interior
- **P. Lynn Scarlett** - Deputy Secretary
- **David Bernhardt** - Solicitor of the Interior
- **Vacant** - Assistant Secretary, Policy Management and Budget
- **Lyle Laverty** - Assistant Secretary, Fish, Wildlife and Parks
- **C. Stephen Allred** - Assistant Secretary, Land and Minerals Management
- **Vacant** - Assistant Secretary, Water and Science
- **Vacant** - Assistant Secretary, Indian Affairs
- **Mary A. Bomar** - Director, National Park Service
- **Dale Hall** - Director, U.S. Fish and Wildlife Service
- **James L. Caswell** - Director, Bureau of Land Management
- **Brent Wahlquist** - Director, Office of Surface Mining Reclamation and Enforcement
- **Mark Myers** - Director, U.S. Geological Survey
- **Randall Luthi** - Director, Minerals Management Service
- **Robert W. Johnson** - Commissioner, Bureau of Reclamation
- **Ross Swimmer** - Special Trustee for American Indians

#### Additional Departmental Senate confirmed Presidential appointees include:

- **Earl Devaney** - Inspector General
- **Phil Hogen** - Chairman, National Indian Gaming Commission

■  
OIG contacts:

**Robert Romanyshyn**  
Assistant Inspector General for Audits

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OIG contact phone number:

■  
**CONTACT OIG**  
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Address of OIG:

**U.S. Department of the Interior - Office of Inspector General Office Locations  
1849 C Street NW - Mail Stop 4428 - Washington, D.C. 20240**

**NOTE: mail stop changed per OIG move based on auditor knowledge**

Purpose of OIG



**What is the Inspector General's (IG) mission?**

Per the Inspector General Act of 1978, as amended, the Inspector General's mission is to:

- Conduct independent and objective audits, investigations and inspections
- Prevent and detect waste, fraud and abuse,
- Promote economy, effectiveness and efficiency,
- Review pending legislation and regulation, and
- Keep the agency head and Congress fully and currently informed

**How are the results of an IG's work communicated?**

IGs issue a variety of written reports such as:

- Audit, investigative, and inspection/evaluation reports prepared in accordance with professional standards;
- Semiannual reports to the Congress that describe the work of the OIG within the reporting period; and
- Immediate correspondence to the agency head to report egregious and flagrant problems and/or abuses. The agency head then transmits this reporting, along with any comments by the agency head, to the Congress within seven days.

IGs also must report:

- Any unreasonable refusal within the agency to provide information to the agency head, or
- Suspected violations of Federal criminal law to the Attorney General.

**Methodology:**

I copied and pasted the org chart from the website.

Submission: Submitted William McMullen 07/18/2008 09:31 35 AM

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Level 2 Approval: Approved John Illson 07/21/2008 03:30 09 PM

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**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI,

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

A 08 DOI Org Chart/OIG Contacts

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**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

A 09 Post field work story conference

## Record of Discussion

Prepared by: William McMullen 12/18/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 09 **Subsection**  
**Program Name** Administration  
**Subject** Post field work story conference

**Origination Doclink** ■

### Participants

Name	Title	Office Location
John Illson	Team Lead	Lakewood
Bill McMullen	Asst Team Lead	Lakewood
Sean Pettersen	Team Member	Lakewood
Greta Bloomfield	Team Member	Lakewood
Stephanie Christian	Team Member	Lakewood
Louise Nelson	Deputy Regional Audit Manager	Lakewood
Lee Floye	Investigator (observer)	Atlanta

**Location** Lakewood OIG office

**Date/Time**

11/26/2007

### Purpose:

Develop briefing for IG and draft outline of report.

### Scope:

AML audit.

### Conclusion:

The team developed the following causes for the conditions documented in the photos and during our field work. For BLM, there were five major program deficiencies (see first attachment below).

- 1. Inadequate management and program neglect**
- 2. Highly collateralized field office staff with insufficient training**
- 3. Insufficient Program Budgeting and Marginal Funding**
- 4. AML inventory not credible**
- 5. Insufficient AML and Solid Minerals program policies and procedures including**

For NPS, two program deficiencies were developed:

- 1. Insufficient Program Budgeting and Marginal Funding**
- 2. Insufficient AML program policies and procedures**

The team also noted several best practices as follows:

- 1. Establish minimum standards of mitigation or adopt state standards utilized for mitigation.**
- 2. To reduce cost, consider outsourcing or resource sharing to manufacture standardized mine closure systems.**
- 3. Consider utilizing more trained volunteers or organizations to identify and verify inventory information on abandoned mine sites.**
- 4. Consider utilizing partnerships with other state, local and federal entities to mitigate AML hazards**

### Summary:

The team held a post field story conference during the week of 11/26/2007 and developed a briefing paper with notes for presentation to the IG scheduled on 12/12/2007. The briefing is attached:

A 09 Post field work story conference



Outline Only 12-17 Notes version.doc

A photobook showing issues found by the team during site visits was also prepared. The cover page and introductory pages are attached (file sizes preclude attachment of detail pages):



C-IN-MQA-0004-2007 Photo Briefing.pdf

Detail pages showing photos from BLM sites (Virginia City, Caselton, Rand Mining District, Barstow, American Flat and Kingman) were developed. Detail pages showing photos from NPS sites (Death Valley, Lake Mead and Joshua Tree) were developed.

A report outline was developed and is attached:



Initial Draft Report Outline.doc

Submission:	Submitted	William McMullen	01/23/2008 08:56 27 AM
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Level 2 Approval:	Approved	John Illson	06/02/2008 01:45:10 PM

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A.10 Post field work IG briefing

**Record of Discussion**

Prepared by: William McMullen 12/18/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A.10 **Subsection**  
**Program Name** Administration  
**Subject** Post field work IG briefing

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location
Earl Devaney	IG	DC
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Mike Wood	Chief of Staff	DC
Kim Elmore	Asst IG Audits	DC
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Chris Martinez	OGC	DC
Jack Rouch	Central Region Audit Manager	Lakewood
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John Illson	Team Lead	Lakewood
Bill McMullen	Assst Team Lead	Lakewood
Sean Pettersen	Team Member (by phone)	Lakewood
Greta Bloomfield	Team Member (by phone)	Lakewood
Lee Floyd	Investigator (observer)	Atlanta
Kris Kolesnik	Assoc IG Exter Affairs	DC

**Location** IG's Office in DC

**Date/Time**

12/12/2007 02:30 PM

**Purpose:**

Brief IG and HQ staff on findings of AML audit.

**Scope:**

AML audit.

**Conclusion:**

During the briefing, the IG noted that:

- photos, graphs and charts were excellent devices to communicate the importance of our findings.
- we should limit our quotes or stories to a select few that really grab the reader's attention
- we found not just a lack of funding but that there were inefficiencies in how the current funding is being used.
- DOI or BLM perhaps should issue a policy statement reiterating the importance of protecting the public from AML hazards and that placing warning signs or fences at sites does not increase federal liability for those sites (Bruce Delaplaine will get with Harvey Blank to discuss such a policy statement).
- approved purchase of A/P photo at \$175.00 for use in the audit report

**Summary:**

Using the briefing notes and photobook prepared by the team during the post field work story conference **A.09 Post field work story conference** ■, John Illson led the team in briefing the IG. John discussed the scope of the audit and noted that we focused on BLM and NPS because they control the most land with AML sites. BIA was excluded because they have no program, no inventory and claim they have created no AML hazards and that the tribes are responsible for such hazards (or EPA in the case of environmental cleanups). The IG and staff were very supportive of our findings and eager to get the report issued as soon as possible.

A.10 Post field work IG briefing

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Level 2 Approval: Approved John Illson 06/02/2008 01:45 38 PM

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**Assignment Workpaper**

Prepared by: William McMullen 01/08/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A.16 **Subsection**  
**Program Name** Administration  
**Subject** Index 1 Results/Field Mgmt/Staffing

**Origination Doclink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

**RESULTS OF AUDIT**

BLM has not adequately protected the public health and safety from the hazards posed by abandoned mines on public lands. ■ **K.BLM (Site Visits) CW** BLM's AML program has long been ineffective because it has been neglected, undermined and marginalized. ■ **J.BLM (Overall) CW**

Although NPS has been generally effective in protecting the public from AML hazards, we found instances of dangerous physical hazards that were readily accessible to the public. We believe NPS has been more effective in part due to the limited scope of their AML program, including fewer sites and restrictions on ORV use. (H. NPS (Overall) ■, ■). **CW**

We visited numerous AML sites including several where ten deaths had occurred due to safety hazards. During our visits, we identified many extremely dangerous hazards associated with accessible mine openings, dilapidated structures and mine waste contaminated with dangerous levels of environmental contaminants, such as arsenic, lead and mercury. Appendices A, B and C provide information on injuries and deaths at AML sites, our observations of physical and environmental hazards and the complete list of sites we visited. **See indexing to Appendices A,B and C CW**

We identified the following deficiencies in the AML programs that have contributed to the unmitigated hazards we found at AML sites: **CW**

- A management culture within BLM field offices that discourages the identification of unmitigated AML hazards. ■ **K.BLM.Arizona.06 Site Visits** ■ **B.02.02 Discussions with Peter Graves** ■ **C.BLM.CAStoffice.04 BLM Inventory - Don't Ast Don't Tell** ■ **C.BLM.CAStoffice.02 CA Program Oversight CW**
- Field office staff at BLM with part time AML responsibilities and insufficient training. (b) (5) ■ **J.BLM.29 AML Staff Qualifications** ■ **CW**
- A lack of a dedicated item identified in the budget (b) (5) ■ **A.03.02 Initial Discussion with George Stone CW** (for BLM) and chronic under-funding for BLM ■ **J.BLM.22 AML Strategic Plan Budget Needs (for BLM) CW** and NPS (B.NPS.03 Funding for NPS AML ■, ■). **CW**
- Residential and commercial trespass at BLM AML sites with physical safety and environmental hazards. **K.BLM.Virginia City.01 Trespass Issues** ■ **F.02.01 Red Mountain land conveyances** ■ **CW**
- Inadequate inventory of AML sites at BLM. **J.BLM.02 BLM AMM Data - AMM Deficiencies** ■ **CW**

- Insufficient management and oversight by BLM of mining claimant responsibilities with regard to site mitigation. ■ [M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures](#) CW

### BLM Field Office Management

BLM's AML program is decentralized, giving operational control and authority to field office managers. ■ [J.BLM.19 Organizational Structure](#) CW BLM has a national AML program coordinator who has developed many policies and procedures for implementing an effective program. ■ [J.BLM.13 BLM AML Program Policy Handbook](#) CW However, we found that these policies and procedures were largely ignored by field office management and staff. ■ [J.BLM.29 AML Staff Qualifications](#) CW

We noted many examples of serious unmitigated AML hazards that were tolerated because AML program line managers discouraged identifying and mitigating these hazards. ■ [K. BLM Site Visits](#) CW We found:

- Employees who were discouraged from identifying AML sites. ■ [C.BLM.CAStoffice.04 BLM Inventory - Don't Ast Don't Tell](#) CW An employee was told by a field office manager not to identify AML sites as it got in the way of other land management activities. ■ [C.BLM.FolsomFO.01 Site Inspections](#) CW Another employee stated that putting sites on an inventory is more detrimental to BLM than leaving them off because listing them acknowledges a hazard and a potential liability. ■ [K.BLM. Arizona.06 Site Visits](#) CW
- Employees who were criticized or received threats of retaliation for site identification. An employee told Department officials that there were thousands of dangerous abandoned mines within the employee's jurisdiction and was subsequently criticized by the State Office for making such a statement. ■ [K.BLM.Arizona.06 Site Visits](#) CW Several other employees told us their management threatened them for raising these issues. ■ [B.02.02 Discussions with Peter Graves](#) ■ [C.BLM.CAStoffice.02 CA Program Oversight](#) CW
- Employees who did not use warning signs and fences because they considered them ineffective or costly to maintain. In one case a BLM official stated that fencing a site was an acknowledgement that BLM knew about the site; and therefore if someone was subsequently injured at the site, BLM could face increased liability. ■ [B.02.02 Discussions with Peter Graves](#) CW
- Employees who did not sample sites that were potentially contaminated with hazardous materials. ■ [D.01.01 Interview with Linn Gum](#) ■ [D.01.02 Interview with Hector Villalobos](#) CW
- An employee who was prevented by BLM management from contacting a claimant about dangerous physical hazards at its claimsite. ■ [D.01.01 Interview with Linn Gum](#) CW
- Employees who did not identify and report residential and commercial trespassing at dangerous BLM AML sites. ■ [K.BLM.07 BLM Carson City Field Office - Terry Neumann & Ken Nelson](#) ■ [K.BLM.Virginia City.01 Trespass Issues](#) CW

NPS' AML program is decentralized, giving operational control and authority to Parks. CW NPS' Geologic Resources Division (GRD) coordinates the AML program. [46] CW Overall, NPS park units have done a better job addressing AML hazards than BLM field offices

■ [\(B.NPS.08 NPS-Office Roles and Responsibilities Related to AML\)](#) - CW ■ [\(b\) \(5\)](#) ■ CW  
Despite its progress, NPS still lacks adequate policies and procedures. A handbook has been developed in draft but has not been widely disseminated and implemented. [B.NPS.04 NPS Policy and Procedure for AML](#) ■ CW

#### Sidebar:

BLM's National AML Program Manager has little ability to implement needed changes at the field offices due to the lack of authority. ■ [J.BLM.19 Organizational Structure](#) CW

#### Sidebar:

Officials sometimes believed to limit liability, sites should not be formally identified or have warning signs and fences. ■ [B.02.02 Discussions with Peter Graves](#) CW

### BLM-AML Staffing and Training

Mitigation of AML sites is often neglected ■ [J.BLM.29 AML Staff Qualifications](#) CW because it is a minor [\(b\) \(5\)](#) part-time duty for field office personnel. These personnel often are funded by the surface management program which may have conflicting program objectives. Field office personnel often lacked adequate AML training. [\[summary of points below\]](#) CW

Part-time [\(b\) \(5\)](#) duty: ■ [B.CASToffice.02 CA AML Collateral Duty Positions](#) CW According to BLM records, 107 field office employees in California, Nevada and Arizona charged time to the AML program in 2007 (see chart below) ■ [J.BLM.31 Time Charged to AML Program](#) CW Because AML is a minor [\(b\) \(5\)](#) part-time duty for most employees, the total time charged to the program for labor accounted for only about 9 full-time employees. ■ [J.BLM.31 Time Charged to AML Program](#) CW We found that many of these employees never performed basic AML duties such as identifying sites or posting warning signs and fences. ■ [J.BLM.29 AML Staff Qualifications](#) CW

Conflicting objectives: Many AML personnel are funded primarily by the much larger surface management program. ■ [J.BLM.29 AML Staff Qualifications](#) CW This program supports active and proposed mining operations. ■ [B.BLM.05 Mitigation of other mining activities](#) CW Mine claimants may oppose AML mitigation because it can restrict their ability to mine minerals which are accessible from abandoned

mine openings and located in mine tailings piles. ■ C.BLM.RidgecrestFO KellyMine.01 Red Mountain Kelly Mine Area and Hazards CW Some BLM field office personnel were reluctant to mitigate sites because of potential conflicts with mine claimants. ■ C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program CW

Inadequate training: Successful performance of AML duties requires specific training to manage both physical safety and environmental site hazards. ■ J.BLM.29 AML Staff Qualifications CW Needed training may include mine site safety, location, recordation, characterization, mitigation, cost estimating and project management. CW In addition, staff need training to comply with complex environmental laws and regulations. CW BLM has no minimum AML training requirements and most field staff lack basic training applicable to this part-time (b) (5)-duty. ■ J.BLM.29 AML Staff Qualifications CW

We found that BLM at the Arizona State Office had responded aggressively to address the issues identified in OIG Flash Report No. C-IN-MOA-0013-2005, "Public Safety Issues at Saginaw Hill Property." ■ K.BLM.Arizona.03AZ Zoned AML Management [32] The Office hired an AML program lead with significant experience in large environmental projects ■ K.BLM.Arizona.03AZ Zoned AML Management CW and a full-time AML coordinator ■ K.BLM.Arizona.03AZ Zoned AML Management CW with an environmental background who was assigned to the Phoenix District Office. ■ K.BLM.Arizona.02 Site Visits CW This person has responsibilities for AML and hazardous materials in the 10 field offices included in the Gila and Phoenix districts. ■ K.BLM.Arizona.03AZ Zoned AML Management CW

NPS personnel also have part-time AML responsibilities H.NPS.10 NPS AML Staff Collateral Duty ■, however we believe this has not prevented the Parks from mitigating their most dangerous sites (auditor opinion). We noted that NPS has no minimum AML training requirements and most field staff lack basic training applicable to this part-time duty. [63]

**Sidebar:**

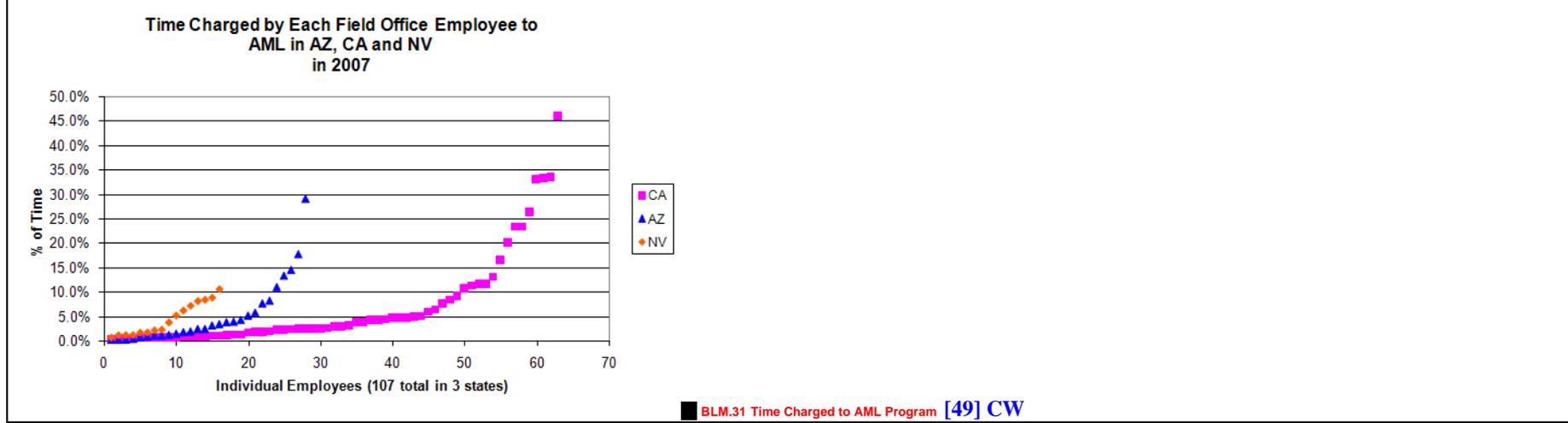
A recent BLM survey of AML field staff in AZ, CA and NV showed that: J.BLM.31 Time Charged to AML Program ■ J.BLM.29 AML Staff Qualifications ■ CW

67 percent spent less than 5 percent of their time on AML duties ■ J.BLM.31 Time Charged to AML Program [31] CW

59 percent were not knowledgeable of BLM's AML policies and procedures ■ J.BLM.29 AML Staff Qualifications CW

59 percent have not received AMM training ■ J.BLM.29 AML Staff Qualifications [48] CW

65 percent have never entered or modified AMM inventory records ■ J.BLM.29 AML Staff Qualifications CW



**Methodology:**

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Level 1 Approval:

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**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 01/07/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section A.17 Subsection  
Program Name Administration  
Subject Index 2 Inventory

Origination Doctlink ■

Purpose:

Scope:

Source:

Conclusion:

Details:

### BLM AML Inventory:

BLM has a national inventory of about 12,000 AML sites included in its Abandoned Mine Module (AMM) [G.BLM.01 BLM AML Background](#) ■ [CW](#) To be used effectively, the AMM must include data necessary for budget justification and project monitoring, tracking, and management at the national level. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [\[35\] CW](#) We found that BLM's AMM was incomplete. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [CW](#) inaccurate, and inconsistent. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [CW](#) For example:

- Much of the data in the AMM was derived from non-BLM sources that are over 10 years old and were never validated by field surveys. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [\[36\] CW](#)
- BLM field office AML staff are not identifying or entering known, high priority AML sites into the AMM database. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [CW](#) We found that:
  - For California, the AMM lists only about 400 AML sites on public land while BLM estimates the California Desert District alone has as many as 20,000 sites. [C.BLM.CAStoffice.01 BLM CA State Office - Inventory Discussion](#) ■ [C.BLM.04 BLM CA - Ridgecrest Field Office](#) ■ [\[37\] CW](#)
  - Many BLM field office staff keep local lists of dangerous AML sites that are not being entered in the AMM database. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [CW](#)
  - BLM developed an AML Strategic Plan that contains a list of approximately 200 projects. [J.BLM.22 AML Strategic Plan Budget Needs](#) ■ [CW](#) identified by the State Offices for near-term funding. This list includes AML sites that are not in the AMM. [BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [CW](#) Additionally, the Strategic Plan includes more comprehensive site information than that in the AMM. We believe the data in the Plan is more useful than the AMM for short-term planning and project management. [J.BLM.20 AML Strategic Plan](#) ■ [CW](#)
- BLM staff do not enter complete or consistent site data into the AMM database needed to locate, evaluate, monitor and track AML hazards. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [\[38\] CW](#)
- When mitigation is performed at AML sites, the data is often not entered into AMM. [J.BLM.02 BLM AMM Data - AMM Deficiencies](#) ■ [CW](#)
- BLM's AML program does not identify, inventory and mitigate hazards at sites abandoned after 1980. [B.BLM.10 BLM Post FLPMA Sites](#) ■ [\[39\] CW](#) BLM's AML [\[45\]](#) handbook defines AML sites as those abandoned prior to the implementation of the surface management regulations on January 1, 1981. [J.BLM.13 BLM AML Program Policy Handbook](#) ■ [CW](#) This definition may unduly limit site identification in that all dangerous AML sites requiring mitigation may not be identified. In June 2005, GAO issued the report "Hardrock Mining- BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs" (No. 05-377). [B.GAO.02 GAO Report on Bonding and 3809 Program](#) ■ [CW](#) The report identified 48. [B.GAO.02 GAO Report on Bonding and 3809 Program](#) ■

**CW** potential post 1980 AML sites with unfunded mitigation liabilities estimated at about \$56 million **B.GAO.02 GAO Report on Bonding and 3809 Program** ■ **CW**

A credible inventory of the most dangerous AML sites is needed to manage the program; however, a comprehensive inventory of all AML sites may not be obtainable **C. Survey-Inventory** ■ **CW** Many of the existing sites are currently so remote or of minimum danger that they might not justify mitigation at any AML funding level **C. Survey-Inventory** ■ **CW** Given the limited funds available, it is much more important that the AMM include current and credible information needed for high level program management of significant sites **C. Survey-Inventory** ■ **CW**

We found that each Park maintains an inventory of AML sites which is consolidated into a Service-wide inventory by GRD **H. NPS (Overall)** ■ ■ **CW** At the Parks we visited the AML inventories generally contained the highest priority sites **(H. NPS (Overall) ■, ■)**. **CW**

**Sidebar**

BLM's AML inventory not credible

Inaccurate inconsistent and unsupported inventory. **CW**

Chronic deficiency identified over many years **J.BLM.02 BLM AMM Data - AMM Deficiencies** ■ ■ **CW**

**Methodology:**

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**Assignment Workpaper**

Prepared by: William McMullen 01/08/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A.18 **Subsection**  
**Program Name** Administration  
**Subject** Index 3 Site Trespass

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

<p><b>BML AML Site Trespass</b></p> <p>According to a BLM official, historical trespass on public land is known to exist at many locations throughout the West. ■ <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <b>CW</b> This trespass includes commercial activities and residential development on AML sites. ■ <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <b>CW</b> Two of the AML sites we visited had trespass issues. <a href="#">See examples below</a> <b>CW</b></p> <p><b>Rand Mining District</b></p> <p>In California’s Ridgecrest Field Office, the Rand Mining District towns of Red Mountain and Randsburg had residential trespass issues. <b>CW</b> BLM allowed residents to purchase title to their properties in 1984 and 1997. <b>CW</b> In Randsburg, land titles were conveyed with clauses requiring the purchasers to indemnify (hold harmless) the government against residents’ exposure to hazardous materials from mining and other activities. <b>CW</b> Such indemnification was required even though the appraiser noted that hazardous wastes were “very likely” present in the area due, in part, to many old mines. <b>CW</b> BLM officials did not take steps to assess the validity of the appraiser’s concern. <b>CW</b> In addition, BLM environmental assessments performed prior to the conveyances were inadequate in that they did not assess the levels of arsenic contamination. ■ <a href="#">F. Land Conveyances (in Rand Mining District Audit, C-IN-BLM-0012-2007)</a> <b>CW</b></p> <p>Site sampling in the Rand Mining District in 2006 confirmed dangerous levels of arsenic contamination which is the subject of a current BLM site mitigation project. ■ <a href="#">E.04.02 BLM CERCLA Handbook and Action Memo (in Rand Mining District Audit, C-IN-BLM-0012-2007)</a> [34] <b>CW</b> We identified concerns with this site in our in OIG Flash Report No. C-IN-BLM-0012-2007, “Environmental, Health and Safety Issues at Bureau of Land Management, Ridgecrest Field Office, Rand Mining District, CA.” *Reporting Draft Report ■ [34] <b>CW</b> Arsenic contamination may impact current residents who obtained title to their properties from BLM. ■ <a href="#">F.01.01 Patents (in Rand Mining District Audit, C-IN-BLM-0012-2007)</a> <b>CW</b> Additionally, the Rand Mining District has numerous physical safety hazards that residents are exposed to including open mine shafts and dilapidated structures. ■ <a href="#">D.01.04 Photos of Red Mountain Safety Issues See photos of open shafts and dilapidated structures (Kelly mill and headframe) (in Rand Mining District Audit, C-IN-BLM-0012-2007)</a> <b>CW</b></p> <p><b>Virginia City, Nevada</b></p> <p>We found recent trespass including [51] <b>CW</b> residential and commercial development at an AML site ■ -in Virginia City, NV identified as public land on BLM maps. ■ <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <b>CW</b> Virginia City has a population of about 1,100 people and is a major tourist attraction in the area. ■ <a href="#">K.BLM.01 Virginia City, NV Population</a> <b>CW</b></p> <p>BLM’s own maps identified the land as public but ■ <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <b>CW</b> BLM officials accompanying us to the site stated that the land ownership could not be determined because of disputes with the county. ■ <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <b>CW</b> However, after this site visit, we interviewed BLM’s State Land Cadastral Surveyor who stated recent land surveys confirmed that the BLM maps of the area were accurate. ■ <a href="#">K.BLM.Virginia City.02 Cadastral Survey</a> <b>CW</b> The Surveyor later noted additional work would be required to resolve the trespass issues. ■ <a href="#">K.BLM.VirginiaCity.06 Latest Status</a> <b>CW</b></p>
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We inspected the property and found commercial enterprises including an operation that offered tours of a mill to people, recently built homes and undeveloped residential lots offered for sale. These commercial and residential activities were being conducted on public lands in trespass. [K.BLM.Virginia City.01 Trespass Issues](#) [See photos of New house, lot and house on BLM land and mill tour.](#) [CW](#) The tour site included a large and dangerously dilapidated mill building and a mine adit where two residents exploring the mine in 1996 were killed by suffocation. The adit has been gated since that incident. [K.BLM.Virginia City.03 AML deaths](#) [See photo tabs for photos of mill, adit and gate across adit](#) [CW](#)

In 1994, EPA sampled soils from the mills around Virginia City and found some sites on BLM land with concentrations of mercury and lead above the levels of concern for residential occupancy. [K.BLM.Virginia City.04 Sample Results](#) [CW](#)

Based on the existence of these two sites, it is very possible that similar other sites exist on public lands where safety or environmental hazards may endanger people in trespass. [CW](#)  
 In these cases, there is an increased risk of injury or death due to safety hazards and environmental contamination. [CW](#) DOI's efforts to mitigate these sites will be more complicated because DOI has allowed this trespass to continue for decades. [K.BLM \(Site Visits\)](#) [CW](#)

<b>Photo 1 Contaminated mine waste washed into resident's yard:</b> <a href="#">D.01.05 Photos of Red Mountain Environmental Issues (in Rand Mining District Audit, C-IN-BLM-0012-2007)</a> <a href="#">CW</a>
<b>Photo 2:</b> <a href="#">K.BLM.Virginia City.03 AML deaths</a> <a href="#">CW</a>
<b>Photo 3:</b> <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <a href="#">CW</a>
<b>Map 1:</b> <a href="#">K.BLM.Virginia City.04 Sample Results</a> <a href="#">K.BLM.Virginia City.01 Trespass Issues</a> <a href="#">[52]</a> <a href="#">CW</a>

**Methodology:**

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**Assignment Workpaper**

Prepared by: William McMullen 01/07/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A.19 **Subsection**  
**Program Name** Administration  
**Subject** Index 4 Budget

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

**BLM and NPS AML Program Budget & Funding**

Neither BLM ■ **A.03.02 Initial Discussion with George Stone** **CW** nor NPS (B.NPS.03 Funding for NPS AML ■) **CW** have dedicated items identified in the budget (b) (5) ■-for their AML programs, and their funding needs receive little visibility. ■ **J.BLM.22 AML Strategic Plan Budget Needs** **CW** As a result, the programs are not a priority and have not been allocated sufficient resources to mitigate the most dangerous AML sites. ■ **J.BLM.22 AML Strategic Plan Budget Needs, (B.NPS.03 Funding for NPS AML ■, ■)**. **CW**

BLM’s AML program has been chronically and drastically under-funded. **CW** In its AML Strategic Plan, BLM has identified funding needs of about \$130 million through FY 2013 for high priority sites. **CW** Clean up of environmental hazards in California’s Rand Mining District alone may cost over \$170 million and total costs to mitigate AML sites bureau-wide could ultimately be billions ■ **G.DOI.02 Seymour Article** of dollars. **CW** However, the program receives annual funding of less than \$10 million from various items identified in the budget (b) (5) ■. ■ **J.BLM.22 AML Strategic Plan Budget Needs This W/P is a reference for entire paragraph with exception of "billion of dollars." Reference for that is the Seymour article.** **CW**

Significant progress to permanently address physical safety and environmental hazards at BLM AML sites will not be achieved unless substantial additional resources are made available. ■ **J.BLM.22 AML Strategic Plan Budget Needs** **CW** However, even with limited current funding, BLM could be more effective in protecting the public. BLM could better use existing funds to identify and evaluate AML sites and to post warning signs and install fences. However, recent funding decreases may jeopardize these efforts. ■ **J.BLM.22 AML Strategic Plan Budget Needs** **CW**

NPS’ AML program is funded as part of the broader NPS Disturbed Land Restoration Program (DLR). Since 2000, specific AML funding within NPS has been inconsistent ranging from a high of approximately \$650,000 in FY 2000 to a low of \$121,000 in FY 2003 (B.NPS.03 Funding for NPS AML ■, ■). **[33] CW**

According to NPS, current funding is inadequate to address known AML issues within parks and the process of “budget erosion” (no fund increases coupled with rising costs) has limited funds available for AML site mitigation (B.NPS.03 Funding for NPS AML ■, ■). **CW** NPS does not have a current estimate of mitigation costs for AML sites. **CW** In 1994, NPS estimated a total cost of \$165 million to address AML sites, of which \$43 million was needed to address the most dangerous sites (B.NPS.03 Funding for NPS AML ■, ■). **CW** NPS requested an increase of \$3 million per year beginning in FY 2009 for park-specific mitigation, technical assistance, and one FTE to support AML activities (B.NPS.03 Funding for NPS AML ■, ■). **CW**

**Methodology:**

A.19 Index 4 Budget

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**Assignment Workpaper**

Prepared by: Stephanie Christian 01/08/2008

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section A 20 Subsection  
 Program Name Administration  
 Subject Index 5 Background

Origination Doctlink [REDACTED]

Purpose:

Scope:

Source:

Conclusion:  
 Background

<p>BLM:                  Approximately 12 000 AML sites identified                  20-30 Percent Pose Safety Hazards                  5-10 Percent Pose Environmental Hazards G.BLM.01 BLM AML Background [REDACTED] CW                  NPS:                  Approximately 3 400 [REDACTED] AML sites identified CW                  20-30 Percent Pose Safety Hazards                  H.NPS.01 Estimate of the number of sites that pose hazards. [REDACTED] (b) (5) [REDACTED] [25] CW                  5 Percent Pose Environmental Hazards H.NPS.01 Estimate of the number of sites that pose hazards. [REDACTED] [25] CW                  BLM reported progress since 2000 in the AML program includes the inventory of about 5,500 sites and the mitigation of hazards at about 3,300 sites. Mitigation includes physical hazards at about 3,000 sites and environmental hazards at 300 sites. J.BLM.21 BLM/USFS AML 10 Year Report [REDACTED] CW</p>	<p>Since the 1850's, mining of hard rock minerals such as gold, silver, copper, and lead [REDACTED] has been an important part of the economy of the Western United States [REDACTED] G.DOI.02 Seymour Article G.BLM.01 BLM AML Background [REDACTED] [26] CW Congress passed the General Mining Law of 1872 which established a process to allow individuals to explore, claim and mine public lands containing mineral deposits G.05 Mining Law and Proposed Changes [REDACTED] CW The General Mining Law required little mitigation of physical and environmental hazards created by mining activities G.05 Mining Law and Proposed Changes [REDACTED] CW In 1976, Congress passed the Federal Land Policy Management Act (FLPMA) that curtailed the creation of new abandoned mine land (AML) sites G. Audit Background [REDACTED] CW However, historic mining activity left hundreds of thousands of unmitigated AML sites G.BLM.01 BLM AML Background [REDACTED] CW                  Within DOI the vast majority of AML sites are located on lands managed by the Bureau of Land Management (BLM) and the National Park Service (NPS) G.06 Federal Lands [REDACTED] CW Most AML sites are located in Arizona, Nevada and California G.02 Legacy of Hardrock Mining [REDACTED] CW Typically no mining operations have been conducted at these sites for many years although valid mining claims may still exist G.BLM.01 BLM AML Background [REDACTED] CW                  Many sites on AML lands present an immediate danger of physical injury or death due to open vertical shafts and horizontal adits and mill sites with deteriorating buildings and equipment. Dangers include falls, deadly gases and asphyxiation, collapsing mine walls, explosive and toxic chemicals and rotting structures G.BLM.01 BLM AML Background [REDACTED] CW Physical hazards generally require the least funding to mitigate and the least expertise to identify and evaluate. J.BLM.22 AML Strategic Plan Budget Needs [REDACTED] CW Mitigation can range from temporary measures including fencing and signs to more permanent measures including steel and concrete covers [REDACTED] K.BLM.Arizona.02 Site Visits J.BLM.21 BLM/USFS AML 10 Year Report [REDACTED] [27] CW The only permanent mitigation action is to fill in shafts and adits and demolish or remove [REDACTED] K.BLM (Site Visits) buildings and structures G.BLM.01 BLM AML Background [REDACTED] [28] CW                  Some sites on AML lands can also present long term dangers to people from exposure to mining wastes containing hazardous materials such as arsenic, lead [REDACTED] K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis and mercury, and in piles of waste rock or mine tailings and ponds G.BLM.01 BLM AML Background [REDACTED] [29] CW These sites can cost hundreds of millions of dollars to remediate and require extensive expertise to identify, evaluate, and mitigate. Potential sites must be sampled to identify hazardous contamination. Mitigation can include temporary measures such as reducing air and water borne contamination through dust control with sprinklers and temporary covers. Additionally, temporary measures also include</p>
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protecting the public by installing fencing and signs and taking appropriate steps to notify the public of the dangers. Permanent mitigation can include reprocessing of tailings to treat contaminants, removal of materials to safer locations or on-site disposal in a properly designed facility. Clean-up of all significant sites with environmental hazards may eventually cost billions of dollars. [J.BLM.22 AML Strategic Plan Budget Needs](#) [G.DOI.02](#)

[Seymour Article](#) [CW](#)

Comprehensive records of AML accidents are not maintained by DOI or the bureaus [D.DOI.01 SMIS Reporting Requirements](#) [CW](#) However, every year, physical safety hazards result in visitor injuries and deaths. We performed a limited search of accident records and found that between 2004 and 2007 at least 12 people were killed in accidents at abandoned mines [G.07 MSHA Incident Data](#) [CW](#) Residents living near abandoned mines are also exposed to significant environmental health risks from contaminated water, soils and mill tailings. [K.BLM \(Site Visits\)](#) [CW](#)

The risk to the public from AML sites has and will continue to increase as the population of the West grows [G. Audit Background](#) [CW](#) Nevada and Arizona were identified by the 2000 Census as the fastest growing states in the country while California had the largest population of any state [G.03 Population Growth](#) [CW](#) In addition, the public is being increasingly exposed to AML hazards in rural areas due to the popularity of Off Road Vehicle (ORV) use, one of the fastest growing recreational activities in the country [G.04 OHV Use](#) [CW](#) AML sites are sometimes located in and near BLM authorized ORV areas and at other BLM and NPS identified recreation areas including hiking trails and campsites. [K.BLM \(Site Visits\)](#) [CW](#)

AML site near a BLM recreation area where a young girl died [\[REDACTED\]](#) BLM maintains the road leading to the area. [K.BLM.Arizona.06 Site Visits](#) [\[30\]](#) [CW](#)



**Details:**

**Methodology:**

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**Assignment Workpaper**

Prepared by: William McMullen 01/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 21 **Subsection**  
**Program Name** Administration  
**Subject** Index 6 Claimant Responsibilities

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

**BLM Management and Oversight of Claimant Responsibilities**

BLM's AML Strategic Plan recommended that the AML and the Surface Management Program develop policy concerning mining claimant responsibilities related to AML sites. ■ **J.BLM.20 AML Strategic Plan**  
**CW** We found BLM lacked procedures requiring BLM staff to: ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

Identify claimants at AML sites where dangerous hazards exist that must be mitigated. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

Inform mine claimants of hazards on their claims. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

Identify any claimant responsibility for mitigation of hazards at AML sites. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

Require claimants to meet their responsibilities for site mitigation. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

Encourage claimants to mitigate AML hazards by, as a minimum, posting signs and fencing dangerous mine hazards. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

Proceed with site mitigation if claimants do not mitigate hazards. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** **CW**

We identified field offices in Arizona and Nevada that informed claimants of hazards at AML sites and were successful in getting claimants to perform some mitigation at these sites  
■ **K.BLM.Arizona.02 Site Visits** ■ **K.BLM.Rip Van Winkle.01 Site Visit** **CW** In some cases where claimants did not perform mitigation, we found that AML coordinators proceeded to take action to post signs and fence sites. ■ **K.BLM.Arizona.02 Site Visits** **CW** We also found cases where BLM officials recognized the need to be proactive and took immediate action to mitigate hazards regardless of claimant responsibility. ■ **K.BLM.Arizona.01 Phoenix District Entrance Conference** **CW**

**Methodology:**

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A 21 Index 6 Claimant Responsibilities

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Prepared by: William McMullen 01/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 22 **Subsection**  
**Program Name** Administration  
**Subject** Index 7 Best Practices

**Origination Doclink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

<b>BEST PRACTICES</b>	
<p>Prefabricated Materials for Mitigation <b>CW</b></p>	<p>At Joshua Tree National Park, NPS has the capabilities to mass produce prefabricated mine covers and gates. The production of prefabricated materials such as bat gates and cupolas enables a large number of sites to be mitigated economically and efficiently. <b>I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead</b> ■ <b>CW</b> We believe this approach is a good model that could be expanded within NPS and adopted by other bureaus. <b>I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead</b> ■ <b>CW</b></p>
<p>NPS personnel from Joshua Tree National Park <b>[54]</b>  <b>CW</b> installing prefabricated cover at Lake Mead.  <b>C.NPS.LAME.02 Pictures from Site Visit</b> ■ ■</p>	 <p style="text-align: center;"><b>CW</b></p>
<p>Gate – Joshua Tree NP.  <b>I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead</b> ■ ■ <b>CW</b></p>	 <p style="text-align: center;"><b>CW</b></p>
<p>Utilizing Volunteers to Address AML Issues <b>CW</b></p>	<p>We identified volunteers who assisted NPS and BLM to identify and inventory AML sites. <b>CW</b> For example, at Joshua Tree National Park, a retired sheriff helps locate and map AML sites within the Park. <b>I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead</b> ■ <b>[40] CW</b></p> <p>In Nevada, BLM is supported by the State’s Division of Minerals who uses college students to identify and inventory AML features <b>J.BLM.16 07/20/07 ROD Chris Ross BLM Nevada</b> ■ <b>[41] CW</b> BLM has also developed a grassroots effort to mitigate physical hazards using volunteer labor <b>L.1.b.03.02 NDOM's Eagle Scout Program</b> ■ <b>[41] CW</b> and donated fuel, heavy equipment, and materials. <b>L.1.b.03.05 Chris Ross Email</b> ■ <b>[41] CW</b></p>

	We believe using volunteers can be effective if they are properly trained and supervised. [41] CW
Partnerships with Other Organizations CW	<p>The Bureau of Land Management initiated the Nevada Abandoned Mine Land Environmental Task Force [42] CW (NAMLET) in March 1999 to address environmental hazards associated with abandoned and inactive mines in Nevada. CW The task force includes 13 federal and state agencies that work together to (1) foster regulatory cooperation, (2) identify priority sites for cleanup, and (3) provide administrative oversight for funded projects. CW The Task Force allows several agencies to leverage their funding cooperatively to mitigate AML hazards L.1.a NAMLET CW</p> <p>The Desert Manager's Group (DMG) is a regional interagency partnership among Federal, State and Local entities who manage California's 20 million acre desert region. The desert region includes two national parks, 72 wilderness areas and six military bases Le Desert Managers Group CW and has a large portion of the AML sites that are located in the Southwest [need link supporting this]. DMG has recently kicked off a five-year effort to form partnerships to leverage funding and mitigate the highest priority abandoned mine sites in the California Desert Region. In 2006, DMG began developing the list of AML sites in the desert region, identifying the capabilities of the different agencies within the DMG, and prioritizing the mitigation of AML sites L.e.01 Desert Managers Group Five Year Plan CW DMG's latest Five Year Plan for FY 2007 through FY 2011 identifies goals to (1) form partnerships to leverage funding, (2) develop a central database of AML sites within the desert region and (3) mitigate the highest priority environmental and physical safety sites L.e.01 Desert Managers Group Five Year Plan CW This collaborative effort among agencies such as BLM, NPS, Department of Defense and the State of California L.e.01 Desert Managers Group Five Year Plan CW could provide a benchmark for maximizing efficiency in mitigating AML sites (auditor's conclusion).. CW</p>
Sites Closures	<p>In August 2006, BLM closed several environmentally contaminated abandoned mine land sites in California to protect the public. The closure included "all forms of entry by the public, including mineral entry [redacted]" and facilitated environmental remediation actions. L.g. Withdrawal, Segregation and Closure of Lands [43] CW Site closure actions could be used more often to protect the public by limiting access to AML lands. L.g. Withdrawal, Segregation and Closure of Lands CW</p>

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Prepared by: William McMullen 01/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 23 **Subsection**  
**Program Name** Administration  
**Subject** Index 8 Conclusion and Recommendations

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

**CONCLUSION**

BLM has not taken adequate steps to protect the public from the hazards associated with AML sites. Safety and environmental hazards have been ignored for decades due to long-standing neglect of the AML program. ■ **K.BLM (Site Visits) CW** In addition, NPS has not addressed all dangerous AML hazards readily accessible to the public. ■ **H. NPS (Overall) CW**

This Report makes ten recommendations that, if implemented, should help the bureaus address these long-standing issues. **See recommendations below CW**

**RECOMMENDATIONS**

We recommend the Secretary of Interior require the Director, BLM to:

1. Issue a clear policy statement that:
  - a.. Supports the AML program and its goals.
  - b. Forbids retaliation against employees for identifying or reporting AML sites.
  - c. Requires field office management and staff to comply with all AML policies and procedures. ■ **J. BLM (Overall) CW**
2. Employ experienced full-time staff dedicated to the AML program at the State and field office levels in CA, AZ and NV and other states where appropriate. ■ **J. BLM (Overall) CW**
3. Establish a specific item identified in the budget **(b) (5)** for the AML program and request and support funding to accomplish project goals identified in the AML Strategic Plan. ■ **J. BLM (Overall) CW**
4. Identify and resolve trespass on AML sites and assess and mitigate hazards associated with these sites. ■ **K.BLM.Virginia City.01 Trespass Issues CW**
5. Validate existing data, develop procedures for ongoing data collection and ensure that data in the AMM is complete, accurate, and consistent. ■ **J.BLM.02 BLM AMM Data - AMM Deficiencies CW**
6. Develop AML program policies and procedures to inform mining claimants of known hazards, require them to mitigate sites, or instruct BLM field offices to take needed immediate action to protect the

public. At a minimum, BLM should ensure that dangerous sites are posted with warning signs and fenced. ■ **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures** CW

7. Implement immediate temporary or permanent measures to mitigate dangerous sites including those identified in Appendix C of this Report. ■ **K.BLM (Site Visits)** CW

We recommend the Secretary of Interior require the Director, NPS to:

8. Issue in final and disseminate the draft AML handbook. (H. NPS (Overall) ■, ■). CW

9. Request and support funding to mitigate sites identified by the AML program. (B.NPS.03 Funding for NPS AML ■, ■). CW

10. Implement immediate temporary or permanent measures to mitigate dangerous sites including those identified in Appendix C of this Report. Cross-indexing provided in appendix C. CW

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Prepared by: William McMullen 01/09/2008

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**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 24 **Subsection**  
**Program Name** Administration  
**Subject** Index 9 Introduction

**Origination Doclink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

INTRODUCTION	
Audit Objective	To determine if the DOI and its bureaus are effectively protecting the public from physical safety and environmental hazards at abandoned hard rock mine sites located on federal lands. ■ <b>A.07 Audit Plan and Program CW</b>

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A 24 Index 9 Introduction

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**Section** A 25 **Subsection**

**Program Name** Administration

**Subject** Index 10 Appendix D Obj, Scope, Method., ICs

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

<b>Appendix D - Objective, Scope, Methodology and Internal Controls</b>	
<b>Audit Objective:</b>	To determine if the Department of the Interior and its bureaus are effectively protecting the public from physical safety and environmental hazards at abandoned hardrock mine sites located on federal lands. ■ <b>A.07 Audit Plan and Program</b> CW
<b>Audit Scope:</b>	Our audit focused on abandoned hardrock mine lands on federal property in the Western U.S. We concentrated on lands in California, Nevada and Arizona, three states with a significant mining legacy that receive no funds collected for reclamation of abandoned mines under the Surface Mining Control and Reclamation Act. This Act primarily supports reclamation of abandoned coal mines. In addition, population growth and wider recreational use of federal land in these states is increasing the risks from AML hazards. After reviewing AML issues and inventories for NPS, BLM, ■ FWS [56] CW and BIA, we limited our field work to lands managed by the NPS and BLM. We also evaluated Departmental programs and efforts to deal with abandoned mine lands. ■ <b>A.07 Audit Plan and Program</b> CW
<b>Audit Methodology:</b>	Our audit was conducted between March 2007 and January 2008. To accomplish the audit objective, we: CW Conducted the audit in accordance with Government Auditing Standards issued by the Comptroller of the United States. CW Included tests of records and other audit procedures that were considered necessary. CW Gained an understanding of applicable laws and regulations and the Department's and bureaus' abandoned mine lands (AML) programs. CW Conducted a limited review of data to identify accidents resulting in fatalities or injuries at AML sites. CW Reviewed Department, bureau and other systems used to report on accidents at AML sites resulting in fatalities or injuries. CW Analyzed management processes for identifying, reporting, prioritizing, and mitigating physical safety and environmental hazards at AML sites. CW Interviewed Departmental and bureau officials at the headquarters, regional, and field office levels. CW Visited selected bureau offices to review records and AML sites to assess the nature of safety and environmental hazards. CW We selected sites based on knowledge gained from bureau officials, prior accident locations, and priority of hazards as identified in bureau plans or by bureau officials.[14]CW Identified best practices within bureaus and from outside entities for mitigation of AML hazards. CW ■ <b>A.07 Audit Plan and Program</b> [14]CW
<b>Appendix D (cont.) - Objective, Scope, Methodology and Internal Controls</b>	
<b>Internal Controls:</b>	As part of the audit, we performed an evaluation of the Department and its bureaus' systems of internal controls related to the identification, prioritization, and mitigation of AML hazards. We did not assess the bureaus' internal controls applicable to financial reporting. ■ <b>B.01 Internal Controls</b> CW

This evaluation of internal controls was conducted at Departmental and bureau offices to the extent we considered necessary to accomplish the audit objective. CW We concluded that the BLM AML program lacks adequate internal controls to identify, prioritize and mitigate AML hazards. CW These deficiencies are discussed in the Results of Audit section of the report.[15] B.01 Internal Controls Added... to show list of deficiencies in the report. CW

NPS generally had adequate internal controls, except it needs to finalize and distribute its AML handbook (H. NPS (Overall) , ).CW

We reviewed the Department of the Interior's Performance and Accountability Reports (PAR) [57]CW for fiscal years 2006 and 2007 and noted that no material weaknesses were reported related to abandoned hard rock mines. Some performance measures (b) (5) in the 2007 PAR did relate to the possible effects of abandoned hard rock mines (e.g., number of visitor injuries and fatalities, percent of physical and chemical hazards mitigated to protect public health and safety, and percent of contaminated sites remediated to protect watersheds) but were not specifically related to such sites. As reported in the PAR, all of these goals were met in 2007. G.DOI.07 2006/2007 PARs CW

Our recommendations, if implemented, should improve the internal controls in the areas with identified weaknesses. See Recommendations Section CW

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**Section** A 26 **Subsection**  
**Program Name** Administration  
**Subject** Index 11 Appendix C OIG Site Visits

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

Appendix C - OIG SITE VISITS - California	
Rand Mining District	Environmental contamination <b>CW</b> Safety hazards due to deteriorating structures and open shafts <b>CW</b> ■ <b>D. Environmental and Safety Issues</b> (in Rand Mining District Audit, C-IN-BLM-0012-2007) References both safety and environmental hazards. Inadequate fencing and signs <b>CW</b> ■ <b>D.01.04 Photos of Red Mountain Safety Issues</b> (in Rand Mining District Audit, C-IN-BLM-0012-2007) Claimant negotiations could impact mitigation <b>CW</b> ■ <b>D.01.01 Interview with Linn Gum</b> (in Rand Mining District Audit, C-IN-BLM-0012-2007) ■ <b>C.BLM.RidgecrestFO KellyMine.01 Red Mountain Kelly Mine Area Hazards</b> Land conveyances could present liability <b>CW</b> ■ <b>B.BLM.CASTOffice.03 CA Solicitor's Office</b> (in Rand Mining District Audit, C-IN-BLM-0012-2007)
Atolia	Open shafts <b>CW</b> Unrestricted access <b>CW</b> Inadequate fencing and signs <b>CW</b> ■ <b>C.BLM.RidgecrestFO.04 GEM Data and Atolia Photos</b> <b>Ridgecrest FO Use as reference for all listed items.</b> (in Rand Mining District Audit, C-IN-BLM-0012-2007)
Ruth Mine	Open adit <b>CW</b> Deteriorating structures <b>CW</b> Inadequate signs <b>CW</b> Recent trespass in residence <b>[1] CW</b> Erosion of tailings into streambed <b>CW</b> ■ <b>C.BLM.RidgecrestFO.07 Site Visits</b> <b>Ruth and Darwin Use as reference for all listed items.</b>
El Paso Mountains	Safety hazards due to "Adopt a cabin" program where active claim and many open shafts/adits exist adjacent to cabins used by visitors <b>CW</b> ■ <b>C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program</b>
Rademacher Hills	Open adits and shafts <b>CW</b> Inadequate fencing and signs <b>CW</b> ■ <b>C.BLM.RidgecrestFO.03 Ridgecrest FO Rademacher Hills AML Data and Site Visit Use as reference for all listed items.</b>
Folsom	Open shaft near campground <b>CW</b> Inadequate fencing and signs <b>CW</b> ■ <b>C.BLM.FolsomFO.01 Site Inspections Use as reference for all listed items.</b>
Barstow - Coolgardie	Open shafts <b>CW</b>

	Minimal fencing CW No signs CW ■ C.BLM.BarstowFO.01 Field visit to Barstow FO Use as reference for all listed items.
Barstow - Goat Basin	Death at one site, not fenced, not on inventory K.BLM.04 Fatality at the Goat Basin Mine ■ CW Two deaths at another site a short distance away K.BLM.04 Fatality at the Goat Basin Mine ■ CW A fence had been put up around the hole many years ago, but remnants remained when we visited K.BLM.04 Fatality at the Goat Basin Mine ■ CW A new fence was erected as a result of our NPF. "Reporting Management's Response to Draft Report" ■ [3] CW Other dangerous openings in the area that were not mitigated and not on the inventory K.BLM.04 Fatality at the Goat Basin Mine ■ CW This site had a death, should have been a high priority, and wasn't even on the inventory K.BLM.04 Fatality at the Goat Basin Mine ■ ■ [4] CW
Darwin	Safety hazards due to deteriorating mill CW Inadequate sampling to assess environmental hazards CW ■ C.BLM.RidgecrestFO.07 Site Visits Ruth and Darwin Use as reference for all listed items.
Spangler	Open adits and shafts CW Inadequate fencing and signs CW Public invited to ORV events CW ■ C.BLM.RidgecrestFO.05 Spangler Hills OHV Area Use as reference for all listed items.
Death Valley National Park	Death at one site (Keane Wonder) ■ CW Open adits and shafts ■ CW Public invited to visit site ■ CW Inadequate fencing and signs ■ ■ C.NPS.DEVA.01 Death Valley National Park Site Visit ■ CW
<b>Appendix C - OIG SITE VISITS – California (cont.)</b>	
Joshua Tree National Park	Open shaft, compromised adits. The most dangerous site we saw was difficult to get to, but does get visitors I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead ■ CW The high priority sites we visited are scheduled to be mitigated in 2008. I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead ■ CW A Park-wide environmental inspection of inactive historical mill sites was performed with no significant findings I.NPS.JOTR.20 JOTR Mill Site Inspection Report ■ [5] CW
<b>Appendix C - OIG SITE VISITS – Nevada</b>	
Virginia City	Two deaths in adit CW ■ K.BLM.Virginia City.03 AML deaths Safety hazards at mill tour business CW ■ K.BLM.Virginia City.01 Trespass Issues Inadequate sampling to assess environmental hazards CW ■ K.BLM.Virginia City.04 Sample Results New commercial and residential trespass CW ■ K.BLM.Virginia City.01 Trespass Issues
American Flat	Death in mill building CW ■ K.BLM.American Flat.01 Safety Issues Safety hazards due to deteriorating structure CW ■ K.BLM.American Flat.01 Safety Issues Unrestricted access CW Inadequate warning signs CW ■ K.BLM.American Flat.01 Safety Issues Use to reference last 2 items.
Caselton	Inadequate groundwater sampling to assess environmental hazards CW ■ K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office Unrestricted access CW Inadequate warning signs CW ■ K.BLM.Caselton.01 Site Visits Use to reference items 2 and 3. Claimant dump site CW ■ K.BLM.Caselton.01 Site Visits Claimant negotiations may hinder mitigation CW ■ K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office
<b>Appendix C - OIG SITE VISITS – Nevada (cont.)</b>	
Spruce Mountain	Deteriorating structures CW Open adit CW ■ K.BLM.Nevada.01 Site Visits Use to reference both items.
Tuscarora	Safety hazards due to illegal dumping CW ■ K.BLM.Nevada.01 Site Visits
Ward	Accessible claimant adits CW Waste rock acid drainage potential CW ■ K.BLM.Nevada.01 Site Visits Use to reference both items.
Tonopah	Death in open shaft CW

	<p>Lack of responsibility for AML assumed by local office. CW</p> <p>Local office stated that it was not their responsibility and that a race organizer was responsible for the accident CW</p> <p>Local residents backfilled the mine shaft after the accident D.BLM.04 Fataality near Beaty, NV CW</p>
Cherry Creek	<p>Lack of recognition that King Midas mill is on BLM land CW</p> <p>No sampling of streambed or wells in Cherry Creek to determine potential contamination from mill tailings CW</p> <p>K.BLM.Nevada.01 Site Visits Use to reference both items.</p>
Lake Mead National Recreation Area (LMNRA) [59] CW	<p>Death at one site, but site was backfilled many years ago CW</p> <p>LMNRA does not have a complete inventory nor is there a prioritized list of sites CW</p> <p>There have been many sites that have been mitigated CW</p> <p>Teamed up with Joshua Tree to mitigate sites C.NPS.LAME.01 Lake Mead Recreation Area Site Visit CW</p>
<b>Appendix C (cont.) - OIG SITE VISITS - Arizona</b>	
Kingman	<p>Death on patented land near BLM road K.BLM.Arizona.06 Site Visits CW</p> <p>Open shafts K.BLM.Arizona.06 Site Visits CW</p> <p>Dangerous physical hazards on patented land K.BLM.Arizona.06 Site Visits CW</p> <p>Inadequate fencing and signs K.BLM.Arizona.06 Site Visits CW</p> <p>Inadequate sampling to assess potential environmental hazards (Boriana) K.BLM.Arizona.06 Site Visits CW</p> <p>Inadequate funding to mitigate known environmental projects (Antler) K.BLM.Arizona.06 Site Visits CW</p> <p>Lack of communication between District and Field K.BLM.Arizona.06 Site Visits CW</p> <p>Lack of coordination between Field and State K.BLM.Arizona.06 Site Visits CW</p> <p>(b) (5) -K.BLM.Arizona.06 Site Visits [6] CW</p>
Wickenburg	<p>Unrestricted access CW</p> <p>Inadequate fencing and signs CW K.BLM.Arizona.02 Site Visits Use to reference both items.</p>
Octave	<p>Inadequate sampling to assess environmental hazards CW K.BLM.Arizona.02 Site Visits</p>
Vulture	<p>Inadequate fencing and signs CW K.BLM.Arizona.02 Site Visits Use to reference both items.</p>
Quartzsite	<p>Safety hazards due to deteriorating structures CW K.BLM.Arizona.02 Site Visits</p> <p>Inadequate sampling to assess environmental hazards CW K.BLM.Arizona.02 Site Visits</p>
Grand Canyon National Park	<p>Safety hazards due to accessible mine with high radon radiation levels I.NPS.GRCA.15 Grandview Mine Site Visit [7] CW</p> <p>Two sites visited I.NPS.GRCA.15 Grandview Mine Site Visit CW</p> <p>For the Orphan Mine, the trail was diverted around the contaminated areas I.NPS.GRCA.20 Orphan Mine Site Visit CW</p> <p>The site was fenced I.NPS.GRCA.20 Orphan Mine Site Visit and signs were posted I.NPS.GRCA.20 Orphan Mine Site Visit CW However, visitors could still get in through a hole in the fence I.NPS.GRCA.20 Orphan Mine Site Visit CW</p> <p>The other site (Grandview) had no fencing or warning signs but was relatively difficult to get to I.NPS.GRCA.15 Grandview Mine Site Visit CW</p> <p>However, hikers in the area are using the mine features as shelter. I.NPS.GRCA.15 Grandview Mine Site Visit CW</p>

**Methodology:**

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Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:35 55 PM

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**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: William McMullen 01/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 27 **Subsection**  
**Program Name** Administration  
**Subject** Index 12 Appendix E Related Reports

**Origination Doctlink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**

**Details:**

Appendix E - Related Reports
<p><b>IG Flash Report No, C-IN-BLM-0012-2007, [58] CW</b>  <i>Environmental, Health and Safety Issues at Bureau of Land Management Ridgecrest Field Office, Rand Mining District, CA</i>, September 2007. [16] CW</p> <p>The OIG noted hazardous conditions at abandoned mine sites in California’s Rand Mining District that required immediate action to protect the health and safety of the public and employees. CW Levels of arsenic thousands of times higher than safe levels were found in tailings piles located near residential properties. CW The cost of environmental site mitigation could exceed \$170 million. CW ■ Draft Report 8/24/07 version See blue highlighting in memo and background sections of the report</p>
<p><b>IG Flash Report No. C-IN-MOA-0013-2005, CW</b>  <i>Public Safety Issues at Saginaw Hill Property, Bureau of Land Management</i>, March 2005. CW</p> <p>The OIG found that BLM had not identified the abandoned hard rock mine safety hazards and environmental contaminants present at the Saginaw hill property in Arizona. CW In addition, BLM had not taken appropriate measures to mitigate or remediate the hazards or limit public access to the hazards at this site. ■ B.OIG.01 OIG AML Audit Report - Saginaw Hill CW</p>
<p><b>GAO Report No. 05-377, CW</b>  <i>Hardrock Mining BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs</i>, June 2005. CW</p> <p>The report concluded that the financial assurances may not fully cover all future reclamation costs as 48 hardrock operations on BLM land had not been fully and adequately reclaimed by operators. CW The report also found that BLM’s LR2000, the system designated to manage BLM’s financial assurances, was inadequate. ■ B.GAO.02 GAO Report on Bonding and 3809 CW Program</p>
Appendix E (cont.) - Related Reports
<p><b>GAO Report 96-30, CW</b>  <i>Information on Efforts to Inventory Abandoned Hard Rock Mines</i>, February 1996. CW</p> <p>The report identified no definitive inventory available to identify the number of abandoned hard rock mines located on federal lands. CW Four major federal land-managing agencies, the BLM, NPS, FWS and USFS were in various stages of inventorying the mine sites on the lands they manage; however, because the methodologies and assumptions used to develop their inventories differ, their results could</p>

not be meaningfully compared or combined. **CW** As a result, neither the number of sites identified, the physical / environmental hazards reported, nor the cost of remediation associated with each hazard could be presented as a consistent total for abandoned mine lands on federal property. **CW** Therefore, the potential harms and damage caused from abandoned mine lands, on federal property, remained difficult to assess and quantify. ■ **B.GAO.01 GAO Reports - AML Inventory CW**

**OIG Report No. 92-I-636, CW**

*Hardrock Mining Site Reclamation, Bureau of Land Management* , March 1992. **CW**

The OIG identified that BLM had not implemented procedures for ensuring that abandoned hardrock mining sites on BLM managed lands were being reclaimed. **CW** BLM also failed to develop a comprehensive inventory of hardrock mining sites that required timely reclamation, and BLM was not fully aware of hazards and dangerous conditions at some abandoned mining sites. **CW**

■ **B.OIG.02 OIG Report - Hardrock Mining Site Reclamation**

**Methodology:**

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**Assignment Workpaper**

Prepared by: William McMullen 01/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 29 **Subsection**  
**Program Name** Administration  
**Subject** Index 14 Cover and Exec Summary

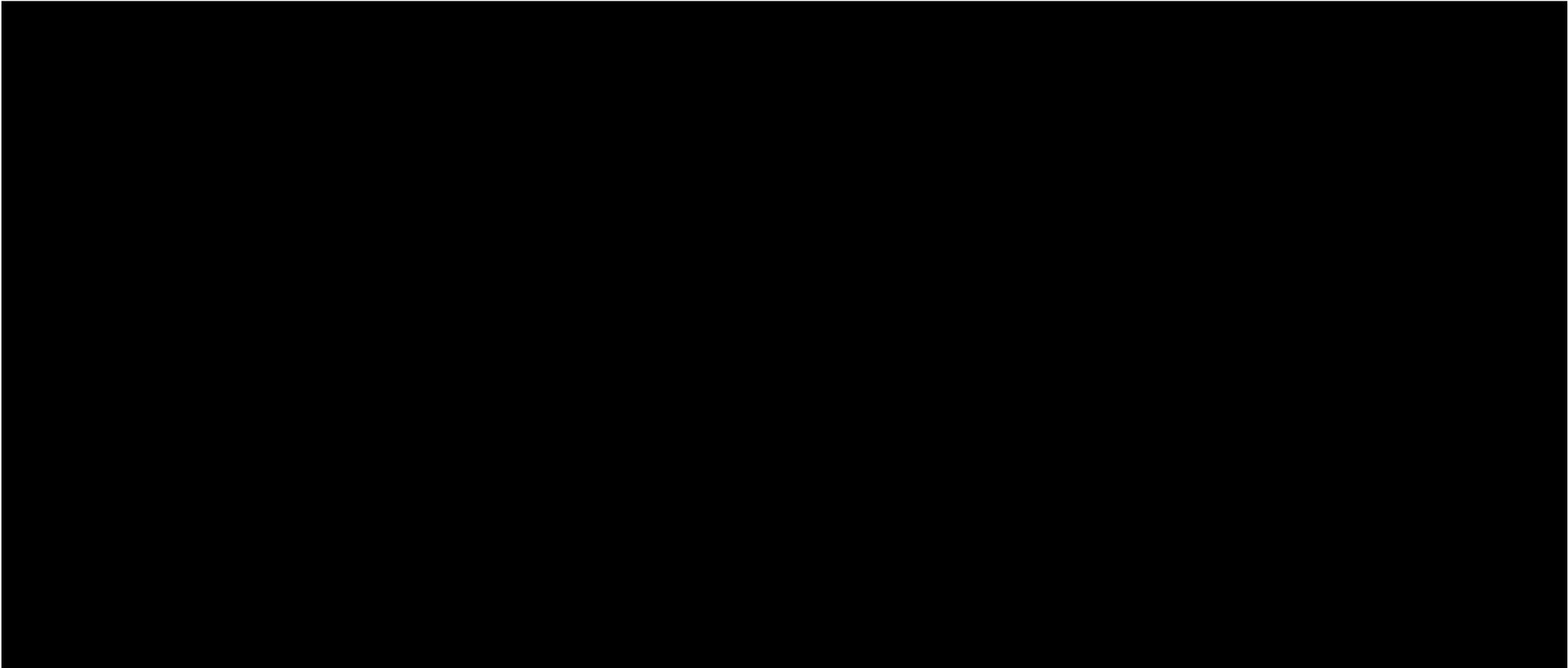
**Origination Doclink** ■

**Purpose:**

**Scope:**

**Source:**

**Conclusion:**



20 pages of a Draft Report  
are being withheld in  
their entirety under  
5 U.S.C. §§ 552(b)(5)

**Record of Discussion**

Prepared by: William McMullen 06/23/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** A 33 **Subsection**  
**Program Name** Administration  
**Subject** AML Exit Conference

**Origination Doclink** ■

**Participants**

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**Location** DC/Main Interior Building

**Date/Time**

06/17/2008 03 00 PM

**Purpose:**

Conduct exit conference for AML audit.

**Scope:**

AML Audit

**Conclusion:**

- NPS and BLM agreed with all recommendations in the report.
- BLM requested and was granted a 2-week extension for submission of written comments.
- NPS has a few minor concerns regarding factual errors in the report.
- BLM has some concerns regarding balance in the report in that global statements are made that may not apply to all of BLM.

**Summary:**

After introductions, Illson reviewed the audit purpose, scope and timeframe. Pettersen then reviewed findings and recommendations for NPS. NPS staff noted some factual errors in the report e.g., that NPS did not have a

cost estimated for mitigation and that NPS had never issued the AML handbook. Pettersen agreed that the report language needed to be changed. NPS staff stated they accepted the recommendations and that lack of funding was the only impediment to more aggressive mitigation of sites.

Ilson then reviewed findings and recommendations related to BLM and noted the excellent cooperation OIG had from BLM staff at all levels. He noted that growth of populations in the West and increasing recreational use of federal land is increasing the risk from AML sites. Ilson emphasized the OIG's view that much could be done within existing resources to provide minimal protection of the public (signs and fences) and identification and evaluation of contaminated sites. He reviewed the seven findings and related recommendations as follows:

1. Finding: inadequate support from BLM field office management for the program// Recommendation: Director policy statement affirming importance of program
2. Finding: collateral duty staff// Recommendation: use dedicated, trained AML staff
3. Finding: Insufficient budget focus// Recommendation: establish a line item in BLM's budget for the program
4. Finding: instances of trespass at AML sites that hinder mitigation// Recommendation: resolve trespass issues
5. Finding: inadequate site inventory// Recommendation: develop approach for targeted inventory starting with Strategic Plan and perhaps employing the example of a Rapid Assessment Technical Team being used in the California desert area.
6. Finding: Take action to mitigate and/or evaluate dangerous sites// Recommendation: use temporary measures, as a minimum, to mitigate safety hazards (fences and signs) and evaluate potentially contaminated sites to determine risk to public
7. Recommendation: work with NPS to share ideas and resources

Bloomfield then reviewed the Best Practices section of the report (dedicated staff, targeted inventory, partnerships, volunteers, prefabricated materials, site closures).

BLM stated they agreed with all recommendations and would detail their comments in a written response rather than cover them at the Exit Conference. BLM did indicate they would like a bit more balance in the report regarding overall statements about BLM as a whole given that the audit scope was limited and OIG visited only a selection of BLM offices and sites. Ilson agreed to review these issues once BLM's written comments were received. Stone also noted that BLM was proceeding with actions to mitigate sites more quickly and had established a workshop (scheduled for July, 2008) called Fix a Shaft Today (FAST) whereby the excellent partnership activity in Nevada will be presented to other states in the hope that they can also partner effectively with industry and volunteers to mitigate sites more quickly.

BLM noted they had requested a 2-week extension for the comment period. Rouch granted the extension with comments now due to OIG on July 4.

Submission:	Submitted	William McMullen	07/15/2008 02:10 20 PM
Level 1 Approval:			
Level 2 Approval:	Approved	John Ilson	07/21/2008 03:29 52 PM

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**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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A 34 FOIA Clearance



C-IN-MOA-0004-2007 dated 07-17-2008 FOIA CLEARANCE.pdf

Thank you for your time,  
VeraLynn

As shown in the attachment, the report was cleared for public distribution:



JUL 17 2008

The following Office of Inspector General internal report has been reviewed by the Freedom of Information Act (FOIA) Unit with a view toward a determination as to whether it is subject to the FOIA, Public Distribution or other action:

Abandoned Mine Lands in the Department of the Interior Report# C-IN-MOA-0004-2007



Mildred Washington  
FOIA Unit

\*\*\*On page 17 under BLM and NPS Best Practices header 1<sup>st</sup> paragraph 2<sup>nd</sup> sentence (OIG Flash Report No. reads (C-IN-MOA-0013-2005) is this correct or should it read C-IN-BLM-0013-2005, and also check on page 29 for the correct report number.

Subject to FOIA:

Public Distribution:

Other Action

**Methodology:**

Reviewed email noting that the AML report has been reviewed and cleared by the FOIA unit.

Submission:	Submitted	William McMullen	07/18/2008 09:06 22 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	07/21/2008 03:29 39 PM

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**Assignment Program/Summary Workpaper**

Prepared by: William McMullen 02/23/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section B.  
 Assignment Program Name Background

**Objective:**

Develop and document relevant background information related to DOI and bureau AML programs and issues.

**Background:**

G.DOI.01 Fact Sheet - Public Safety Issues on Abandoned Mine Lands

**Assignment Steps:**

Survey Step	Staff	Work Paper Reference
<b>B. Background</b>		
1 Review past OIG, PART, and GAO reports and summarize the results of any prior audit coverage of safety risks related to AML sites	Stephanie	B.OIG.01 OIG AML Audit Report - Saginaw Hill SGC B.GAO.01 GAO Reports - AML Inventory B.GAO.02 GAO Report on Bonding and 3809 Program B.GAO.03 GAO Report on Hardrock Mining Reclamation B.OIG.02 OIG Report - Hardrock Mining Site Reclamation B.GAO.04 GAO Report on Abuses of Hardrock Mining B.GAO.05 GAO Report on Hardrock Mining Operations
2 Review bureau budget justifications for FY 2005 & FY 2006 to identify AML issues	Sean	J.BLM.22 AML Strategic Plan Budget Needs
3 Identify funding sources available addressing Bureau AML issues (e.g. Fee Demo Funds, Central Hazmat Funds, Soil and Water Appropriations etc.)	Team	B.BLM.03 Funding - Hazmat Fund B.BLM.02 BLM AML Funding B.BLM.CASTOffice.01 BLM Funding - CA State Office B.BLM.06 BLM Budgeting Process
4 Obtain and review department and bureau strategic plans. Identify any strategic goals related to the review (GPRA)	Team	J.BLM.20 AML Strategic Plan G.DOI.06 Relevant GPRA Goals
5 Obtain DOI Accountability Report for FY 2005 & FY 2006 and identify any reported weaknesses that relate to the audit (FMFIA)	Sean/Bill	G.DOI.07 2006/2007 PARs
6 Determine whether any applicable internal reviews or assessments have been performed on safety-related AML issues (e.g. Management Control Reviews)	Team	B.01 BLM-Internal Controls
7 Obtain and evaluate regulations and laws related to safety on Abandoned Mine Lands	Team	G.DOI.03 FLPMA B.BLM.04 Federal Authority to Close Lands G.01 SMCRA G.08 EPA AML Reference Notebook J.BLM.23 Discussion with Roger Haskins L.g. Withdrawal, Segregation and Closure of Lands
8 Identify DOI and Bureau organizational structures related to AML, and obtain and review mission	Team	B.BLM.07 BLM Organization Chart and Reorganization of AML/Hazmat Programs

Assignment Program/Summary Workpaper B.

<p>statements Identify responsible officials and their duties (e.g. are AML positions collateral or full time? What are position descriptions and qualifications for these officials?)</p>		<p><b>B.CASTOffice.02 CA AML Collateral Duty Positions</b> ■ SGC</p> <p><b>B.NPS.01 NPS- GRD Organization chart</b> ■ <b>B.NPS.02 NPS-GRD Mission Statement</b> ■ <b>B.NPS.08 NPS-Office Roles and Responsibilities Related to AML</b> ■</p>
<p>9 Determine bureau responsibilities for mitigating safety hazards resulting from abandoned hard rock mines and other mining activities (quarries) on DOI land</p>	<p>Team</p>	<p><b>C.BLM.HQ.01 BLM HQ Meeting with George Stone</b> ■ SGC</p> <p><b>B.BLM.05 Mitigation of other mining activities</b> ■ SGC <b>B.BLM.04 Federal Authority to Close Roads</b> ■ <b>B.BLM.08 BLM Manual 3720 Abandoned Mine Land Program Policy</b> ■ <b>B.BLM.CASTOffice.03 CA Solicitor's Office</b> ■ SGC <b>B.BLM.09 BLM Pits and quarries</b> ■ SGC <b>B.BLM.10 BLM Post FLPMA Sites</b> ■ SGC</p>
<p>10 Contact the Solicitor's Office and: Identify claims settled, and the amounts paid, for injuries or fatalities that occurred on AML sites since 1990 If available, obtain estimates of contingent liabilities resulting from injuries or fatalities that occurred on AML sites since 1990</p>	<p>Sean</p>	<p><b>B.SOL.01 Tort Claims Settled</b> ■</p>
<p>11 Identify OSM allocations to states for AML sites</p>	<p>Bill</p>	<p><b>G.01 SMCRA</b> ■</p>

**Conclusion:**

Background information showed not only safety hazards but environmental hazards as well exist at AML sites on BLM land. This led to the development of a separate assignment to review these issues in the Rand Mining District (C-IN-BLM-0012-2007.

BLM and NPS may not be adequately protecting the public from the safety and environmental hazards presented by abandoned mines on federal lands.

Submission: Submitted William McMullen 07/18/2008 09:30 52 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 07/21/2008 03:28:42 PM

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## Assignment Workpaper

Prepared by: William McMullen 12/17/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B 01 Subsection  
Program Name Background  
Subject Internal Controls

Origination Doctlink [REDACTED]

### Purpose:

Document requirements for internal controls and bureau actions to implement internal controls.

### Scope:

DOI and bureau AML programs.

### Source:

GAO/AIMD-00-21.3.1 "Standards for Internal Control in the Federal Government" found at <http://www.gao.gov/special.pubs/ai00021p.pdf> and attached:



GAO Standards for Internal Control in the Federal Government.pdf

### Conclusion:

We conclude that:

- instances where BLM was not identifying, characterizing, prioritizing or mitigating AML sites and conclude that BLM does not have adequate internal controls regarding these activities.

### Details:

#### Internal Control

[REDACTED] The scope of the AML audit included an assessment of the physical safety and environmental hazards present at AML sites and BLM and NPS efforts to identify, characterize and mitigate these hazards. We did not assess internal controls with regard to financial reporting in the audit. This evaluation of internal controls was conducted at Departmental and bureau offices to the extent we considered necessary to accomplish the audit objective. [A.07 Audit Plan and Program](#) [REDACTED]

[REDACTED] We found instances where BLM was not identifying [C.BLM.FolsomFO.01](#), characterizing [Interview with Hector Villalobos D.01.02](#), prioritizing [K.BLM.Rip Van Winkle.01 Site Visit](#) [REDACTED] or mitigating [B.02.02 Discussions with Peter Graves](#) AML sites and conclude that BLM does not have adequate internal controls regarding these activities.

[With regard to NPS,](#)

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pages 6 and 7 of the attachment define internal controls:

An integral component of an organization's management that provides reasonable assurance that the following objectives are being achieved:

- Effectiveness and efficiency of operations including the use of the entity's resources.
- Reliability of financial reporting, including reports on budget execution, financial statements, and other reports for internal and external use.
- Compliance with applicable laws and regulations.

With regard to operational effectiveness and efficiency:

We did evaluate efforts at BLM HQ to establish program guidance documents [J.BLM.20 AML Strategic Plan](#) [REDACTED], [J.BLM.13 BLM AML Program Policy Handbook](#) [REDACTED], [B.BLM.08 BLM Manual 3720 Abandoned Mine Land Program Policy](#) [REDACTED], [B.BLM.01 BLM Policy for AML Physical Safety Hazards](#) [REDACTED] and found these documents did establish a solid foundation for conduct of the AML program within BLM.

We did note that the Strategic Plan [J.BLM.20 AML Strategic Plan](#) [REDACTED] (pages 9 and 10 of attachment in Strategic Plan workpaper) includes a section on Accountability that includes the following subsections

#### 3.2.4.1. AMM Database and System

BLM will continue to enhance the AMM database. Initiatives are already underway to combine AMM with the Site Cleanup Module (SCM). AMM and SCM have their own features and capabilities. The consolidated system will enable features and capabilities to be shared. The result will be an integrated system that eliminates duplicative records, facilitates program and project management, and enables reporting of Contingent Environmental Liabilities to the Department. Once consolidated, development of more useful reports for Program Assessment Rating Tool (PART) analysis and links to MIS and FFS/FBMS and other BLM databases will be pursued.

#### 3.2.4.2. AML Project Peer Review Process

BLM will refine its AML project peer review process. Now that this process has been implemented for two fiscal years, lessons learned can be taken back to make the peer review process more useful. One area that needs to be factored into the process is State Office and Field Office performance. For FY 2008, the State Office multi-year plans will be able to provide a backdrop to gauge the status of long-term funding commitments and identify patterns and trends affecting future priorities and fund shifts among State Offices.

We also noted that page 10 of BLM's AML Program Policy Handbook states:

#### **Chapter Summary of Field Personnel Duties**

BLM field personnel should do the following to support the AML program

- .. Be aware of the AML National Strategic Plan and ensure activities are conducted in accordance with it
- .. Update the AML inventory database with accomplishment, liability, and other information to assist the BLM in meeting its GPRA and OMB reporting requirements.
- .. Pursue every opportunity to leverage funds with the BLM's partners.

We found that BLM staff in the states and the field were either not familiar with the Strategic Plan and other program documents [J.BLM.29 AML Staff Qualifications](#) or were not complying with key provisions, such as the requirement to provide information of AML sites to the AMM inventory [J.BLM.02 BLM AMM Data - AMM Deficiencies](#). We noted that the BLM AML program is very decentralized [J.BLM.19 Organizational Structure](#) and that the BLM HQ AML Program Manager has no line authority over State and Field offices. Priorities for the AML program and specific projects are established by the State and Field Offices [J.BLM.20 AML Strategic Plan](#) and there is no national prioritization of efforts. In fact, we noted that one project was being funded in Nevada [K.BLM.Rip Van Winkle.01 Site Visit](#) that appeared to OIG to present less safety or environmental hazards than a number of other sites visited by OIG during this audit. We noted that the project peer review process identified in the Strategic Plan was not to be implemented until FY 2008 for review of State Office multi-year plans included in the Strategic Plan.

Most troubling, we found a number of instances where State and Field Office management were actively discouraging implementation of elements of the AML program such as identifying sites, inventorying sites, and mitigating sites as summarized below:

- An employee who was told by a field office manager not to identify AML sites as it got in the way of other land management activities. [C.BLM.FolsomFO.01](#)
- Employees who received verbal threats of retaliation for site identification. [C.BLM.CAStoffice.04](#)
- An employee who told Department officials that there were "thousands of dangerous abandoned mines" and was subsequently verbally criticized by the State Office for making such a statement. [Kingman K.BLM.Arizona.06](#)
- An employee who stated, "Putting sites on an inventory is more detrimental to BLM than leaving them off." Because listing them acknowledges a hazard and a potential liability. [Kingman K.BLM.Arizona.06](#)
- Employee's who were aware of hazardous AML sites but never entered any into the AMM inventory. [C.BLM.BarstowFO.01](#)
- Employees who knew of hazardous AML sites but did not know if they were on located on federal land and incorrectly assumed they were not. [K.BLM.05](#)
- Personnel who did not use warning signs and fences because they considered them ineffective or costly to maintain. In one case a BLM official stated that fencing a site was an acknowledgement that BLM knew about the site; and therefore if someone was subsequently injured at the site, BLM could face increased liability. [B.02.02 Discussions with Peter Graves](#)
- Personnel who did not take site samples for potentially hazardous materials or ensure they were taken. One field office manager (a geologist) acknowledged that he had long been aware of a large, obviously dangerous and potentially contaminated site but never had it characterized because no one ever asked him too. He later stated that he had seen over a hundred such sites in his career. [Interview with Hector Villalobos D.01.02](#)
- Personnel who mistakenly believed they could not mitigate sites due to regulatory requirements. This included permits or clearances for the protection of the environment, wildlife or historic buildings and facilities. [C.BLM.RidgecrestFO.02](#)

We also noted that there were no DOI GPRA goals that specifically mentioned abandoned mines although several goals did relate to visitor safety and elimination of environmental hazards [G.DOI.06 Relevant GPRA Goals](#), [G.DOI.07 2006/2007 PARs](#).

**Given these issues, we conclude that the BLM AML program does not have an internal control program to assess the effectiveness and efficiency of operations as required by GAO/AIMD-00-21.3.1.**

With regard to compliance with applicable laws and regulations, pages 8-10 of the AML Program Policy Handbook note the laws applicable to the AML program as shown below. Again, because few AML staff are familiar with the handbook and other program documents [J.BLM.29 AML Staff Qualifications](#), it would appear they may not be familiar with applicable laws. We also found that there is no set agenda or list of topics for training of AML staff and concluded that knowledge of applicable laws relies on the individual initiative of staff members.

### **1.8. Authorities and Regulations**

This subsection provides a description of the statutes and regulations that authorize the BLM to clean up environmental degradation and mitigate physical safety risks associated with abandoned mines.

The text box below provides Web links to the full text of these laws and regulations.

.. **Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1701, et seq.).**

Section 302(b) authorizes the Secretary of the Interior, through the BLM, to take actions that prevent unnecessary or undue degradation of public lands.

.. **National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300).**

The NCP "provide[s] the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and

contaminants” (40 CFR 300.1).

.. **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42**

**U.S.C. 9601)**. CERCLA was enacted to address risks to public health and the environment resulting from actual or potential releases of hazardous substances and to recover costs spent for cleanups from responsible parties. Executive Orders (EO) 12580 (Superfund Implementation) and 13016 (Amendment to E.O. 12580) delegate CERCLA authority and responsibility to the DOI to respond to actual or potential releases of hazardous substances on or affecting public lands administered, by the BLM and initiate cost recovery from responsible parties. These actions should comply with the requirements of the NCP.

.. **Watershed Restoration and Enhancement Agreements (“Wyden Amendment”) (Public**

**Law (PL)-104-208, Sec. 124, PL 10-5-277, Sec. 136 of the 1999 Interior Appropriations Act**

**of 1998)**. The Wyden Amendment authorizes the BLM to conduct watershed-based environmental reclamation, through partnerships with States, at abandoned mines, impacted by contamination originating from non-Federal lands, to improve the viability of and otherwise benefit the fish, wildlife, and other biotic resources on public land in the watershed.

In addition to the preceding primary authorities, the BLM also relies on the following secondary authorities applicable to the evaluation and cleanup of abandoned mine lands. These authorities present standards and requirements that must be observed in the course of AML cleanup and reclamation.

.. **National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.)**. In the absence of the application of CERCLA processes, AML projects require compliance with NEPA. NEPA establishes a process to review the environmental impacts of a proposed major Federal action that could significantly affect the quality of the environment, as well as the environmental impacts of possible alternatives to the proposed action. Proposed Federal activities that potentially could result in environmental impacts at abandoned mines include non-CERCLA environmental reclamation and physical safety risk mitigation efforts.

.. **Surface Mining Control and Reclamation Act (SMCRA) (30 U.S.C. 1201, et seq.)**. After meeting coal clean-up responsibilities, SMCRA allows States and Tribes with approved SMCRA

AML programs to fund clean-up of non-coal sites. For abandoned mine purposes, the law also allows reclamation resources to be used for clean-up of non-coal mines that, if not addressed, would substantially degrade the quality of the environment, prevent or damage the beneficial use of land or water resources, or endanger the health or safety of the public. This facilitates the BLM’s partnership opportunities with States, such as cooperative agreements and fund leveraging.

.. **Surface Resources Act of 1955 (PL-167) (30 U.S.C. 611-614)**. This statute authorizes the BLM to manage the vegetative and surface resources on mining claims located after 1955. The Act also provides for restriction on the use of unpatented mining claims.

.. **Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. 6921-6924)**. RCRA is the primary Federal authority for managing hazardous wastes from cradle to grave. Subtitle C of RCRA regulates the generation, collection, transportation, treatment, storage, and disposal of hazardous wastes. In 1980, Congress amended RCRA to include the **Bevill Amendment (Section 3001(b) (3) (A) (ii) and 40 CFR 261.4(b)(7))**, which effectively exempted wastes from the extraction and beneficiation of ores and minerals from RCRA subtitle C, regardless of their chemical composition. A limited set of mining wastes *may* be eligible under RCRA—if the abandoned mine (or associated operations) held a subtitle C treatment, storage, or disposal facility permit or if the abandoned mine generated non-Bevill excluded waste. From a practical point of view, the Bevill Amendment exempts most tailings and waste rock from RCRA standards, thus many on-site repository solutions can be utilized for stabilization of mine wastes. (See Section 9.4.7.2 for more information on repositories).

.. **Clean Water Act of 1972 (CWA) (33 U.S.C. 1251 et seq.)**. The BLM can use the provisions of the CWA to promote cooperative clean-up efforts at abandoned mine sites impacting water quality.

.. **Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531)**. Where abandoned mines may impact endangered or threatened species (e.g , bats or fish), the BLM uses ESA authority to ensure environmental risks are addressed through ecologically protective reclamation efforts.

.. **National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470)**. Where abandoned mines may impact historic or cultural resources, the BLM uses NHPA authority to ensure protection of historic and archaeological properties. (See Section 9.3.3.1 for application).

.. **Mining Law of 1872, as amended (30 U.S.C. 21, et seq.)** . This statute allows the location, use, and patenting of mining claims on public lands.

**Given the lack of standardized training and the unfamiliarity of staff with the AML Program Policy Handbook and other program documents, we conclude that BLM does not have an effective internal controls program to assess compliance with applicable laws and regulations.**

**Methodology:**

Reviewed source document and evaluated BLM actions to implement internal controls.

Submission:	Submitted	William McMullen	01/11/2008 10:27:42 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/11/2008 10:58:15 AM

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B 01 Internal Controls

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: William McMullen 03/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM 01 **Subsection** Survey B.9  
**Program Name** Background  
**Subject** BLM Policy for AML Physical Safety Hazards

**Origination Doctlink** 

**Purpose:**  
 Determine what policies exist in BLM for mitigating physical hazards at abandoned mines.

**Scope:**  
 BLM abandoned mine lands.

**Source:**  
 BLM Instruction Memorandum 2000-182, "Mitigating and Remediating Physical Safety Hazards at Abandoned Mine Land Sites" found at <http://www.blm.gov/nhp/efoia/wo/fy00/im2000-182.html> and attached:



im2000-182.pdf

Telephone discussion on 3/23/2007 as follows:

Name	Title	Office	Phone	Email
W. McMullen	Evaluator	Lakewood, OIG	303.236.9123	william_mcmullen@doioig.gov
Jim Horan	Data Administrator	BLM WO-560, Information Resources Management Governance	202.452.5023 x 3023	im_horan@blm.gov

**Conclusion:**  
 M 2000-182 was issued in 2000 to provide interim policy for dealing with physical safety hazards from abandoned mines on BLM lands. While the IM has expired, its policy is typically still accepted by the field until fu her policy is provided (note: an AML Manual was issued in 2006 and an AML Handbook was formally released in March 2007). The IM states:

- BLM's purpose is to eliminate or reduce physical hazard and safety risks at AML sites,
- Potential tort claims are a key driver for mitiga ing AML safety hazards,
- Priori ies are set 1) for sites where dea h or injuries have occurred and 2) where sites are in close proximity to developed recreation areas or areas with high visitor use,
- State offices were to submit a list of developed recreation sites and areas of high visitor use where AMLs posed significant safety hazards, and
- Field offices could use funds from other budget subactivities ("benefitting budget subactivity" concept) to address immediate needs.

**Details:**  
 The purpose of IM 2000-182, "Mitigating and Remediating Physical Safety Hazards at Abandoned Mine Land Sites" is stated below:

**Purpose of IM**

The IM notes the importance of physical safety issues with regard to poten ial tort claims against BLM and the need for BLM to take proactive measures as follows :

**Tort Claim Issues**

The IM indicates the priorities to be used to assess physical safety mitigation needs at AML sites as follows :

**AML Safety Priorities**

The IM indicates the need for an inventory of sites needing mitigation of physical safety hazards as shown below:

**Need for Inventory**

The IM also suggests ways to fund needed physical safety mitigation efforts as follows:

**Funding of Mitigation Actions**

M 2000-182 carried an expiration date of 9/30/2001. According to Jim Horan, even if a IM has expired, the field still considers that to be he latest guidance from HQ and that the spirit of he IM continues until superceded by another IM or a manual/handbook revision.

**Methodology:**

Reviewed Source document to determine BLM policies for AML physical safety hazards and discussed IM procedures with BLM WO (Jim Horan).

Submission: Submitted William McMullen 04/10/2007 10:07:46 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 05/02/2007 10:12 57 AM

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B BLM.02 BLM AML Funding

**Record of Discussion**

Prepared by: Stephanie Christian 04/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM 02 **Subsection** Survey B.3  
**Program Name** Background  
**Subject** BLM AML Funding

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader	134 Union Blvd	303-236-9119	John_Illson@doioig.gov
Stephanie Christian	Evaluator	134 Union Blvd	303-236-9112	Stephanie_Christian@doioig.gov
Sean Pettersen	Auditor	134 Union Blvd	303-236-9133	Sean_Pettersen@doioig.gov
Bill McMullen	Evaluator	134 Union Blvd	303-236-9123	Bill_McMullen@doioig.gov
Gary Cooper	Deputy Chief of Engineering and Environmental Services	BLM HQ	202-557-3572	Gary_Cooper@blm.gov
Nancy Dean	Chief of Engineering and Environmental Services	BLM HQ	202-557-3572	Nancy_Dean@blm.gov

**Location** BLM HQ

**Date/Time**

03/14/2007 11 00 AM

**Purpose:**

To identify funding sources available addressing Bureau AML issues (e.g. Fee Demo Funds, Central Hazmat Funds, Soil and Water Appropriations etc.)

**Scope:**

BLM AML Funding

**Conclusion:**

BLM has no dedicated source of funding for the AML program. Two funding sources are being used to help fund AML cleanup; water quality and hazmat funding. AML sites that have a water quality component can be mitigated using water quality funding (BLM 1010 budget subactivity). A portion of the hazmat funding (BLM 1640 subactivity) was set aside for the AML program. And a Special Cleanup Fund was established using hazmat funding to ensure high risk sites are mitigated. AML projects can compete for funding from the Special Cleanup Fund, but they must be ranked a high priority by a special committee that allocates the funding.

**Summary:**

**Nancy Dean, Chief, and Gary Cooper, Deputy Chief, Division of Engineering and Environmental Services**

According to Nancy, there are two funding mechanisms for the AML program. The first funding source is for water quality and the money is used for watershed work and improving water quality. The money does not go into the Division of Engineering and Environmental Services directly, but rather comes from the 1010 group, which provides the division with its piece of the funding. From the water quality money, the division gets 8.5 million. However, this money is only supposed to be used to improve water quality. Nancy indicated that BLM needs a different sub-activity for AML and dedicated funding to mitigate the physical safety hazards. The money that comes from water quality comes in and is supposed to be used for watershed work. This money was never meant for safety hazards. However, the division does allow money to be spent on AML issues where there is also a water quality issue. Therefore, AML does receive some funding from this program. Nancy indicated that they would like to work on the physical safety work which is not water related, but the water quality money can not be spent for this purpose. However, Nancy indicated that she did make a request to have a separate sub activity for the AML program. However, this request was not approved. There is not, nor has there been, a specific appropriation for the AML program. However, Nancy indicated that she did make hazmat money (1640 subactivity) available for the AML program. About 4-5 years ago, a portion of the hazmat funding was dedicated to AML and also to a Special Cleanup Fund. AML projects can compete for funding from the Special Cleanup Fund based on the priority of the AML site. This priority is determined by a special committee which ranks all of the projects and determines where the funding will be spent.

Submission: Submitted Stephanie Christian 04/10/2007 10:46 58 AM  
 Level 1 Approval: Approved William McMullen 04/10/2007 11:02 22 AM  
 Level 2 Approval: Approved John Illson 05/02/2007 10:15:46 AM

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**Scope:**

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BLM has no dedicated source of funding for the AML program. Two funding sources are being used to help fund AML cleanup: water quality and hazmat funding. AML sites that have a water quality component can be mitigated using water quality funding (BLM 1010 budget subactivity). A portion of the hazmat funding (BLM 1640 subactivity) was set aside for the AML program. And a Special Cleanup Fund was established using hazmat funding to ensure high risk sites are mitigated. AML projects can compete for funding from the Special Cleanup Fund, but they must be ranked a high priority by a special committee that allocates the funding.

**Summary:**

**Nancy Dean, Chief, and Gary Cooper, Deputy Chief, Division of Engineering and Environmental Services**

According to Nancy, there are two funding mechanisms for the AML program. The first funding source is for water quality and the money is used for watershed work and improving water quality. The money does not go into the Division of Engineering and Environmental Services directly, but rather comes from the 1010 group, which provides the division with its piece of the funding. From the water quality money the division gets 8.5 million for the AML program. However, this money is only supposed to be used to improve water quality. Nancy indicated that BLM needs a different sub-activity for AML and dedicated funding to mitigate the physical safety hazards. The money that comes from water quality comes in and is supposed to be used for watershed work. This money was never meant for safety hazards. However, the division does allow money to be spent on AML issues where there is also a water quality issue. Therefore, AML does receive some funding from this program. Nancy indicated that they would like to work on the physical safety work which is not water related, but the water quality money can not be spent for this purpose. However, Nancy indicated that she did make a request to have a separate sub activity for the AML program. However, this request was not approved. There is not, nor has there been, a specific appropriation for the AML program. However, Nancy indicated that she did make hazmat money (1640 subactivity) available for the AML program. About 4-5 years ago, a portion of the hazmat funding was dedicated to AML and also to a Special Cleanup Fund. B.BLM.03 Funding - Hazmat Fund AML projects can compete for funding from the Special Cleanup Fund based on the priority of the AML site. This priority is determined by a special committee which ranks all of the projects and determines where the funding will be spent.

**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

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**Record of Discussion**

Prepared by: Stephanie Christian 04/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM 03 **Subsection** Survey B.3  
**Program Name** Background  
**Subject** Funding - Hazmat Fund

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader	134 Union Blvd	303-236-9119	John_Illson@doioig.gov
Stephanie Christian	Evaluator	134 Union Blvd	303-236-9112	Stephanie_Christian@doioig.gov
Sean Pettersen	Auditor	134 Union Blvd	303-236-9133	Sean_Pettersen@doioig.gov
Bill McMullen	Evaluator	134 Union Blvd	303-236-9123	Bill_McMullen@doioig.gov
Miyoshi Stith	Program Lead, Hazard Materials Management	BLM HQ	202-557-3578	

**Location** BLM HQ

**Date/Time**

03/14/2007 09 00 AM

**Purpose:**

Identify funding sources available to address Bureau AML issues (e.g. Fee Demo Funds, Central Hazmat Funds, Soil and Water Appropriations etc.)

**Scope:**

BLM AML Funding

**Conclusion:**

BLM hazmat program has allocated funding to the AML program through its annual appropriations because the AML program has no dedicated funding. The hazmat program also created a special clean-up fund that has approximately \$500,000 annually for special projects. This money is prioritized by a special committee. AML projects can also compete for this fund by making a project request for specific projects. Most of the hazmat funding is allocated directly to the states and it is the states' discretion to determine what projects to fund including AML.

**Summary:**

**3/14/07 Meeting Schedule:**

**9 a.m. Miyoshi Stith, Program Lead, Hazard Materials Management**

According to Miyoshi, originally the hazmat program was related to hazardous waste and unexploded ordinance. The hazmat program funds the environmental audit program and environmental assessments. That was the original use of hazmat. Nancy Dean, the Branch Chief noticed that there was no money allocated for physical safety and the AML program. Hazmat then carved money out of the hazmat program for the AML program about 4-5 years ago. The budget sub activity code for hazmat is 1640. This fund gets approximately 16 million dollars in allocations each year. A special cleanup fund was set aside and there is a special committee that ranks the sites for cleanup. AML can compete for this funding through an application. The projects that are submitted are prioritized and AML may get more or less than the \$500,000 based on the ranking of the projects. If AML sites are ranked a high priority then they may get additional funding, but if they are ranked low, then they may not get funded. All of the rest of the money for the hazmat program is given to the states for the discretionary cleanup of the hazardous waste and AML sites. This money is used discretionally at the state level to decide what projects will receive funding. You can determine how much each state spends on AML based on the code of BH, which is for the AML physical safety. This amount is typically about \$100,000 each year. Hazmat money is based on priority and states with more hazmat problems get more funding. Each year the money is readjusted based upon need. Base salary is covered by this 1640 money as well.

Pages from BLM 2006 Budget Justification follow and show that Hazardous Materials Management funding was \$16,497,000 in FY04 (actual), \$15,850,000 in FY05 (enacted), and \$16,126,000 in FY06 (requested) or about \$16 million per year. (see yellow highlighting below)

**Bureau of Land Management**

**2006 Budget Justifications**

**SUMMARY OF REQUIREMENTS (\$000)**

Comparison by Activity/ Subactivity	2004 Actual		2005 Enacted		Uncontrollable & Related Changes (+/-)		Program Changes (+/-)		2006 Budget Request		Inc(+) Dec(-) from 2005	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
<b>Management Of Lands and Resources</b>	<b>6,441</b>	<b>855,271</b>	<b>6,440</b>	<b>836,826</b>	<b>0</b>	<b>+26,177</b>	<b>-9</b>	<b>-6,826</b>	<b>6,431</b>	<b>850,177</b>	<b>-9</b>	<b>+13,351</b>
Land Resources	1,538	183,135	1,541	186,014	0	+4,466	-9	-5,517	1,532	186,983	9	-1,051
Soil, Water, Air Mgt	255	36,038	253	34,738	0	712	0	-2,107	253	33,343	0	-1,395
Range Mgt	712	72,459	700	69,163	0	2,114	-12	-2,085	688	69,212	-12	+29
Forestry Mgmt	75	8,093	81	8,695	0	205	5	1,459	86	10,559	+5	+1,664
Riparian Mgt	199	22,015	199	21,228	0	590	0	-114	199	21,704	0	+476
Cultural Resources Mgt	137	15,479	136	14,925	0	390	0	-75	136	15,240	0	+315
Wild Horse and Burro Mgt	160	29,051	172	39,045	0	455	-2	-2,595	170	36,905	-2	-2,140
Wildlife & Fisheries	279	34,068	208	36,947	0	778	14	3,359	313	41,084	+14	+4,137
Wildlife Mgt	185	22,387	204	25,063	0	515	12	3,009	215	28,587	+12	+3,524
Fisheries Mgt	94	11,711	95	11,884	0	263	2	350	97	12,497	+2	+613
Threatened & Endangered Species	182	21,940	160	21,144	0	530	0	-102	180	21,572	0	+428
Recreation	597	62,276	568	60,539	0	1,531	10	2,364	588	64,604	+10	+4,015
Wilderness Mgt	166	17,673	158	16,431	0	469	0	-94	158	16,806	0	+375
Recreation Resource Mgt	430	44,603	430	44,158	0	1,182	10	2,478	440	47,798	+10	+3,640
Recreation Operations Fees	1	0	0	0	0	0	0	0	0	0	0	0
Energy & Minerals	1,037	107,879	1,032	106,631	0	2,754	-21	-2,613	1,011	106,772	-21	+141

**Bureau of Land Management** **2006 Budget Justifications**

Oil and Gas Mgt	860	88,195	855	87,360	0	2,257	-20	-2,326	835	87,291	-20	-69
Coal Mgt	81	9,390	81	9,311	0	220	-1	-235	80	9,296	-1	-15
Other Mineral Resources Mgt	96	10,294	96	9,960	0	277	0	-52	96	10,185	0	+225
Alaska Minerals	17	2,453	19	3,944	0	45	-2	-1,692	17	2,297	-2	-1,647
Realty and Ownership	730	93,246	736	92,624	0	2,231	-12	-13,769	724	81,146	-12	-11,478
Alaska Conveyance	279	41,920	279	41,975	0	760	-12	-9,136	267	33,599	-12	-8,376
Cadastral Survey	123	16,691	120	15,690	0	369	0	-2,093	120	13,866	0	-1,724
Land and Realty Mgt	337	34,635	337	35,059	0	1,102	0	-2,480	337	33,661	0	-1,378
Communications Sites Mgt	27	0	27	0	0	0	0	0	27	0	0	0
Fee Collection	27	2,000	27	2,000	0	0	0	0	27	2,000	0	0
Offsetting Fees		-2,000		-2,000		0		0	0	-2,000		0
Resource Protection & Maintenance	530	81,260	541	81,501	0	1,381	5	734	546	83,616	+5	+2,115
Resource Mgt Planning	331	48,510	340	48,863	0	797	0	-144	340	49,516	0	+653
Resource Protection & Law Enforcement	77	16,283	81	16,788	0	242	5	944	86	17,974	+5	+1,186
Hazardous Materials Mgt	122	16,497	120	15,850	0	342	0	-68	120	16,126	0	+276
Transportation & Facilities Maintenance	428	81,533	430	77,813	0	1,204	0	-2,726	430	76,291	0	-1,522
Operations	55	6,311	55	6,057	0	269	0	-55	55	6,271	0	+214
Annual Maintenance	277	31,646	277	30,564	0	935	0	-206	277	31,293	0	+729

Submission: Submitted Stephanie Christian 04/03/2007 02:58:17 PM

Level 1 Approval: Approved William McMullen 04/10/2007 10:08:16 AM

Level 2 Approval: Approved John Illson 01/09/2008 10:45:10 AM

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Purpose:

Identify funding sources available to address Bureau AML issues (e.g. Fee Demo Funds, Central Hazmat Funds, Soil and Water Appropriations etc.)

Scope:

B BLM.03 Funding - Hazmat Fund

BLM AML Funding

Conclusion:

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Operations	55	6,311	55	6,057	0	269	0	-55	55	6,271	0	+214
Annual Maintenance	277	31,646	277	30,564	0	935	0	-206	277	31,293	0	+729

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

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B BLM.03 Funding - Hazmat Fund

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B BLM.04 Federal Authority to Close Lands

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B BLM.05 Mitigation of other mining activities

**Record of Discussion**

Prepared by: Stephanie Christian 04/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM 05 **Subsection** Survey B.9  
**Program Name** Background  
**Subject** Mitigation of other mining activities

**Origination Doclink** [REDACTED]

**Participants**

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Sean Pettersen	Auditor	134 Union Blvd	303-236-9133	Sean_Pettersen@doioig.gov
Bill McMullen	Evaluator	134 Union Blvd	303-236-9123	Bill_McMullen@doioig.gov
Mitchell Leverett	Deputy Chief of the Division of Solid Minerals	BLM HQ	202-452-5088	Mitchell_Leverett@blm.gov
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**Location** BLM HQ

**Date/Time**

03/14/2007 10 00 AM

**Purpose:**

Determine bureau responsibilities for mitigating safety hazards resulting from other mining activities (quarries) on DOI land.

**Scope:**

BLM Mitigation of other mining activities

**Conclusion:**

The Solid Minerals Division does not cover the reclamation of historic AML sites including quarries (AML is considered any mining activity that took place prior to 1981). Only at historic AML sites where current mining operations that are using old mining site workings are claimants required to remediate the site after mining has ceased. If the current mining claimant does not use old workings, but creates new ones, they are not responsible for reclamation of old workings at the site. The Solid Minerals Division only requires that current claims obtain a bond for remediation of a site after the mining operations cease. This program, however, has not completed cleanup of AML sites that were post 1981 where companies lacked proper bonds and have not remediated the site.

**Summary:**

**Responsibilities from the solid minerals division:**

Mitchell Levrett outlined the solid minerals division and responsibilities. The responsibilities include: Coal, Non-energy leasable, saleable minerals. Responsible for issuance of authorizations. There is a mine plan submitted for all active mining operations which must be completed and filed prior to the issuance of the use authorization. Once the plan is approved, the authorization is issued. Then each use authorization is oversighted to ensure that reclamation of the site is completed after mining operations cease. All operators are required to obtain a bond to ensure the BLM can contract out the reclamation of the sites in case the company goes bankrupt. The BLM 3809 program is fully funded by the mining claim fees, loss recovery and fines and assessments. This money covers the entire running of the program. This is a line item appropriation for the program and can only be used for the 3809 program administration.

John Illson asked about historic sites that new companies are now reopening for mining. Scott indicated that some of the mining operations are occurring at historic mining sites. BLM has a policy that if a current operator is operating at the historic mining site, the operator is responsible for only what he/she disturbs in its mining, not what was previously disturbed. According to Scott, notices that were filed prior to 2001 did not require reclamation of a site once mining was completed. After 2001, all notices must also include a bond for reclamation of sites being mined. Scott indicated that mining claim fees are reviewed every 5 years for the cost and they were recently increased.

John Illson asked why some of the fees collected could not go to mitigate sites. Mitchell indicated that in 2000 GAO did an audit of the 3809 program. The program had been using some of its funding for areas not covered by the 3809 program and the audit stipulated that the program is a line item appropriation and could not be used for any other purpose.

John then asked who was responsible for the reclamation of old quarries. Mitchell indicated that quarries are part of the 3600 saleable program. However, Mitchell stipulated that historic quarries should be part of the AML program, as they are not covered under the current program. There now are bonds required for the saleable program, but if it was an old historic quarry, it would not be covered by this program. Mitchell indicated that the program manager for this area is George Brown. He also gave us the lead for the leasable program (Program 3500) which is Charlie Beachum.

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

B BLM.05 Mitigation of other mining activities

Scott indicated that this program does not cover any AML activity that took place prior to 1981. If there are sites post 1981 that have no bond then BLM is on the hook for cleaning up those sites, but this program has not done the cleanup even for sites that were post 1981 and lacked proper bonds.

Submission:	Submitted	Stephanie Christian	04/10/2007 10:44 04 AM
Level 1 Approval:	Approved	William McMullen	04/05/2007 01:06 53 PM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:27:14 AM

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**Purpose:**  
Determine bureau responsibilities for mitigating safety hazards resulting from other mining activities (quarries) on DOI land.

**Scope:**  
BLM Mitigation of other mining activities

**Conclusion:**  
The Solid Minerals Division does not cover the reclamation of historic AML sites including quarries (AML is considered any mining activity that took place prior to 1981). Only at historic AML sites where current mining operations that are using old mining site workings are claimants required to remediate the site after mining has ceased. If the current mining claimant does not use old workings, but creates new ones, they are not responsible for reclamation of old workings at the site. The Solid Minerals Division only requires that current claims obtain a bond for remediation of a site after the mining operations cease. This program, however, has not completed cleanup of AML sites that were post 1981 where companies lacked proper bonds and have not remediated the site. ■

**Summary:**  
**Responsibilities from the solid minerals division:**  
Mitchell Levrett outlined the solid minerals division and responsibilities. The responsibilities include: Coal, Non-energy leasable, saleable minerals. Responsible for issuance of authorizations. There is a mine plan submitted for all active mining operations which must be completed and filed prior to the issuance of the use authorization. Once the plan is approved the authorization is issued. Then each use authorization is oversights to ensure that reclamation of the site is completed after mining operations cease. All operators are required to obtain a bond to ensure the BLM can contract out the reclamation of the sites in case the company goes bankrupt. The BLM 3809 program is fully funded by the mining claim fees, loss recovery and fines and assessments. This money covers the entire running of the program. This is a line item appropriation for the program and can only be used for the 3809 program administration.

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**History**

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B BLM.05 Mitigation of other mining activities

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Stephanie Christian 04/10/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM 06 **Subsection** Survey B.3  
**Program Name** Background  
**Subject** BLM Budgeting Process

**Origination Doctlink** 

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Becky Lasell	Budget Program Analyst	BLM HQ - D.C.		
Karen Moreson	Budget Specialist	BLM HQ - D.C.		
Karen Moore	Sr. Budget Program Lead	BLM HQ - D.C.		

**Location** BLM HQ - D.C.

**Date/Time**  
 03/15/2007 01 00 PM

**Purpose:**  
 To identify funding sources available that address Bureau AML issues.

**Scope:**  
 BLM AML Funding

**Conclusion:**  
 The BLM AML program does not have its own sub-activity and therefore is typically lumped in with other program areas. This means that there is not a separate line item in the budget to address the safety issues associated with AML sites. The injuries and fatalities that occur at AML sites should be looked at in determining the priority for funding allocations, but the data submitted to budget on injuries and fatalities on BLM land comes from the Law Enforcement Program and is only associated with funding request for Law Enforcement.

**Summary:**  
 The BLM budget process begins in March for out year planning, which is the budget for 2 years out from the current FY. The budget office and a strategy team, which is made up of a variety of disciplines and grade levels, comes together to look at the funding outlook for 2 years out. They anticipate OMB's response and they look at the needs of BLM and where money should be allocated to address those needs. There is also information coming in from the information systems to look at the budget demands for funding. This information is used to determine each program's individual needs. The strategy team came up with 4 emphasis areas that BLM has chosen to focus its budget allocations on. These emphasis areas are managing forest for watershed, recreation, domestic energy and preserving cultural heritage resources. A data call was sent out to the states to create the emphasis areas. The budget is then based upon the priorities and the workload of each program area. The priority and workload are weighed into the appropriations needed by each program area. Every year a memo is sent requesting States to outline what they are going to spend out their base funding. However, there is no sub-activity for the safety issues associated with AML sites. This area is typically lumped in with other programs, and is not addressed as a separate issue. This means that there is not a separate line item in the budget to address the safety issues associated with AML sites. The injuries and fatalities that occur at AML sites should be looked at in determining the priority for funding allocations, but the data submitted to budget on injuries and fatalities on BLM land comes from the Law Enforcement Program and is only associated with funding request for Law Enforcement.

Submission: Submitted Stephanie Christian 04/10/2007 04:23 54 PM  
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**.02 Objectives**

The AML program supports the BLM mission of public land conservation through communication, consultation, and cooperation with federal, state, and local partners in abandoned mine land reclamation. The AML program’s objective is to support core BLM programs by addressing degraded water quality, hazardous materials and other environmental impacts on or affecting lands administered by BLM, and to mitigate physical safety hazards of abandoned mine land sites on public lands.

The AML program strategic objectives include:

1. Protect and restore the Nation’s watersheds impacted by abandoned mines through a risk-based, watershed approach that uses partnerships to effectively leverage funding and facilitate projects.
2. Protect public safety and reduce liabilities by eliminating or reducing hazards posed by abandoned mines.

Responsibilities- Chief Div of Engr and Env Services
Responsibilities- State Directors
Responsibilities- Field and District Managers
Responsibilities- Inventory
Responsibilities- Prioritization Strategy: Water Quality and Physical Safety

**Methodology:**

Reviewed Source document.

Submission:	Submitted	William McMullen	06/29/2007 11:03:47 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	07/02/2007 10:36 55 AM

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B BLM.08 BLM Manual 3720 Abandoned Mine Land Program Policy

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

B BLM.09 BLM Pits and quarries

**Record of Discussion**

Prepared by: Stephanie Christian 04/18/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM 09 **Subsection** Survey B.9  
**Program Name** Background  
**Subject** BLM Pits and quarries

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
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George Brown	Geologist - Lead on Saleable Program	Washington Office	202-452-7765	

**Location** e-mail (4/13/07) and phone conversation (4/11/07)

**Date/Time**

04/11/2007 11 00 AM

**Purpose:**

To determine BLM responsibilities for mitigating safety hazards resulting from abandoned mining activities including (quarries/pits) on DOI land.

**Scope:**

BLM Saleable Program

**Conclusion:**

There are orphaned mineral materials sites, both gravel pits and quarries. Safety issues are more likely at abandoned stone quarries (e.g., highwalls, unstable slopes, water hazards), while gravel pits may need reshaping and revegetation. Both types of sites can become magnets for unauthorized dumping, which can potentially involve hazardous materials. In some cases, the pits were pre-existing and acquired as part of land exchanges. In other cases, there are community pits where, for various reasons, insufficient fees or bonds were collected or required to fund all necessary work - in some instances, unanticipated safety hazards have developed that need corrective action. Although bond forfeitures are infrequent at sale sites, funds from such forfeitures must be used to reclaim the sites involved (and cannot be used elsewhere - any excess must be refunded to the bond company).

In many cases, unauthorized pits were developed in trespass. Through enforcement actions and litigation, BLM recovers full or partial settlements for the damages. The first priority for the settlement funds is to repair the trespass damage at those sites. The next priority for any remaining funds would be to repair other damaged mineral material sites.

**Summary:**

**George Brown/WO/BLM/DOI@BLM**

04/13/2007 05:12 AM

To Stephanie Christian/DEN/OIG/DOI@OIG  
 cc  
 Subject Your questions, plus cost recovery and repair of damaged land authority



SERVICE CHARGESpl94-579.doc 103105-FY06 Sec 9 Service Charges Authorizations.doc

Stephanie,

Please don't confuse the salable minerals program (43CFR3600) with mining law operations (43CFR3809/3715). A lot of people get them mixed up. They are entirely different programs with different authorities, regulations and general requirements and operating procedures. Here is a general description of the items you asked about.

B BLM.09 BLM Pits and quarries

There are several main categories of mineral materials contracts and permits -

**-nonexclusive sales contracts**

- small sales typically 90 days duration or less - small quantities under \$2000 in place value

**-exclusive sales contracts**

- three types (noncompetitive, nonrenewable competitive, renewable competitive) - generally larger quantities, longer terms

**-free use permits**

- two types (to government agencies - potentially unlimited quantities, up to 10 yrs.; to nonprofit organizations - 5000 cubic yards, 1 yr. max)

Any of these types of contracts and permits can occur either at a stand-alone independent site or within a BLM operated mining area (CP or CUA).

Bonds are routinely required at independent sale sites. Government agencies are usually self-bonding, but bonds may be required in unusual situations.

The salable program requires performance bonds, not reclamation bonds. The difference is that a performance bond covers all terms and conditions of the contract, including full payment for the materials as well as reclamation of the site and any other contract requirements.

Stand-alone sites - bonding is mandatory for contracts of \$2000 or more.

Bonding is discretionary with BLM for contracts of less than \$2000. 43CFR3602.14(b) further states that BLM will not require a bond amount greater than 20 percent of the total contract value.

At community pits, BLM may or may not require a bond. Instead, BLM collects reclamation fees (CPs are areas designated by BLM for intensive disturbance, with BLM designed mining and reclamation plans). BLM performs the site preparation, life-of-mine monitoring operations, interim corrective work, final reclamation, and post-closure verification of reclamation success and any needed additional repairs. If the purchaser/permittee is required to pay the fee, no bond is required because the cash fee provides the funds for the reclamation work (and that work is performed by BLM or a BLM contractor).

Depending on BLM's CP mining and reclamation plan and overall pit management plan, all types of contracts and permits may be issued within the boundaries of a community pit. The portion of the CP where BLM usually prepares a detailed mining and reclamation plan is usually for small nonexclusive sales (i.e., all purchasers share the same removal area).

Other portions of the CP may be designated by BLM for individual free use permits and exclusive sales (contracts designating a particular site for exclusive use by that purchaser), and the plan may or may not provide details on development and reclamation for those portions. In those areas, BLM may choose to allow the purchaser or permittee to prepare a detailed mining and reclamation plan for that internal mining cell within BLM's overall CP plan, and to perform some of the reclamation work. If the applicant is allowed this option, a bond is required for the work that will be performed by the applicant - that bond amount must be calculated to cover BLM's direct and indirect costs for performing the work if there is a bond forfeiture. BLM must still review those sub-plans and monitor operations to determine if the site is being developed and closed in accordance with the reclamation plan, so a fee is still required. In such situations, BLM may reduce the CP reclamation fee in proportion to the amount of work that will not be performed directly by BLM, but a fee would still be charged in addition to the bond to cover the work that is done by BLM for the overall CP and BLM's work directly related to the reclamation of that cell. The idea is to ensure that the total cost of the work is covered.

Common use areas (CUAs) are broad areas designated by BLM for operations that involve limited disturbance typically for very small nonexclusive sales (e.g., collecting boulders or decorative stone by hand without digging). Fees for these CUAs are intended for monitoring and reclamation or repair of minor disturbance such as that caused by access routes.

There are orphaned mineral materials sites, both gravel pits and quarries. Safety issues are more likely at abandoned stone quarries (e.g., highwalls, unstable slopes, water hazards), while gravel pits may need reshaping and revegetation. Both types of sites can become magnets for unauthorized dumping, which can potentially involve hazardous materials. In some cases, the pits were pre-existing and acquired as part of land exchanges. In other cases, there are community pits where, for various reasons, insufficient fees or bonds were collected or required to fund all necessary work - in some instances, unanticipated safety hazards have developed that need corrective action. Although bond forfeitures are infrequent at sale sites, funds from such forfeitures must be used to reclaim the sites involved (and cannot be used elsewhere - any excess must be refunded to the bond company).

In many cases, unauthorized pits were developed in trespass. Through enforcement actions and litigation, BLM recovers full or partial settlements for the damages. The first priority for the settlement funds is to repair the trespass damage at those sites. The next priority for any remaining funds would be to repair other damaged mineral material sites, such as those described here.

In general, the 43CFR3600 regulations have been consistent over the past 25 years, with only minor changes until 2001. The 2001 changes were consistent with the prior regulations and mainly served to improve their functionality for contracts and permits, and provide better clarification and strengthening of some procedures and authorities as a result of audits in the 1990's.

George Brown, CME 0134  
Geologist WO320  
Washington Office BLM

Here is an excerpt from the 2001 Federal Register Section II. Discussion of Comments explaining the changes made to the financial security requirements:

Section 3602.14 What kind of financial security does BLM require?

Several comments addressed this section. One comment stated that the bonding provision is cumbersome because it appears to set up a dual bond requirement--a performance bond of 5 percent, and a reclamation bond of at least \$500. The intent of the proposed rule was not to require two bonds, but to set up a two-stage calculation to determine the required amount of the bond, which BLM could have used to enforce any part of the contract performance.

BLM has determined that the two-stage calculation is unnecessary, and we have removed the requirement that the bond include 5 percent of the total contract price. A performance bond large enough to cover reclamation costs should be sufficient for environmental protection, and BLM can still use the bond amount to enforce any part of the contract performance. For average operations (contracts of \$57,000) the bond amount under these new requirements is expected to decrease from \$11,400 to \$5,000, a reduction of \$6,400. While on its face, this reduction might appear to afford less protection to the Federal Government, it actually only recognizes that

the relatively high bonding requirements of the mineral materials program have been unnecessary. Moreover, we will also be holding the purchaser's cash deposit of 5 percent of the contract value, or \$500, whichever is larger, which will further guarantee performance. These changes make the bonding system for mineral materials more consistent with bonding standards in other minerals programs, such as oil and gas, leaseable minerals, and the mining law. Further, if the purchaser removes excess materials, we can use trespass procedures under 43 CFR 9239.0-7 and 9239.0-8 to recover damages.

One comment recommended that BLM accept other forms of security besides performance bonds, and went on to suggest examples of types of security that other agencies accept. The comment suggested that we add language allowing "any other form of financial security which is acceptable to the Secretary." We have adopted the suggestion that we accept other forms of security, and have added irrevocable letters of credit to the forms that BLM will accept. We have also made clear that surety bonds can be arranged or paid for by third parties. We have not adopted the broad language suggested by the comment because we have determined that the rules should not provide open-ended discretion in the bonding area.

One comment urged that BLM not set a maximum bond of 20 percent of contract value for contract sales less than \$2,000. The respondent raised two concerns: first, reclamation costs may exceed the bond in some circumstances, and second, the Federal upper limit may cause problems with State and local bonding requirements. BLM does not view these concerns as outweighing the reasons for the provision.

- This bonding provision is necessary to protect the interests of small purchasers. Many of our small sales are from community pits and common use areas, where bonds are generally not needed at all. For other small sales, BLM takes extra care to select sites with minimal possibility of environmental damage and therefore low reclamation costs.
- BLM bonding levels should have no effect on State or other agency bonding policies and requirements. It is quite common for different levels of government to have different bonding requirements.

Finally, one comment pointed out that paragraph (a)(2) of this section as proposed would seem to require bonding for sales of \$2,000 or more from community pits, and said that this seems to be an unnecessary burden on business. BLM agrees, and, as stated above, in the final rule, we have removed the provision requiring a 5 percent bond.

Submission:	Submitted	Stephanie Christian	04/30/2007 04:31 04 PM
Level 1 Approval:	Approved	William McMullen	05/07/2007 11:39 23 AM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:31 52 AM

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**Record of Discussion**

Prepared by: Stephanie Christian 04/18/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM.10 **Subsection** Survey B.9  
**Program Name** Background  
**Subject** BLM Post FLPMA Sites

**Origination Doctlink** 

**Participants**

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**Location** Telephone

**Date/Time**

04/11/2007 11 00 AM

**Purpose:**

To determine BLM responsibilities for mitigating safety hazards resulting from abandoned mining activities including (Post FLPMA Sites) on DOI land.

**Scope:**

BLM 3809 Program

**Conclusion:**

According to the Solid Minerals Division of the 3809 mining operations program, bonding is handled by each BLM field office. Post FLPMA, BLM required reclamation of all AML sites. However, bonding was not required until the 1990s. Scott did indicate that there are sites that were not remediated post FLPMA and there is no bond or insufficient in place to reclaim the site. According to Scott, those sites in which bonding was insufficient for reclamation of a site or sites with no bond in place, BLM would have to come up with funding to remediate those sites. However, there is no list kept to identify the sites that require reclamation due to insufficient bonding.

**Summary:**

According to Scott, bonding is handled by each of the BLM field offices. However, he stated that BLM is responsible for reclamation of all sites. Post FLPMA, BLM required reclamation of all AML sites. However, bonding was not required until the 1990s. Scott did indicate that there are sites that were not remediated post FLPMA and there is no bond or insufficient in place to reclaim the site. According to Scott, those sites in which bonding was insufficient for reclamation of a site or sites with no bond in place, BLM would have to come up with funding to remediate those sites. This problem is handled at the state office level and the state office must determine where to come up with the funds to reclaim a site. Reclamation, however, is not part of the 3809 program which oversees mining operations. I asked him if there is a list of sites that require reclamation due to insufficient bonding. He stated that there is no listing of sites for which bonding is insufficient to cover reclamation costs. He stated that BLM can go after the operator if they have not reclaimed a site and have insufficient bonding, but if they are unable to pay, BLM would be responsible for the site. Scott also indicated that it is up to the field office to follow-up and get compliance from the companies to reclaim a site. This is primarily done by geologists in the field offices. However, Scott did indicate that there are a number of sites for which remediation will have to be completed by BLM due to insufficient bonding of mining companies.

Submission: Submitted Stephanie Christian 05/25/2007 11:03:44 AM  
 Level 1 Approval: Approved William McMullen 07/10/2007 11:07:45 AM  
 Level 2 Approval: Approved John Illson 01/09/2008 10:46:10 AM

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but the 1010 (water quality funding) money has increased. There is also money that CA can get out of the 1640 (hazmat funding) fund for special cleanup. CA has received money out of that fund for cleanup of AML sites.

2. How much 1010 and 1640 funds have you spent on mitigation of AML physical safety hazards?

About \$300,000 has been spent for AML each year out of 1640 (hazmat funding). The money for 1640 (hazmat funding) fluctuates, but the 1010 (water quality funding) money has increased. It is not a set amount each year. The goal is to not spend more than 25% of the budget on AML physical safety hazards.

3. Where do AML physical safety hazards rank in the context of overall Hazmat priorities in your State/District/Zone?

There have been a number of problems with marijuana growing and cleanup on public land. There is a lot of debris that need to be cleaned up regarding the marijuana growing that must be paid for out of the 1640 (hazmat funding). These problems have taken priority due to the hazards that the debris pose to the public.

Unfortunately, due to the timing of the funding for the AML program, most of the ALM sites being mitigated this year are carried over from last year. This delay is due to the late funding allocations for the AML program. Most of the money is given to the AML program at the end of the year because it is what is left over after the hazmat issues have been addressed. This causes a delay in the projects being started and normally pushes the mitigation of AML sites into the next FY. BLM is always behind, as well, due to the long process of contracting and contractor selection. Money is allocated toward the end of the year for AML physical safety. Field offices get frustrated because they enter their sites and then they are not always selected. Field offices don't see the point of entering them into BPS if they are not going to be funding.

4. How much non BLM funding (including in kind contributions) has been received for mitigation of physical safety hazards? From whom has it been obtained?

Most of the outside contributions for AML mitigation is coming from the Department of Conservation, which is a department within the State of CA. This Department spends approximately \$100,000 on BLM AML sites. This offices also has in kind staff that work on BLM AML physical safety. CA obtains the money to fund the AML mitigation from the silver and gold tax which is collected by the State of CA. This money is used to clean up AML sites on public land in CA, which includes BLM land.

5. How much money is spent by the state office out of other non-AML appropriations to address AML physical safety hazards?

This information may come out of the MIS. This may come from the OHV grant funding. George will check on this. The cultural (1050), survey, biological and damaged lands have all contributed some of the AML mitigation.

6. If you AML duties are collateral about how much time is dedicated to this program?

AML staff spend less than 10% of the their time dealing with AML issues due to the collateral duty. The people who are assigned AML collateral duties also have a number of other collateral duties as well as their full time responsibilities.

Submission:	Submitted	Stephanie Christian	04/10/2007 10:44 21 AM
Level 1 Approval:	Approved	William McMullen	04/10/2007 11:02 58 AM
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**Record of Discussion**

Prepared by: Stephanie Christian 04/13/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B BLM.CASTOffice 03                      **Subsection** Survey B.9  
**Program Name** Background  
**Subject** CA Solicitor's Office

**Origination Doctlink** ■

**Participants**

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Stephanie Christian	Evaluator	134 Union Blvd	303-236-9112	Stephanie_Christian@doioig.gov
George Stone	Senior Abandoned Mine Lands Specialist	Washington Office	202 557 3573	george_stone@blm.gov
Temi Berger	Deputy Regional Solicitor	CA State Office		

**Location** CA State Office

**Date/Time**

03/28/2007 03 00 PM

**Purpose:**

To determine BLM responsibilities for mitigating safety and contamination hazards resulting from abandoned hard rock mines on DOI land.

**Scope:**

BLM AML Program

**Conclusion:**

In the case of safety and contamination hazards caused by past mining activities, BLM may be accountable for safety concerns resulting in injury on BLM land. There have not been a lot of tort claims on AML sites in the past, but BLM may be held liable in a case when someone falls in a hole on BLM land. Berger also indicated that she was surprised there were not more tort claims due to the accidents that have occurred on AML land. She also indicated that there may be more claims as more individuals continue to visit sites previously remote. For hazmat sites and safety hazards, BLM is responsible for mitigation and remediation of those sites.

**Summary:**

3/28/07 – 3 PM - Meeting with the Temi Berger – Deputy Regional Solicitor

The solicitor office role and authority is to act as BLM's in house counsel. Temi works as an advisor for BLM to let them know what their risks and liability may be for different situations. And as a result of any litigation, the solicitor's office would represent BLM in any court proceedings or lawsuits. It is up to the state management team to involve the solicitor's office and seek any advice it needs on liability and risk for BLM.

In the case of safety and contamination hazards caused by past mining activities, BLM may be accountable for safety concerns resulting in injury on BLM land. There have not been a lot of tort claims on AML sites in the past, but BLM may be held liable in a case when someone falls in a hole on BLM land. She also indicated that she was surprised there were not more tort claims due to the accidents that have occurred on AML land. She also indicated that there may be more claims as more individuals continue to visit sites previously remote. For hazmat sites and safety hazards, BLM is responsible for mitigation and remediation of those sites. In the one example of Kelly, BLM is waiting for the risk assessment to determine what it needs to do to prevent harm to OHV visitors and residents in the area. Based on the risk assessment, BLM will determine an appropriate course of action to mitigate the safety and health concerns in the area.

We asked Temi about the about BLM's responsibility in conveying land with safety and contamination hazards, as occurred with the Kelly site. Temi indicated that the solicitor's office was never consulted on the conveyances for that site, but BLM may be liable for conveying land with safety and contamination hazards. She indicated she did not look at the specifics of the conveyances, but BLM may be found liable for any harm caused by those conveyances.

Temi also indicated that BLM needs to have a good handle on the number of AML and contaminated sites so BLM knows what liabilities it has. Temi indicated that although an inventory may lead to more

litigation, it is critical for the bureau to identify for mitigation.

Submission:	Submitted	Stephanie Christian	04/13/2007 06:24 56 PM
Level 1 Approval:	Approved	William McMullen	04/16/2007 08:59 25 AM
Level 2 Approval:	Approved	John Illson	05/02/2007 09:49:17 AM

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**Purpose:**

To determine BLM responsibilities for mitigating safety and contamination hazards resulting from abandoned hard rock mines on DOI land.

**Scope:**

BLM AML Program

**Conclusion:**

■ In the case of safety and contamination hazards caused by past mining activities, BLM may be accountable for safety concerns resulting in injury on BLM land. There have not been a lot of tort claims on AML sites in the past, but BLM may be held liable in a case when someone falls in a hole on BLM land. Berger also indicated that she was surprised there were not more tort claims due to the accidents that have occurred on AML land. She also indicated that there may be more claims as more individuals continue to visit sites previously remote. For hazmat sites and safety hazards, BLM is responsible for mitigation and remediation of those sites.

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**Purpose:**

To determine BLM responsibilities for mitigating safety and contamination hazards resulting from abandoned hard rock mines on DOI land.

**Scope:**

BLM AML Program

**Conclusion:**

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

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continue to be significant sites that go undetected for years and there is no assurance that more sites like Kelly are not out there on BLM land.

Submission:	Submitted	Stephanie Christian	04/13/2007 02:21 55 PM
Level 1 Approval:	Approved	William McMullen	04/16/2007 09:02 38 AM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:36 28 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/07/2008 10:29:43 AM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Mon 01/07/2008 10:29 AM. For original text, refer to the field(s) above.

**Purpose:**

To Identify BLM organizational structures related to AML, (e.g. are AML positions collateral or full time? )

**Scope:**

BLM AML Program

**Conclusion:**

■ The main problem with the AML program is that the field offices have individuals with AML as a collateral duty. There are no full time AML people in the state of CA other than one person at the state office. A specialized team approach or a full time AML staff approach would be more helpful than the collateral duty method being used by the BLM currently. Everyone agrees with the notion that there needs to be more of a district level approach with full time personnel in each district for the AML program.

**Summary:**

3/28/07 – Meeting 10:45 – Richard Garbowski

The main problem with the AML program is that the field offices have individuals with AML as a collateral duty. There are no full time AML people in the state of CA other than one person at the state office. Each field office has a geologist or hazmat person who is assigned AML as one of many collateral duties they have. There needs to be no collateral duty people in the field offices, but rather full time people in the district offices that focus on the AML program to ensure that the program is a priority. There also needs to be teams of people dedicated to the AML program to ensure sites are identified and reported.

A specialized team approach or a full time AML staff approach would be more helpful than the collateral duty method being used by the BLM currently. Everyone agrees with the notion that there needs to be more of a district level approach with full time personnel in each district for the AML program. Most field offices do not have the work for a full time AML staff member, but by separating the work by district offices, it would be more helpful. The lack of specialists has prevented an inventory push to ensure that high priority sites are being entered into the database.

AML needs to have its own dedicated line item funding to allow focus on the program. If there were dedicated line funding, then there would be some dedication on the inventory and then focus on mitigating the Saginaw sites. If no additional funding will be provided, then the water quality money needs to be more flexible in how it can be used. The clean water money is being run by a different assistant secretary and has been very regulated as to how it can be spent.

There are some performance standards for AML programs on individual performance appraisals. However, these standards are too vague which prevents people from being held accountable for the AML program. It is also difficult to hold people accountable on appraisals because the AML program is only one of the collateral duties they are assigned. It is also difficult to hold AML staff accountable because the staff that run the AML program also perform reimbursable work for the minerals group which receives more focus due to the incoming funding line. There also needs to be training for the AML staff to ensure they are capable of gathering the necessary information to identify and report sites in the AMM database. Without training or a change in the AML program direction there will continue to be significant sites that go undetected for years and there is no assurance that more sites like Kelly are not out there on BLM land.

**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

B.CASTOffice.02 CAAML Collateral Duty Positions

Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: Greta Bloomfield 04/11/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B DOI.01 **Subsection**  
**Program Name** Background  
**Subject** Feinstein-related AML funding for 2008

**Origination Doclink** ■

### Purpose:

To identify funding available funding sources for bureau AML issues.

### Scope:

BLM and NPS AML funding for AML projects in the Desert Region of California

### Source:

Cy Oggins, California Department of Conservation

### Conclusion:

We have identified one-time earmarked annual AML funding for BLM and NPS in California, as funding that is relative to this audit.

During our attendance of the Desert Managers Group Hazmat Working Group meeting on April 1st, 2008, we learned that both BLM and NPS are receiving one-time annual earmarked funding for AML mitigation in California. Senator Diane Feinstein requested a list of each agency's prioritized AML projects and as a result was able to appropriate \$984,400 in funding for BLM California and \$964,712 for NPS in California. The breakdown by Parks is as follows:

Point Reyes National Seashore : \$278,000

Joshua Tree National Park: \$87,000

Mojave National Preserve: \$600,000

We were not provided a breakdown by region for the Bureau of Land Management.

### Details:

B DOI 01 Feinstein-related AML funding for 2008

**From:** [Reeves, Sarah](#)  
**To:** [greta\\_bloomfield@doioig.gov](mailto:greta_bloomfield@doioig.gov)  
**Subject:** FW: Department of Interior AML Funding  
**Date:** 04/10/2008 05:08 PM  
**Attachments:** [jesdivf.pdf](#)

---

Greta,

Below is our knowledge of the appropriation made by Senator Feinstein's Office. Let me know if you have any other questions. Thanks.

Sarah Reeves  
Engineering Geologist  
Department of Conservation  
Office of Mine Reclamation  
Abandoned Mine Lands Unit  
801 K Street, MS 09-06  
Sacramento, CA 95814

(916) 322-4143  
(916) 445-6066 (Fax)

-----Original Message-----

From: Oggins, Cy  
Sent: Thursday, April 10, 2008 2:01 PM  
To: Reeves, Sarah  
Cc: Harmon, Wendy; George\_Stone@blm.gov; John\_Burghardt@nps.gov  
Subject: Department of Interior AML Funding

Sarah,

The following is my understanding of recent action by Congress involving federal funds for "Department of the Interior, Environment, and Related Agencies." Feel free to pass this on the person in the Inspector General's office who contacted you.

The passage of the Consolidated Appropriations Act of 2008 (H.R. 2764, which became Public Law No. 110-161 on 12/26/07) included a one-year appropriation for the U.S. Bureau of Land Management of \$1,000,000 for abandoned mine reclamation in California (see pages 2 & 72 of 141 in the attached document entitled jesdivf.pdf). All federal funding is reduced by an across-the-board rescission of 1.56%, so the actual amount is ~ \$984,400. It is my understanding that this money must be spent or encumbered by the end of this federal fiscal year (by September 30, 2008).

The National Park Service (NPS) in California also received a \$980,000 appropriation as listed on page 81 of 141 of the jesdivf.pdf document (this is not identified as AML money). This too would be subject to the rescission of 1.56%, meaning \$964,712 is available. According to Michael Walker, formerly of Senator Feinstein's San Francisco Office, it's the

B DOI 01 Feinstein-related AML funding for 2008

Senator's understanding that funds earmarked for the National Park Service in the 2008 Consolidated Appropriations Act are for abandoned mine reclamation activities. According to Michael, ~\$279K is for 6 mine sites in Point Reyes National Seashore, ~\$600K is for 10 mine sites in the Mojave National Preserve, and ~\$87K is for 4 mine sites in Joshua Tree National Park.

For the U.S. Forest Service, page 51 of 141 of the attached document states:

(1) "The direction proposed by the House is modified so that the first priority for use of the increased funds above the request should be managing geologic hazards and resources and managing environmental compliance and restoration, including mitigation of abandoned mine lands...."

(2) "The Senate recommendation is retained requiring the Forest Service to provide a report on prioritization of abandoned mine land clean-up on national forest lands within 90 days of enactment of this Act."

The IG may wish to contact George Stone of the BLM or John Burghardt of the National Park Service for clarification. Their contact information is provided below.

--Cy

\*\*\*\*\*

Cy R. Oggins  
Acting Assistant Director, Office of Mine Reclamation California  
Department of Conservation  
801 K Street, MS 09-06  
Sacramento, CA 95814  
916-323-9226 phone; 916-445-6066 fax

-----Original Message-----

From: John\_Burghardt@nps.gov [mailto:John\_Burghardt@nps.gov]  
Sent: Thursday, January 24, 2008 3:46 PM  
To: George\_M\_Stone@blm.gov; Oggins, Cy  
Cc: Dave\_Steensen@nps.gov  
Subject: Re: FY 2008 +\$1m BLM AML for CA committee language

Thanks for thinking of us, George. Although Sen. Feinstein was talking to the California NPS units about their top 8 projects in each unit last year, I don't see any provision in here for it. Let me know if you hear otherwise, Cy. -John

-----

John E. Burghardt, Geologist, Certified Mineral Examiner #0075 National Park Service, Natural Resource Program Center Geologic Resources  
Division P.O. Box 25287 Denver, CO 80225-0287  
(303) 969-2099; Fax (303) 987-6792  
e-mail: john\_burghardt@nps.gov  
http://www2.nature.nps.gov/geology/

B DOI 01 Feinstein-related AML funding for 2008

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George M  
Stone/WO/BLM/DOI@  
BLM  
To Cy.Oggins@conservation.ca.gov  
01/24/2008 04:14  
cc PM EST John\_Key@ca.blm.gov,  
David\_Lawler@ca.blm.gov@BLM,  
Richard\_Grabowski@ca.blm.gov,  
Leroy\_Mohorich@ca.blm.gov@BLM,  
John Burghardt/DENVER/NPS@NPS  
Subject FY 2008 +\$1m BLM AML for CA  
committee language

Hi, Cy!

Good to chat w/you.

The language is in the "Joint Explanatory Statement to Accompany Consolidated Appropriations Amendment" which I am attaching. Refer to pages 2 and 72. \$1,000,000 was added to the BLM appropriation. It is subject to an across-the-board rescission of 1.86%, so the actual amount

looks more like \$984,400. I expect BLM's budget shop to get the funds allocated in about a month.

It can also be found online at:  
[http://www.rules.house.gov/110\\_fy08\\_omni.htm](http://www.rules.house.gov/110_fy08_omni.htm). Click on "Division F - Interior."

[attachment "jesdivf.pdf" deleted by John Burghardt/DENVER/NPS]

I do not see anything mentioned for NPS, but maybe it's more cryptic.

I've asked John and Dave to pull together a proposal for obligating the funds consistent with the communications between CA and Sen. Feinstein's staff.

George Stone  
Senior Abandoned Mine Lands Specialist  
Division of Environmental Quality and Protection (WO-280) Bureau of Land Management  
v: 202.557.3573 f: 202.452.5046 c: 202.253.0061  
[www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands.html)

**Methodology:**

We were told about the money during the Desert Manager's Group meeting. I contacted Sarah Reeves, with the California Department of Conversation, to determine the exact amounts each bureau is receiving. Cy Oggins wrote Sarah, who forwarded the email to me. The email is posted in the details.

B DOI 01 Feinstein-related AML funding for 2008

Submission:	Submitted	Greta Bloomfield	04/11/2008 01:08 33 PM
Level 1 Approval:	Approved	William McMullen	05/05/2008 02:55 08 PM
Level 2 Approval:	Approved	John Illson	06/02/2008 02:39 56 PM

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI

**Confidentiality** Standard

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## Assignment Workpaper

Prepared by: Stephanie Christian 04/10/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B.GAO 01 Subsection Survey B.1  
Program Name Background  
Subject GAO Reports - AML Inventory

Origination Doctlink 

### Purpose:

To summarize the prior GAO audit reports on the safety risks related to AML sites.

### Scope:

AML Program for FWS, NPS and BLM

### Source:



GAO report.pdf

### Conclusion:

GAO Report 96-30, *Information on Efforts to Inventory Abandoned Hard Rock Mines*, was released in February 1996. The report identified no definitive inventory available to identify the number of abandoned hard rock mines located on federal lands. Four major federal land-managing agencies, the Department of Interior's BLM, NPS and FWS and the U.S. Department of Agriculture's Forest Service are in various stages of inventorying the mine sites on the lands they manage; however, because the methodologies and assumptions used to develop their inventories differ, their results cannot be meaningfully compared or combined. As a result, neither the number of sites identified, the physical / environmental hazards reported, nor the cost of remediation associated with each hazard can be presented as a consistent total for abandoned mine lands on federal property. Therefore, the potential harms and damage caused from abandoned mine lands, on federal property, remains difficult to assess and quantify.

### Details:

GAO report 96-30, presented two major findings in detail. The first discussed why a nationwide inventory of abandoned hard rock mines is unavailable and the second discussed the two kinds of hazards that abandoned hard rock mines generally contain. Both findings illustrate how each of the four major federal-land managing agencies, BLM, NPS, FWS and the U.S. Forest Service, conduct their inventories and classify the hazards recorded on the lands they manage.

BLM has made no overall estimate of the number of abandoned mine sites, but BLM's Nevada and Utah state offices are piloting the agency's inventory approach, which only began in 1994. The Nevada state office reported an estimated 400,000 mine openings to include structures and other individual components of mining operations; however as of the report date the state office did not differentiate between federal and other lands. BLM's Utah, Colorado, and Montana state offices also reported an estimated number of mine sites, but had yet to differentiate between mines on federal vs. private properties, as well. NPS began their inventory efforts in 1984 and as of the report date had counted 99 percent of the abandoned hard rock mines in all of its units. The NPS reported 2,500 sites tallied. However, the NPS disclosed that they tally a single mine site as "an area where mining occurred" which includes multiple shafts, openings, adits, and inclines. BLM counted these structures separately and NPS state offices similarly counted mine sites like BLM. Unlike BLM and NPS, the FWS produced an inventory by reviewing its mining files, not conducting on site inspections. In their files, the FWS only identified 240 mine sites. The U.S. Forest Service identified 250,000 mine sites on their property using aerial photography, fieldwork, and a questionnaire. Each of the four agencies differentiated on the methodologies used to guide their inventory and all except the FWS disclosed that they had not completed their inventory. As a result, the "abandoned mine sites" identified could not be compared or combined to gain an overall count.

In respect to identifying the hazards, BLM's guidance on inventory stated that as sites are identified they should be placed in categories illustrating the presence of physical or environmental hazards. BLM's inventory should also provide reclamation needs for any hazardous sites identified. In their BLM's efforts, the Nevada state office found extensive safety hazards on many sites identified but confirmed that most of the chemically hazardous sites were already known. The NPS ranks each site according to the type and degree of hazards present. The ranking system considers 3 components, that result in the "type and degree" of the hazard present. Of their 2,500 mine sites, NPS identified nearly 7,700 hazardous openings of which 5 to 10 percent posed an environmental threat. Of 240 mine sites identified through FWS records, officials stated that none are known to be hazardous. The U.S. Forest Service classifies its sites according to whether they may degrade water quality or other natural resources or if they contain hazardous materials. Using this criteria, the Forest Service identified over 1,500 western mining sites with significant problems of acid drainage. However, because not all the agencies have completed their inventories, they have not conducted the necessary fieldwork to identify how mine sites have either physical safety hazards or conditions of environmental degradation.

Again, each agency assesses and ranks their "sites" as physically unsafe or environmentally harmful using their own criteria, so the data presented cannot be combined or quantified to determine the cost these hazards may pose to the federal government in total. Each agency did attempt to estimate the costs for the mitigation and reclamation of these sites. This information was presented in the appendix of the report. The report also discussed how other federal and nongovernmental agencies classify and report any physical or environmental hazards on their abandoned mine lands property.

### Methodology:

N/A

Submission:	Submitted	Stephanie Christian	05/03/2007 09:22 34 AM
Level 1 Approval:	Approved	William McMullen	05/07/2007 11:43:49 AM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:41:14 AM

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The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Wed 01/09/2008 03:41 PM. For original text, refer to the field(s) above.

**Purpose:**  
To summarize the prior GAO audit reports on the safety risks related to AML sites.

**Scope:**  
AML Program for FWS, NPS and BLM

**Source:**  
 GAO report.pdf

**Conclusion:**  
GAO Report 96-30, *Information on Efforts to Inventory Abandoned Hard Rock Mines*, was released in February 1996. The report identified no definitive inventory available to identify the number of abandoned hard rock mines located on federal lands. Four major federal land-managing agencies—the Department of Interior's BLM, NPS and FWS and the U.S. Department of Agriculture's Forest Service—are in various stages of inventorying the mine sites on the lands they manage; however, because the methodologies and assumptions used to develop their inventories differ, their results cannot be meaningfully compared or combined. As a result, neither the number of sites identified, the physical / environmental hazards reported, nor the cost of remediation associated with each hazard can be presented as a consistent total for abandoned mine lands on federal property. Therefore, the potential harms and damage caused from abandoned mine lands, on federal property, remains difficult to assess and quantify.

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**Methodology:**  
N/A

**History**

Status	Approved	Request Review
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**In Progress Edit** Guest\_Theresa Gumataotao/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

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## Assignment Workpaper

Prepared by: Stephanie Christian 04/11/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B.GAO 02 Subsection Survey B.1  
Program Name Background  
Subject GAO Report on Bonding and 3809 Program

Origination Doctlink 

### Purpose:

To summarize the prior GAO audit reports on the safety risks related to AML sites.

### Scope:

BLM Bonding Process

### Source:



GAO - BLM Post FLIPMA Sites.pdf

### Conclusion:

GAO released Report No. 05-377, *Hardrock Mining: BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs*, in June 2005. The report stated that BLM state offices were using 11 types of financial assurances to include surety bonds, letters of credit, and corporate guarantees, valued at about \$837 million, to guarantee reclamation costs for existing hardrock operations. The report concluded that the financial assurances may not fully cover all future reclamation costs as 48 hardrock operations on BLM land had not been fully and adequately reclaimed by its operators. New BLM regulations in 2001 required all operators to submit reclamation plans and costs estimates, along with financial assurances that the estimates could be paid, to ensure that any disturbed land would be reclaimed. This was to be done prior to beginning any exploration or mining operations. GAO found that of the 48 hardrock operations which had not been fully or adequately reclaimed, 25 offered financial assurances which could not pay for all the estimated reclamation costs, and 23 underestimated their reclamation costs by failing to consider inflation and other related costs. The report also found that BLM's LR2000, the system designated to manage BLM's financial assurances, was inadequate. The LR2000 cannot track critical information, to include operations' basic status, types of allowable assurances, and state and county held financial assurances. Additionally, the LR2000 is not updated in a timely manner by BLM staff. BLM has taken steps to improve the management of their system and the overall operation of managing financial assurances for their hardrock operations.

### Details:

Since the General Mining Act of 1872, billions of dollars in hardrock minerals, such as gold, have been extracted from federal land now managed by the Department of the Interior's Bureau of Land Management (BLM). For years, some mining operators did not reclaim land, creating environmental, health, and safety risks. Beginning in 1981, federal regulations required all operators to reclaim BLM land disturbed by these operations. In 2001, federal regulations began requiring operators to provide financial assurances before they began exploration or mining operations. GAO was asked to determine the (1) types, amount, and coverage of financial assurances operators currently use; (2) extent to which financial assurance providers and others have paid to reclaim land not reclaimed by the operator since BLM began requiring financial assurances; and (3) reliability and sufficiency of BLM's automated information system (LR2000) for managing financial assurances for hardrock operations.

According to GAO's survey of BLM state offices, as of July 2004, hardrock operators were using 11 types of financial assurances, valued at about \$837 million, to guarantee reclamation costs for existing hardrock operations on BLM land. Surety bonds, letters of credit, and corporate guarantees accounted for most of the assurances' value. However, these financial assurances may not fully cover all future reclamation costs for these existing hardrock operations if operators do not complete required reclamation. BLM reported that, as of July 2004, some existing hardrock operations do not have financial assurances and some have no or outdated reclamation plans and/or cost estimates, on which financial assurances should be based. BLM identified 48 hardrock operations on BLM land that had ceased and not been reclaimed by operators since it began requiring financial assurances. BLM reported that the most recent cost estimates for 43 of these operations totaled about \$136 million, with no adjustment for inflation; it did not report reclamation cost estimates for the other 5 operations. However, as of July 2004, financial assurances had paid or guaranteed \$69 million and federal agencies and others had provided \$10.6 million to pay for reclamation, leaving \$56.4 million in reclamation costs unfunded. Financial assurances were not adequate to pay all estimated costs for required reclamation for 25 of the 48 operations because (1) some operations did not have financial assurances, despite BLM efforts in some cases to make the operators provide them; (2) some operations' financial assurances were less than the most recent reclamation cost estimates; and (3) some financial assurance providers went bankrupt. Also, cost estimates may be understated for about half of the remaining 23 operations because the estimates may not have been updated to reflect inflation or other factors. BLM's LR2000 is not reliable and sufficient for managing financial assurances for hardrock operations because BLM staff do not always update information and LR2000 is not currently designed to track certain critical information. Specifically, staff have not entered information on each operation, and for those operations that are included, the information is not always current. Also, LR2000 does not track some critical information—operations' basic status, some types of allowable assurances, and state- and county-held financial assurances. Given these limitations, BLM's reliance on LR2000 to manage financial assurances is mixed: headquarters does not always rely on it and BLM state offices' reliance varies. To compensate for LR2000's limitations, some BLM offices use informal record-keeping systems to help manage hardrock operations and financial assurances. BLM has taken some steps and identified others to improve LR2000 for managing financial assurances for hardrock operations.

### Methodology:

N/A

Submission:	Submitted	Stephanie Christian	05/03/2007 09:54 26 AM
Level 1 Approval:	Approved	William McMullen	05/07/2007 11:48:46 AM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:42:10 AM

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The following information was copied from the rich text field(s) above into this field by Stephanie Christian/DEN/OIG/DOI on Mon 01/07/2008 06:27 PM. For original text, refer to the field(s) above.

**Purpose:**

To summarize the prior GAO audit reports on the safety risks related to AML sites.

**Scope:**

BLM Bonding Process

**Source:**



GAO - BLM Post FLIPMA Sites.pdf

**Conclusion:**

GAO released Report No. 05-377, *Hardrock Mining: BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs*, in June 2005. The report stated that BLM state offices were using 11 types of financial assurances to include surety bonds, letters of credit, and corporate guarantees, valued at about \$837 million, to guarantee reclamation costs for existing hardrock operations. The report concluded that the financial assurances may not fully cover all future reclamation costs as 48 hardrock operations on BLM land had not been fully and adequately reclaimed by its operators. New BLM regulations in 2001 required all operators to submit reclamation plans and costs estimates, along with financial assurances that the estimates could be paid, to ensure that any disturbed land would be reclaimed. This was to be done prior to beginning any exploration or mining operations. GAO found that of the 48 hardrock operations which had not been fully or adequately reclaimed, 25 offered financial assurances which could not pay for all the estimated reclamation costs, and 23 underestimated their reclamation costs by failing to consider inflation and other related costs. The report also found that BLM's LR2000, the system designated to manage BLM's financial assurances, was inadequate. The LR2000 cannot track critical information, to include operations' basic status, types of allowable assurances, and state and county held financial assurances. Additionally, the LR2000 is not updated in a timely manner by BLM staff. BLM has taken steps to improve the management of their system and the overall operation of managing financial assurances for their hardrock operations.

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**Methodology:**

N/A

**History**

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**Confidentiality** Standard

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### Assignment Workpaper

Prepared by: Stephanie Christian 04/11/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B.GAO 03 Subsection Survey B.1  
Program Name Background  
Subject GAO Report on Hardrock Mining Reclamation

Origination Doctlink 

**Purpose:**  
To summarize the prior GAO audit reports on the safety risks related to AML sites.

**Scope:**  
BLM Reclamation Funding

**Source:**  
  
GAO - AML Funding.pdf

GAO report No. 93-67, *Mineral Resources: Hardrock Mining Reclamation* , was released in August 1993.

**Conclusion:**  
GAO report No. 93-67, *Mineral Resources: Hardrock Mining Reclamation* , was released in August 1993. The report found that there is no federal program or funding source to ensure that past hardrock reclamation problems on federal, state, or private lands are remedied. The report does not offer new cost estimates associated with the current (1993) reclamation requirements but instead presents past figures from GAO's 1988 report, DOI's 1991 report and an estimate from the Mineral Policy Center, to illustrate that current estimates must be higher while discussing the extent of the federal government's reclamation problems. The report further highlights the issues the federal government must consider in creating and / or amending public policy associated with the hardrock reclamation program. A major issue involves a waiver to reclaim disturbances on land currently being explored or mined, which had previously been disturbed before land-managing agencies implemented recent reclamation requirements.

**Details:**  
In expounding on the federal government's reclamation problems associated with hard rock mines, the report discusses the "nature of the operations needing reclamation" and "alternatives to help ensure reclamation."

Nature of operations needing reclamation:  
GAO reported that sites needing reclamation contain various physical hazards such as pit mines, open trenches, mine shafts, and abandoned mining equipment. These hazards although unsightly and dangerous, are relatively inexpensive to cure. Additionally, sites also contain environmental hazards which require far more expensive measures to remedy. Environmental hazards are often caused by toxic mine wastes. These wastes create erosion, landslides, and water run-off, which easily affect nearby soil, vegetation, and water deposits.

Alternatives to help ensure reclamation:  
In reviewing reclamation policies put in place by various land-managing agencies, GAO critiqued and commented on several areas. For BLM, the report stated "BLM's policy to require financial guarantees only from operations for more than 5 acres was ineffective" So, GAO recommend that BLM strengthen its bonding requirements so all could be held accountable. Further, to reduce the number of invalid, inactive, and abandoned mine claims, GAO re-stated a recommendation made in their 1988 report to Congress. The recommendation required that claim holders pay a holding fee to the federal government.

In a final point, the report also offered an opinion on whether the AML fund established by Congress could truly support the reclamation costs associated with hard rock mines. GAO stated that the AML fund could not continue to be the exclusive funding source for reclaiming hardrock mine sites, as the fund will experience an estimated \$27 billion dollar shortfall before 1977, although it is has the authority to continue receiving its designated revenue source of fees collected from coal miners up until 2004. This was predicted to occur since the estimated costs to reclaim land and the fees collected are incomparable.

**Methodology:**  
N/A

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Level 1 Approval:	Approved	William McMullen	05/07/2007 12:54 29 PM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:43 34 AM

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**Assignment Workpaper**

Prepared by: Stephanie Christian 05/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B.GAO 04 **Subsection** Survey Step B.1  
**Program Name** Background  
**Subject** GAO Report on Abuses of Hardrock Mining

**Origination Doctlink** 

**Purpose:**  
To summarize the prior GAO audit reports on the safety risks related to AML sites.

**Scope:**  
BLM Hardrock Mining

**Source:**  
GAO Report No. RCED-86-48 titled **Public Lands: Interior Should Ensure Against Abuses From Hardrock Mining** was released on March 27, 1986



GAO Report - Interior Should Ensure Against Abuses From Hardrock Mining.pdf

**Conclusion:**  
GAO evaluated how the Bureau of Land Management (BLM) carries out its mining claim recording and environmental protection responsibilities under the Federal Land Policy and Management Act. GAO found that: (1) BLM failed to inspect more than half of the mining sites that began operations in 1981 to determine whether they had been adequately reclaimed; (2) of the sites BLM inspected, 39 percent had not been reclaimed at the time of inspection; (3) there were a number of sites in the 10 states which showed varying degrees of environmental damage, including deep trenches, open pits, and improperly disposed waste; and (4) while BLM can require mine operators to post bonds to cover the costs of reclamation, it only does so for operators with a record of noncompliance.

**Details:**  
GAO evaluated how the Bureau of Land Management (BLM) carries out its mining claim recording and environmental protection responsibilities under the Federal Land Policy and Management Act, focusing on BLM procedures for ensuring that: (1) it gets enough information to determine the location and validity of mining claims on federal lands; and (2) mined lands are adequately reclaimed once mining activity ends. GAO conducted its work at 10 BLM offices in western states, where most of the mining activity within BLM jurisdiction occurs.

GAO found that: (1) while all 10 BLM offices review claims to ensure that claim holders have provided adequate location information, not all of the offices check to ensure that claims include a map or geographic reference; (2) some BLM officials believe that a map or geographic reference is necessary to adequately establish a claim's location; and (3) in cases where BLM does not adequately check location information, it may be unable to obtain further information from claim holders, if necessary. GAO also found that: (1) BLM failed to inspect more than half of the mining sites that began operations in 1981 to determine whether they had been adequately reclaimed; (2) of the sites BLM inspected, 39 percent had not been reclaimed at the time of inspection; (3) there were a number of sites in the 10 states which showed varying degrees of environmental damage, including deep trenches, open pits, and improperly disposed waste; and (4) while BLM can require mine operators to post bonds to cover the costs of reclamation, it only does so for operators with a record of noncompliance.

**Methodology:**  
N/A

Submission:	Submitted	Stephanie Christian	05/15/2007 12:30:42 PM
Level 1 Approval:	Approved	William McMullen	05/16/2007 08:51 20 AM
Level 2 Approval:	Approved	John Illson	05/17/2007 10:44 52 AM

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**Assignment Workpaper**

Prepared by: Stephanie Christian 05/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B.GAO 05 **Subsection** Survey B.1  
**Program Name** Background  
**Subject** GAO Report on Hardrock Mining Operations

**Origination Doclink** 

**Purpose:**  
To summarize the prior GAO audit reports on the safety risks related to AML sites.

**Scope:**  
Hardrock Mining Operations

**Source:**



GAO - Hardrock Mining Operations.pdf  
**GAO Testimony T-RCED-93-67 titled Mineral Resources: Hardrock Mining Operations released on August 5, 1993.**

**Conclusion:**  
More than five years ago, GAO reported that it would cost nearly \$300 million to reclaim abandoned, suspended, or unauthorized hardrock mining operations on federal land in 11 western states; cleanup estimates since then have ranged as high as \$71.5 billion. No federal program or funding sources now exists to ensure that past hardrock reclamation problems on government and private land are remedied. Accordingly, any public policy decision on how best to address these reclamation needs will have to carefully consider the workability of such a program and the source of funding.

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**Methodology:**  
N/A

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B NPS.01 NPS- GRD Organization chart

**Geologist/GIS-T:** David Plume  
**Geographer-T:** Georgia Hybels  
**Nat. Resource Spec-T:** Melanie Ransmeier  
**Physical Scientist-T:** Andrea Croskrey  
**Partner:** Judy Daniels  
**Partner:** Jim Chappell<sup>3</sup>  
**Partner:** John Graham  
**Partner:** Ron Karpilo<sup>3</sup>  
**Partner:** Katie KellerLynn  
**Partner:** Stephanie O'Meara<sup>3</sup>  
**Partner:** Heather Stanton<sup>3</sup>  
**Partner:** Trista Thornberry-Ehrlich<sup>2</sup>

**Branch Chief:** Bob Higgins  
**Env. Prot. Spec.:** Judy Geniac  
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**Branch Chief:** Jim C. Woods

**Cave Specialist:** vacant

**Coastal Geologist:** Rebecca Beavers

**Geologist/DLR:** Deanna Greco

**Geologist/DLR:** Dave Steensen

**Geologist/DLR:** vacant

**Geologist/DLR:** vacant

**Geologist/Mining:** John Burghardt

**Mining Engineer:** vacant

**Paleontologist:** vacant

**SCEP/Paleo:** Jason Kenworthy<sup>5</sup>

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**Notes:**

1 Duty-stationed in Carlsbad, NM, 2 Washington, D C , 3 Fort Collins, CO, 4 Salt Lake City, UT, 5 Corvallis, OR  
T=term appointment

**Methodology:**

Obtain information from NPS-GRD organization chart.

Submission:

Submitted

Sean Pettersen

01/16/2008 03:29 03 PM

B NPS.01 NPS- GRD Organization chart

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Level 2 Approval: Approved John Illson 04/28/2008 12:44 02 PM

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

B NPS.02 NPS-GRD Mission Statement

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## Assignment Workpaper

Prepared by: Sean Pettersen 12/14/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B NPS 03 Subsection Survey Step 03  
Program Name Background  
Subject Funding for NPS AML

Origination Doctlink ■

### Purpose:

To identify funding sources for AML mitigation at National Parks.

### Scope:

Funding for AML

### Source:

See source documents below. They have been attached where relevant.

NPS Disturbed Land Restoration Program (DLR) information was taken from the NPS website. <http://www.nature.nps.gov/geology/dlr/index.cfm>

### Conclusion:

NPS' AML program is funded as part of the broader NPS Disturbed Land Restoration Program (DLR) (it is not its own budget line-item). Since 2000, specific AML funding within NPS has been inconsistent ranging from a high of approximately \$650,000 in FY 2001 to a low of \$121,000 in FY 2003. Because there is no dedicated budget subactivities for NPS' AML program, we believe the programs' funding needs receive little visibility. As a result, the program appears not to be a priority and has not been allocated sufficient resources to mitigate the dangerous AML sites. We will make the recommendation that Request and support funding to mitigate sites identified by the AML program.

According to NPS, current funding is inadequate to address known AML issues within parks and the process of "budget erosion" (no fund increases coupled with rising costs) has limited funds available for AML site mitigation. NPS does not have a current estimate of mitigation costs for AML sites. In 1994, NPS estimated a total cost of \$165 million to address AML sites, of which \$43 million was needed to address the most dangerous sites. NPS requested an increase of \$3 million per year beginning in FY 2009 for park-specific mitigation, technical assistance, and one FTE to support AML activities.

In addition to AML funding from the Disturbed Land Program, some parks have been able to use fee-demo funds to mitigate AML sites. NPS has also formed partnerships with states and have shared cost for some projects.  
(see details below for cross-indexing and support).

### Details:

#### Disturbed Land Program Funding:

#### Disturbed Land Program Funding:

NPS' AML program is funded as part of the broader NPS Disturbed Land Restoration Program (DLR) ■.

Disturbed land restoration (DLR) is the process of restoring lands where the natural conditions and processes have been impacted by development (e.g. facilities, roads, mines, dams, abandoned campgrounds) and/or by agricultural practices (e.g. farming, grazing, timber harvest, abandoned irrigation ditches) to the unimpaired natural conditions.

DLR stands for "Disturbed Land Restoration." In many areas, National Park System units represent the last vestiges of once vast and undisturbed ecosystems. Yet, over 315,000 acres in 195 parks have been disturbed by modern human activities, including abandoned roads, dams, canals, railroads, grazed areas, campgrounds, mines, and other abandoned sites. Some of these features may be of historical significance, but most are not in keeping with the mandates of the National Park System units or the mission of the National Park Service, "to conserve the scenery and the natural and historic objects and the wild life therein...unimpaired for the enjoyment of future generations." (16 U.S.C. 1 et seq.)

Since 2000, specific AML funding within NPS has been inconsistent ranging from a high of approximately \$650,000 in FY 2000 to a low of \$121,000 in FY 2003(See below). Because there is no dedicated budget subactivities for NPS' AML program, we believe the programs' funding needs receive little visibility. As a result, the program appears not to be a priority and has not been allocated sufficient resources to mitigate the dangerous AML sites (Auditor Opinion).

GRD now manages the NPS AML Program as part of the broader NPS Disturbed Land Restoration (DLR) Program. This program provides specialized technical skills to parks and funding for park-specific projects. The DLR program also facilitates partnerships with other

(see page 1 of the attachment)



NPS Response to our initial information request.pdf

	FY2000	FY2001	FY2002	FY2003	FY2004	FY2006
Total AML Funding	649,600	620,450	346,100	121,000	199,000	128,000



1998-2012\_AML\_Summary-Svcwide Funds for wps.xls (see the AML Summary tab (line 57) of this attached spreadsheet for the numbers listed above)

According to NPS, current funding is inadequate to address known AML issues within parks and the process of "budget erosion" (no fund increases coupled with rising costs) has limited funds available for AML site mitigation.

In 1998, a modest increase in funds for AML reclamation (\$500,000) enabled the completion of many important AML projects through 2003. However, the process of "budget erosion" (no fund increases coupled with rising costs) has virtually eliminated funds available for program support and no funding is currently available specifically for abandoned mine cleanup. Field reports indicate that many parks are discouraged about competing for other small sources of funding (e.g., NRPP-Disturbed Lands). Consequently, parks often do not submit AML project proposals to their respective regions. In addition, many urgent large-scale projects (e.g., projects

(see page 1 of the attachment)



OFS\_26291A-AML-2007-0118-final.pdf

NPS does not have a current estimate of mitigation costs for AML sites. In 1994, NPS estimated a total cost of \$165 million to address AML sites, of which \$43 million was needed to address the most dangerous sites.

impacts such as environmental pollution, habitat loss, soil erosion, sedimentation, and viewsnea degradation. In 1994, the Geologic Resources Division (GRD) produced a Backlog Report estimating a total cost of \$165 million to address these problems, of which \$43 million was required for high priority sites. NPS has a current request in the Operations Formulation System for \$3 million to support AML projects in parks. (See OFS-AML-2007-0118-final.doc)

(see page 1 of the attachment)



NPS Response to our initial information request.pdf

*I confirmed with NPS-GRD that there is not a more current estimate. John Burghart stated that this is the only estimate that NPS has prepared and that it is only an estimate.*

NPS requested an increase of \$3 million per year beginning in FY 2009 for park-specific mitigation, technical assistance, and one FTE to support AML activities.

**Concise Description and Justification:**

This request will establish a Service-wide capability to address critical abandoned mineral lands concerns and to support adequate NPS achievement of Departmental strategic goals for AML reclamation. The Geologic Resources Division will oversee the \$3 million in project funds, targeted exclusively for park-specific reclamation, technical assistance, and one additional FTE technical position to support abandoned mineral land reclamation activities. Through cooperative efforts with parks, regions, other federal agencies, and State AML programs, some of whom can provide limited matching funds, The requested funding will enable mitigation of physical safety hazards at AML sites on or affecting NPS-managed lands, and the implementation of solutions to degraded water quality, cultural resources, critical habitat conservation (e.g., endangered bats and desert tortoise), and other environmental impacts.

(See page 1 of the attachment).



OFS\_26291A-AML-2007-0118-final.pdf

Fee Demo:

Fee Demo:

Fee Demo money can only be used for deferred maintenance and in the Pacific West Region, AML is not considered deferred maintenance. This determination has been made by the Regional Office and GRD officials informed us that this is not consistent throughout NPS. Other Regions consider AML to be deferred maintenance and Fee Demo money is available for mitigation. Even within the Pacific West Region there is inconsistent application to the rules on Fee Demo. For example, Joshua Tree National Park use this source of funding for mitigation even though it is within the Pacific West Region.

Matching Funds From States:

Matching Funds From States:

Limited federal and state dollars have made partnerships a very effective tool to address AML issues on NPS lands. These partnerships should be promoted, particularly through cost share programs such as DOI's Cooperative Conservation Initiative. Abandoned mine reclamation programs have saved lives, restored ecosystems, and protected habitat for threatened, endangered, and sensitive wildlife species. The NPS has partnered with ten states (AR, AZ, CA, CO, MT, TX, UT, VA, WV, WY) to address public safety, resource degradation, and wildlife habitat issues associated with abandoned mine lands (AML) in parks. The NPS anticipates new partnerships with AK and WA.

**Methodology:**

Reviewed and summarized pertinent documents. See attached documents in the details.

Submission:

Level 1 Approval:	Approved	William McMullen	01/22/2008 11:17 51 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 02:40:15 PM

Linkage Information

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## Assignment Workpaper

Prepared by: Sean Pettersen 01/11/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B NPS 04 Subsection  
Program Name Background  
Subject NPS Policy and Procedure for AML

Origination Doctlink 

### Purpose:

To determine whether NPS has issued policy and procedures for AML sites.

### Scope:

AML Policy and Procedures.

### Source:



NPS Draft Handbook.pdf Select pages from the NPS Draft Handbook.

### Conclusion:

A Draft Handbook for the remediation of Abandoned Mine Lands was develop for NPS in June, 1992 According to John Burghard -NPS-GRD the handbook was never fianalized and distributed to the parks. Therefore, NPS has not issued formal policy and procedures for AML sites. The draft handbook appears to be adequate but it has not been issued. We told NPS that they need to revise the handbook and issue it as soon as possible.

### Details:

The handbook contains information on areas such as (see page 2 of attachment in source):

- Program Management
- Project Management
- Remmediation Methods
- Preliminary Cost Estimates
- Underground Safety

The handbook also has policy on prioritizing AML sites (see pages 4&5 of the attachment in the source). According to the handbook,

High priority sites have the following characteristics:

- \* Extreme health and safety hazards.
- \* Ease of access.
- \* High visitation.
- \* Difficult rescues.
- \* Severe and progressive environmental degradation. (see page 4 of the attachment in the source).

Under some circumstances, it may be appropriate to select sites differen ly han given by the rating procedure. For example, there could be insufficient funds to permanently close and remediate the highest priority site. In his case, a park might decide to simply fence the worst site and permanently close a less costly site with a lower priority. Justification for circumven ing the site ratings include cost-benefit analysis, limited funds, less cos ly temporary closures versus more costly permanent closures, and concerns over liabilities (See page 5 of the attachment in the source).

### Methodology:

Obtained, reviewed and summarized NPS handbook.

Submission:	Submitted	Sean Pettersen	01/16/2008 03:30:19 PM
Level 1 Approval:	Approved	William McMullen	01/22/2008 11:19 07 AM

Level 2 Approval: Approved John Illson 04/28/2008 12:44:46 PM

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## Assignment Workpaper

Prepared by: Sean Pettersen 04/13/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section B NPS 08 Subsection Survey Step B.08  
Program Name Background  
Subject NPS-Office Roles and Responsibilities Related to AML

Origination Doctlink 

### Purpose:

To determine the Washington, Regional and Park roles and responsibilities related to AML sites

### Scope:

NPS Organization.

### Source:

Select pages from the NPS Handbook for the Remediation of Abandoned Mine Lands



Scan001.PDF

### Conclusion:

NPS' AML program is decentralized and primarily accomplished within parks as directed by Superintendents. The following list of roles and responsibilities describes how the NPS program is organized. The Washington Office - Geologic Resource Division (GRD) has the responsibility for coordinating a servicewide program, but they have no authority over the Parks. Management of the parks is at the discretion of the Park Superintendents.

The following roles and responsibilities are outlined in the attachment:

#### Mining and Minerals Branch (Now is Geologic Resource Division (GRD))

- Responsible for coordinating a servicewide AML program
- Staff include geologists, mine engineers, environmental specialists, and policy analysts
- Provide AML technical expertise and policy guidance
- Provide technical guidance on optimizing AML remediation at minimum cost
- Assist in obtaining funding
- Maintain a service wide AML database
- Provide training
- Design Notices for the public
- Prepare sample fact sheet on AML accidents for use by Public Affairs Officers.

#### Regional Offices:

- Direct and approve regional AML program
- Insure compliance with NEPA, Endanger Species Act, and the National Historic Preservation Act
- Cooperate with states on AML projects
- resolve conflicts regarding the type or method of mine closures and site remediation

Note: Discussions with Regional AML coordinators from the Intermountain and Pacific West Regions indicate that they are minimally involved in the AML program. Zero to less than 5% of their time is spent on AML issues. Their main role is to provide technical assistance to the Parks. They have no line authority over the Parks. They may or may not be involved in selecting Regional priorities for projects competing for Disturbed Lands funding (this is where AML funding is available). The Regional coordinators stated that overall, the AML program and mitigating physical safety hazards are a low priority and that purely physical safety issues probably won't fair well competing with other disturbed lands projects that address vegetation or other biological issues.

See these discussions for further details:

NPS' AML program is decentralized and primarily accomplished within parks as directed by Superintendents. The following are the Park's responsibilities related to AML sites

**Parks:**

- Conduct AML inventories
- Implement AML remediation
- Monitor both remediated and unremediated sites
- Post warning signs at AML sites along access routes, and visitor centers.

**Details:**

See conclusion

**Methodology:**

Obtained and reviewed the NPS AML handbook and identified the roles and responsibilities.

Submission:	Submitted	Sean Pettersen	01/16/2008 03:30 35 PM
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<b>Confidentiality</b>	Standard	

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## Assignment Workpaper

Prepared by: Stephanie Christian 04/10/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B.OIG.01 **Subsection** Survey Step B.01  
**Program Name** Background  
**Subject** OIG AML Audit Report - Saginaw Hill

**Origination Doctlink** ■

### Purpose:

To summarize the prior OIG audit reports on the safety risks related to AML sites.

### Scope:

Prior OIG audit reports on AML.

### Source:



Saginaw Hill Report.pdf

**OIG Report No. C-IN-MOA-0013-2005. Public Safety Issues at Saginaw Hill Property Bureau of Land Management, was released in March 2005.**

### Conclusion:

The Saginaw Hill Flash report found that BLM had not identified the abandoned hard rock mine safety hazards and environmental contaminates present at the Saginaw hill property. In addition, BLM had not taken appropriate measures to mitigate or remediate the hazards or limit public access to the hazards on this site.

The Saginaw Hill property is a 540 acre parcel of land located in Pima County, just outside the city of Tucson, Arizona. From the 1800's to the mid 1900s, mining had occurred at this site. The mining left behind two contaminated areas and numerous physical safety hazards which pose a significant threat to human health, safety and environment. Public access to the site is unrestricted, and frequent public uses include recreational activities including, hiking, camping, off-road vehicle use, and rock collecting. BLM erected a barbed wire fence around two small areas of contamination in December 2003. However, the fencing had been vandalized or compromised, allowing unrestricted access. There were no signs anywhere on the property prohibiting entry or warning the public of the contamination and safety hazards at the site.

### Details:

The Saginaw Hill Flash report found that BLM had not identified the abandoned hard rock mine safety hazards and environmental contaminates present at the Saginaw hill property. In addition, BLM had not taken appropriate measures to mitigate or remediate the hazards or limit public access to the hazards on this site.

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There is an elementary school 1/3 of a mile from the site and there is a path that leads from the elementary school to the contaminated areas. In addition, new homes are being build within 1 mile of the property, existing homes are as close as 800 feet, and there is a Pascua Yaqui casino and amphitheater approximately 1/2 mile away.

Since 1988, four environmental assessments have been performed at the Saginaw Hill Property. Pima County performed two of these assessments to evaluate the suitability of the land for use as a park. All of these assessments identified toxic levels of lead. Assessments also identified dangerous levels of arsenic. At least one of the assessments concluded that both contaminates were present in amounts that exceeded safe levels established by the Arizona Department of Environmental Quality and BLM by up to 20 times.

The audit also found that there were physical safety hazards including many open mine shafts. The 1988 assessment performed by Pima County found that there were more than 65 safety hazards. In 2005, the auditors found 18 dangerous mine shafts and determined that BLM had not mitigated many of the previously identified safety hazards.

**Methodology:**

N/A

Submission:	Submitted	Stephanie Christian	05/23/2007 01:26:47 PM
Level 1 Approval:	Approved	William McMullen	06/01/2007 08:29 33 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 02:41 00 PM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/09/2008 03:33:22 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Wed 01/09/2008 03:33 PM. For original text, refer to the field(s) above.

**Purpose:**

To summarize the prior OIG audit reports on the safety risks related to AML sites.

**Scope:**

Prior OIG audit reports on AML.

**Source:**



Saginaw Hill Report.pdf

**OIG Report No. C-IN-MOA-0013-2005. Public Safety Issues at Saginaw Hill Property Bureau of Land Management, was released in March 2005.**

**Conclusion:**

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There is an elementary school 1/3 of a mile from the site and there is a path that leads from the elementary school to the contaminated areas. In addition, new homes are being build within 1 mile of the property, existing homes are as close as 800 feet, and there is a Pascua Yaqui casino and amphitheater approximately 1/2 mile away.

Since 1988, four environmental assessments have been performed at the Saginaw Hill Property. Pima County performed two of these assessments to evaluate the suitability of the land for use as a park. All of these assessments identified toxic levels of lead. Assessments also identified dangerous levels of arsenic. At least one of the assessments concluded that both contaminates were present in amounts that exceeded safe levels established by the Arizona Department of Environmental Quality and BLM by up to 20 times.

The audit also found that there were physical safety hazards including many open mine shafts. The 1988 assessment performed by Pima County found that there were more than 65 safety hazards. In 2005, the auditors found 18 dangerous mine shafts and determined that BLM had not mitigated many of the previously identified safety hazards.

Methodology:  
N/A

**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Stephanie Christian 04/11/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B.OIG.02 **Subsection** Survey B.1  
**Program Name** Background  
**Subject** OIG Report - Hardrock Mining Site Reclamation

**Origination Doctlink** 

### Purpose:

To summarize the prior OIG audit reports on the safety risks related to AML sites.

### Scope:

OIG Prior Audits

### Source:

[OIG Report No. 92-I-636, Hardrock Mining Site Reclamation, Bureau of Land Management, was released in March of 1992.](#)



OIG - 92 Report.PDF

### Conclusion:

The report identified that BLM had not implemented procedures for ensuring that abandoned hardrock mining sites on BLM managed lands were being reclaimed. BLM also failed to develop a comprehensive inventory of hardrock mining sites that required timely reclamation, and BLM was not fully aware of hazards and dangerous conditions at some abandoned mining sites.

### Details:

The overall objective of the audit was to determine if BLM protected and managed public resources in an effective manner. The objectives were specific to the design of BLM's efforts to determine if they (1) detected and resolved issues where damage to public lands occurred (2) monitored the mitigation efforts required for public lands that had been damaged and (3) took corrective action to eliminate the probability of repeated environmental damage incidents, for abandoned hardrock mines. The report determined that the Bureau was not fully aware of the hazards present on many of the sites and therefore had taken no strong steps towards mitigation. The report also explained that mitigation begins with an inventory of the problems that exist and disclosed that BLM had no complete inventory. As a result, the report cited that significant AML sites on BLM lands contain toxic chemicals, remain in a degraded condition, and represent serious hazards to the general public and wildlife in the area.

The report discussed two main findings: (1) Hazardous Mining Sites and (2) Financial Guaranties.

On hazardous mining sites, auditors visited 10 of 68 sites which BLM identified as not being reclaimed. Each of the ten sites could be easily encountered by the general public and were found to store potentially hazardous materials. Five of the ten sites had not been properly tested to determine their potentially hazardous conditions. This occurred as BLM personnel did not follow through with procedures on how to report or test sites when potentially hazardous materials are found. As a result some of these five sites remained untested and ignored for up to five years. Each of the sites visited either revealed toxic chemicals, abandoned equipment, and/or debris scattered in all areas. One of the chemicals found open and exposed was Thiourea. This chemical is tested to be carcinogenic causing allergic reactions and blood abnormalities to humans and also causing tumors. The chemical is also tested to cause lung, thyroid, and liver damage in animals. These health and environmental dangers along with physical dangers were reported as abundant on the non-reclaimed sites. Evidence illustrated that BLM did not act to report or remediate the issues immediately, as well. A single site was inspected by BLM and auditors together, but when auditors returned six months later for a follow-up, the site was the same as they had left it.

On the findings of financial guaranties, the report discussed the weaknesses of the current reclamation requirements. For instance, the current reclamation requirements (as provided in 1992) do not guarantee that any disturbance to the land, created by mining operators, will be corrected; most especially those who mine on 5 acres of land or less. As a result, large areas are left unclaimed and legislation will continue to allow it this to happen unless the law is amended to reflect current and urgent issues.

The audit report contained five recommendations to improve BLM's efforts in reclaiming abandoned hardrock mines. These included:

1. To inventory and rank sites needing reclamation according to the potential harm posed to the general public, wildlife, and environment.
2. To use all means available to obtain hardrock mining site reclamation.
3. To develop a bureau wide plan of action to begin to reclaim public lands degraded by abandoned hardrock mines
4. Implement bureau wide procedures to keep the public safe, such as posting warning signs informing the public of general dangers.
5. To amend the bonding regulations requiring all operators to post financial guarantees commensurate with the type and size of mining operation they anticipate.

In the Bureau's response to the audit report they were in general concurrence with the findings and recommendations.

**Methodology:**

Reviewed source document.

Submission:	Submitted	Stephanie Christian	05/23/2007 01:20 58 PM
Level 1 Approval:	Approved	William McMullen	06/01/2007 08:31 51 AM
Level 2 Approval:	Approved	John Illson	06/04/2007 10:10 54 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/09/2008 03:45:39 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Wed 01/09/2008 03:45 PM. For original text, refer to the field(s) above.

**Purpose:**

To summarize the prior OIG audit reports on the safety risks related to AML sites.

**Scope:**

OIG Prior Audits

**Source:**

**OIG Report No. 92-I-636, Hardrock Mining Site Reclamation, Bureau of Land Management, was released in March of 1992.**



OIG - 92 Report.PDF

**Conclusion:**

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**Details:**

The overall objective of the audit was to determine if BLM protected and managed public resources in an effective manner. The objectives were specific to the design of BLM's efforts to determine if they (1) detected and resolved issues where damage to public lands occurred (2) monitored the mitigation efforts required for public lands that had been damaged and (3) took corrective action to eliminate the probability of repeated environmental damage incidents, for abandoned hardrock mines. The report determined that the Bureau was not fully aware of the hazards present on many of the sites and therefore had taken no strong steps towards mitigation. The report also explained that mitigation begins with an inventory of the problems that exist and disclosed that BLM had no complete inventory. As a result, the report cited that significant AML sites on BLM lands contain toxic chemicals, remain in a degraded condition, and represent serious hazards to the general public and wildlife in the area.

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5. To amend the bonding regulations requiring all operators to post financial guarantees commensurate with the type and size of mining operation they anticipate.

In the Bureau's response to the audit report they were in general concurrence with the findings and recommendations.

**Methodology:**

Reviewed source document.

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Guest\_Theresa Gumataotao/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

B.SOL.01 Tort Claims Settled

## Assignment Workpaper

Prepared by: Sean Pettersen 04/09/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** B.SOL.01 **Subsection** Survey Step B-10

**Program Name** Background

**Subject** Tort Claims Settled

**Origination Doclink** ■

### Purpose:

To request that the Solicitor's Office provide the number of tort claims that have resulted from injury or death at abandoned mines on DOI property.

### Scope:

AML fatalities or injuries liabilities

### Source:

Response to the request were provided by Alton Woods, Assistan Solicitor, Branch of Acquisitions and intellectual Property, 202.208.6201  
Response are attached.



Scan001.PDF

### Conclusion:

The request was sent to all SOL-Regional Solicitors and SOL-Field Solicitors. There were six Solicitors who responded to the request and none of them had any claims to report.

The personnel who responded were:

John Steiger, Unknown Office  
Joe Darnell, Anchorage, AK  
Ar hur Arguedas, Santa Fe  
Barbara Goodyear Unkown Office  
Bill Quinn (Rich Greenfield and Shari Mauney) Phoenix  
Priscilla Wifahrt (Twin Cities)

### Details:

We asked the Solicitor's Office to provide us with the following information:

1. A list of all claims settled for injuries or fatalities that occurred on AML sites since 1990
2. the amounts paid for any claims set led
3. If available, estimates of contingent liabilities resulting from injuries or fatalities that occurred on AML sites since 1990
4. A list of SOL personnel in field offices we can talk to, if the need arises, concerning issues to claims on AML lands.

Alton Woods stated that he forwarded our request to all supervisors in the SOL. We asked Alton Woods to respond by April 2nd.

### Methodology:

Reviewed and summarized response by SOL to our information request.

Submission:	Submitted	Sean Pettersen	07/25/2007 09:59 01 AM
Level 1 Approval:	Approved	William McMullen	07/27/2007 11:54 57 AM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:45 38 PM

**Linkage Information**

**History**

**Status** Approved **Request Review**

**In Progress Edit** Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 03/07/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section C.  
 Assignment Program Name Survey-Inventory

**Objective:**

**Background:**

**Assignment Steps:**

Survey Step	Staff	Work Paper Reference
<b>C. Identify AML sites with significant safety hazards on all DOI lands.</b>		
Obtain inventories and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data	Team (Stephanie will compile)	C.BLM.HQ.01 BLM HQ Meeting with George Stone ■ SGC C.BLM.CAStoffice.01 BLM CA State Office - Overall Meeting ■ SGC C.BOR.01 BOR AML Inventory ■ SGC C.BOR.02 BOR Response to Data Call ■ SGC C.FWS.01 FWS AML Inventory ■ SGC C.FWS.02 FWS Data Call Response ■ SGC C.BLM.CAStoffice.02 CA Program Oversight ■ SGC C.BLM.CAStoffice.03 CA Targeted Inventory ■ SGC C.BLM.CAStoffice.04 BLM Inventory - Don't Ask Don't Tell ■ SGC C.FWS.03 FWS AML Inventory ■ SGC C.BLM.02 BLM CA - Needles Field Office ■ SGC C.BLM.03 BLM CA - Hollister Field Office ■ SGC C.BLM.04 BLM CA - Ridgecrest Field Office ■ SGC C.BLM.05 BLM CA - Folsom Field Office ■ SGC C.BLM.06 BLM CA - Palm Springs Field Office ■ SGC C.BLM.07 BLM CA - Barstow Field Office ■ SGC C.BLM.08 BLM CA - Redding Field Office ■ SGC C.BLM.09 BLM CA - Bishop Field Office ■ SGC C.BLM.10 BLM CA - Eagle Lake Field Office ■ SGC C.BLM.11 BLM CA - Alturas Field Office ■ SGC C.BLM.12 BLM CA - Arcata Field Office ■ SGC
Determine how bureaus ensure that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)	Team	C.BLM.HQ.01 BLM HQ Meeting with George Stone ■ SGC C.BLM.CAStoffice.01 BLM CA State Office - Overall Meeting ■ SGC C.FWS.01 FWS AML Inventory ■ SGC C.BLM.CAStoffice.02 CA Program Oversight ■ SGC C.BLM.CAStoffice.03 CA Targeted Inventory ■ SGC C.BLM.CAStoffice.04 BLM Inventory - Don't Ask Don't Tell ■ SGC C.BLM.02 BLM CA - Needles Field Office ■ SGC

		<p>C.BLM.03 BLM CA - Hollister Field Office █ SGC C.BLM.04 BLM CA - Ridgecrest Field Office █ SGC C.BLM.05 BLM CA - Folsom Field Office █ SGC C.BLM.06 BLM CA - Palm Springs Field Office █ SGC C.BLM.07 BLM CA - Barstow Field Office █ SGC C.BLM.08 BLM CA - Redding Field Office █ SGC C.BLM.09 BLM CA - Bishop Field Office █ SGC C.BLM.10 BLM CA - Eagle Lake Field Office █ SGC C.BLM.11 BLM CA - Alturas Field Office █ SGC C.BLM.12 BLM CA - Arcata Field Office █ SGC</p>
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**Conclusion:**

Post- Survey Meeting on Inventory: 4/16/07

█ **Overall DOI inventory of AML sites:** Most sites identified by the bureaus are on BLM and NPS land as shown below.

BLM 11,500 sites **G.BLM.01 BLM AML Background** █ █

NPS 3,351 sites **C.NPS.01 NPS AML Inventory** █ █

BIA: 0 sites **C.BIA.01 BIA AML program** █

BOR: 1 site **C.BOR.01 BOR AML Inventory** █

FWS: 241 sites **C.FWS.01 FWS AML Inventory** █

**BLM:**

- The Bureau of Land Management does not have a process in place to identify AML sites.
- BLM does not have an effective process to identify AML sites.
- The existing AML inventories can not be used to identify and prioritize sites for mitigation because they lack specific detail about the site.
- There is a culture of "Don't Ask, Don't Tell" which inhibits identification of sites.
- There have been many failed inventory attempts including the most recent targeted inventory that resulted from the Saginaw Hill Audit Report.
- BLM's AMM inventory does not contain all of the known sites, nor the sites with the most serious threat to health and safety.
- BLM has been unable to justify sufficient funding for this program because of the poor inventory data.
- BLM has not identified all AML sites with safety issues/hazards.
- BLM does not have sufficient inventory policy and procedure to ensure consistent, reliable and independent data is collected.
- BLM does not have a consistent policy for site characterization and identification (i.e. is one hole a site or ten holes).
- BLM's AMM system is capable of supporting program needs, however the field level does not support the use of the system.
- BLM has not provided sufficient training, monitoring and oversight to ensure that AMM is used properly.
- BLM's AMM database includes many records from the Bureau of Mines and mass mills data which has not been field verified and lacks sufficient detail to determine mitigation needed.

A credible inventory of the most dangerous AML sites is needed to manage the program; however, a comprehensive inventory of all AML sites may not be obtainable. This is primarily due to the fact that there is a limited number of AML staff available to inventory these sites. For example, in the Ridgecrest, CA BLM field office, staff have thousands of sites that are not currently inventoried because the staff does not have the time to go out to each site and complete a comprehensive inventory. **C.BLM.04 BLM CA - Ridgecrest Field Office** █ █ The main problem with the AML program is that the field offices have individuals with AML as a collateral duty. There are no full time AML people in the state of CA other than one person at the state office. Each field office has a geologist or hazmat person who is assigned AML as one of many collateral duties they have. **B.CASTOffice.02 CA AML Collateral Duty Positions** █

Many of the existing sites are currently so remote or of minimum danger that they might not justify mitigation at any AML funding level.

Out of the thousands of AML sites, there are a number of sites that are in remote locations, where they are not a threat to the public. For example, in the Arcata, CA BLM field office, there are a number of prospecting holes and AML sites, but they are in a designated wilderness area and pose no threat to the public. Therefore, the BLM field office has not inventoried these sites, nor have they mitigated these sites. **C.BLM.12 BLM CA - Arcata Field Office** █

Given the limited funds available **B.BLM.02 BLM AML Funding** █, it is much more important that the AMM include current and credible information needed for high level program management of significant sites. **C.BLM.CAStoffice.03 CA Targeted Inventory** █

Submission:

Level 1 Approval:

Assignment Program/Summary Workpaper C.

Level 2 Approval: Approved John Illson 06/02/2008 01:40 01 PM

**Linkage Information**

**History**

**Status** Approved **Request Review**

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: William McMullen 04/13/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BIA.01 **Subsection** Survey C.1  
**Program Name** Survey-Inventory  
**Subject** BIA AML program

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader	Lakewood OIG	303 236 9119	john_illson@doioig.gov
Bill McMullen	Evaluator	Lakewood OIG	303 236 9123	william_mcmullen@doioig.gov
Debbie McBride	Environmental Scientist	BIA HQ	703 390 6524	DebbieMcBride@bia.gov

**Location** Main Interior Building

**Date/Time**

03/15/2007 12:15 PM

**Purpose:**

Discuss AML audit program and BIA's position regarding AML sites.

**Scope:**

BIA AML sites.

**Conclusion:**

Because BIA has no AML sites on lands owned by BIA and does not assume responsibility for abandoned mines on tribal lands, which are managed by the tribes, BIA should be excluded from the scope of this AML audit.

**Summary:**

Ms. McBride stated that BIA's position on abandoned mine lands was similar to the position taken on the recent OIG Hazardous Materials audit whereby BIA does not accept responsibility for hazardous materials or abandoned mines on tribal lands unless BIA created those problems. As far as Ms. McBride knew, there are no abandoned mines on lands owned by BIA and those on tribal lands are managed by the tribes. There are some Superfund mine remediation sites on tribal lands that BIA contributes funding to but this is the extent of BIA's involvement in AML sites.

BIA's position was supported by OGC [G.DOI.08 OGC Response to OIG Questions](#) ■ wherein OGC concurred that BIA had no CERCLA responsibility for abandoned mines that it did not create or control.

Submission: Submitted William McMullen 01/11/2008 10:30:25 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:02:43 AM

[Linkage Information](#)

**History**

**Status** Approved [Request Review](#)

**In Progress Edit** William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean

C.BIA.01 BIA AML program

Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: William McMullen 04/05/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 01 **Subsection** Survey C.1  
**Program Name** Survey-Inventory  
**Subject** Saginaw Instruction Memorandum and Responses

**Origination Doctlink** ■

**Purpose:**  
 Document responses to BLM Instruction Memorandum following up the OIG Flash Report No. C-IN-BLM-0013-2005.

**Scope:**  
 BLM inventory of hazardous sites near populated and high-use areas

**Source:**  
 BLM IM 20005-231 found at <http://www.blm.gov/nhp/efoia/wo/fy05/im2005-231.htm> and attached below:



im2005-231.pdf  
 Listing of AML sites in California provided in response to IM and given to OIG via email from L. Torrence on 3/23/2007 below:

- Conclusion:**
- Not all California BLM Field Offices were responses to the Saginaw IM.
  - The Ridgecrest Field Office did provide detailed information on AML sites in their area.
  - The Washington AML program has little authority to compel State BLM offices to comply with data requests such as the Source IM.

**Details:**  
 In March 2005, the Office of Inspector General issued a Flash Report (No. C-IN-BLM-0013-2005) on Public Safety Issues at the Saginaw Hill Property in which it identified the need for the BLM to be more proactive in fulfilling this policy. In response, the BLM committed to develop a report on what resources will be needed to identify hazardous sites in close proximity to populations. The Source Instruction Memorandum (IM) establishes a bureauwide process by which the BLM will conduct an assessment to identify hazardous sites on the public lands that are in close proximity to populated areas and other high-use areas. The Source IM requires BLM State offices to review and revise information provided by the Washington Office on AML sites in each state. Each office is to consider specific criteria provided in Attachment 1 to the Source document during their review to determine AML sites that potentially pose the greatest hazard due to their proximity to populated or high visitor use areas.

In response to the IM, eleven California Field Offices responded with varying levels of detail as summarized below: Only the Ridgecrest Field Office provided detailed information on AML sites in their area of responsibility. Several field offices refused to participate in the evaluation process outlined in the IM **C.BLM.CAStoffice.01 BLM CA State Office - Inventory Discussion** ■. Clearly, the national AML program in BLM has little authority to compel state BLM or field offices to comply with data requests such as those outlined in the Source IM.

Field Office	Number of Sites	Notes	Priority Cost Estimate
Alturas	1	none	0
Arcata	1	none	0
Barstow	17	no field checking	\$1,000
Bishop	17	minimal field checking	\$172,000
Folsom	45	minimal field checking	\$259,000
Needles	15	minimal field checking	\$1,000
Redding	32	no field checking	\$35,000
Ridgecrest	34	extensive field checks and proposed mitigation/remediation measures	\$153,875,000 (Red Mountain comprises \$120 million)
Eagle Lake	1	no field check	0
Ukiah	1	field checked	\$1,000

Palm Springs	22	minimal field checking	\$46,000
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The Ridgcrest response is detailed below:

**Ridgcrest FO Saginaw Response**

**Methodology:**

Reviewed source documents.

Submission:	Submitted	William McMullen	04/10/2007 10:09:42 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	05/02/2007 10:00:40 AM

**Linkage Information**

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	John Illson/DEN/OIG/DOI, Robert Romanyshyn/ARL/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Purpose:** The purpose of this Instruction Memorandum (IM) is to refine the process for addressing Abandoned Mine Lands (AML)-related environmental and physical safety hazards located in close proximity to populated places (PPL) and high use areas on Bureau of Land Management (BLM) lands. This IM establishes the goals, steps, measures of progress, and reporting requirements for the refined process. The IM also clarifies the kinds of hazards and places that need to be included in analyses. The goals of this initiative are to identify a realistic and accurate number of AML-related safety hazards that must be addressed immediately because they are within a 1/4 mile of a PPL, and to allow future funding and mitigation activities to be prioritized accordingly.

**Policy/Action:** In response to IM No. 2005-231, Identification of Hazardous Sites Near PPLs, more than 2,000 potential AML-related safety hazards were reported to be within 1 mile of a PPL. In order to most efficiently and effectively use available funding, the BLM must identify the most urgent AML-related safety hazard sites. This can be accomplished by re-evaluating the IM No. 2005-231 data to determine which AML-related safety hazards are within 1/4 mile of a PPL. Attachment 1 provides the detailed steps and timelines to accomplish the following phases:

- Phase 1. Fiscal Year (FY) 2007: Analyze data by comparing against the AML Strategic Plan issued under IM 2006-145, Cooperative Conservation Based Strategic Plan for the Abandoned Mine Lands Program (or as updated).
- Phase 2. FY 2007: Re-prioritize AML-Related Safety Hazard Sites to 1/4 Mile from PPLs.
- Phase 3. FY 2008: Field Validate Priority AML-Related Safety Hazard Sites.
- Phase 4. FY 2009 through FY 2011: Prioritize, Fund, and Mitigate AML-Related Safety Hazards.

In conducting analyses and follow-up actions, the field should focus on identifying hazardous sites in close proximity to populated areas similar to Saginaw Hill. Saginaw Hill is an AML site with both safety and environmental hazards, and is located adjacent to an expanding urban area in greater Tucson, Arizona.

The revised IM outlines a series of phases as shown in the tab below to 1) Analyze AML Strategic Plan for Safety Hazard Sites in Progress, 2) Reprioritize Safety Hazard Sites to 1/4 Mile from PPL, 3) Field Validate Priority Safety Hazard Sites and 4) Prioritize, Fund and Mitigate Safety Hazard Sites :

**Revised IM Phases**

The revised IM has a number of shortcomings in criteria and guidance.

**Shortcomings of Revised IM**

Given the shortcomings of the revised IM, we conclude that this exercise will likely result in another failed attempt by BLM to produce an accurate inventory of AML sites with significant safety hazards. The result will be an understatement of AML physical safety hazards with an apparent lessened need for increased budgets to mitigate significant AML hazards.

**OIG Conclusion**

**Methodology:**

Reviewed documents sent by email from George Stone.

Submission: Submitted William McMullen 01/11/2008 08:45:42 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:03 22 AM

**Linkage Information**

**History**

Status	Request Review
In Progress Edit	Approved John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

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**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 02 **Subsection** Survey C.1& C.2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Needles Field Office

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Ken Downing	Geologist	BLM Needles Field Office	760-326-7017	

**Location** Telephone Conversation

**Date/Time**

03/07/2007 02:30 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Needles Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory done a number of years ago with very limited information.
- \*No active inventory process is in place to update AML sites.
- \*No AML sites are being entered into the AMM database because no one in the office is trained on using they system.

**Summary:**

According to Ken Downing, he is not aware of any AML sites where an injury or fatality has occurred on BLM property, but he stated that his office does not track injuries and fatalities. He stated that there was a inventory list created a number of years ago with around 500 AML sites. He stated that the information was not great and there is not a lot of detail for each site, but it has a simple listing of locations for the sites. No update to the inventory is currently being done, so there is no update to the work done a number of years ago for an inventory. No one currently enters sites into the AMM. There was a person who used to do that, but they are no longer in the office and no one else is trained on the system. According to Ken, sites are not currently being identified, nor are sites being entered into the AMM. Ken did state that priority is given to sites that are a problem due to accidents or injuries, but there have not been any accidents or injuries he has been aware of.

Submission: Submitted Stephanie Christian 05/25/2007 01:15:00 PM  
 Level 1 Approval: Approved William McMullen 05/30/2007 01:17:16 PM  
 Level 2 Approval: Approved John Illson 06/04/2007 10:11:57 AM

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**History**

**Status** Approved **Request Review**  
**In Progress Edit** Stephanie Christian/DEN/OIG/DOI  
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C.BLM 03 BLM CA - Hollister Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 03 **Subsection** Survey C.1& C.2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Hollister Field Office

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Tim Moore	Geologist	BLM CA Hollister Field Office	831-630-5027	

**Location** Telephone Conversation

**Date/Time**

03/07/2007 03 50 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Hollister Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory has approximately 40 total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*All of the sites have been entered into the AMM database.

**Summary:**

According to Tim Moore, he is not aware of any AML sites where an injury or fatality has occurred on BLM property, but BLM does not track injuries and fatalities in his office. He stated that there was a inventory list created which has a total of 40 AML sites listed. No update to the inventory is currently being done, so there is no update to the 40 sites previously identified. Time currently enters sites into the AMM. According to Tim, sites are not currently being identified to update the list of AML sites. Tim stated that his office has been closing the AML sites they have on their list and there are only about 8-9 sites he knows of that are high priority due their proximity to a recreation area.

Submission: Submitted Stephanie Christian 05/25/2007 03:45 07 PM  
 Level 1 Approval: Approved William McMullen 05/30/2007 01:14:17 PM  
 Level 2 Approval: Approved John Illson 06/04/2007 10:12 54 AM

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**History**

Status Approved Request Review

C.BLM 03 BLM CA - Hollister Field Office

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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C.BLM 04 BLM CA - Ridgecrest Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C BLM 04 Subsection Survey C.1&2  
 Program Name Survey-Inventory  
 Subject BLM CA - Ridgecrest Field Office

Origination Doctlink 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Lynn Gumm	Geologist	BLM CA - Ridgecrest Field Office	760-384-5450	

Location Telephone Conversation

Date/Time

03/07/2007 04 20 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Ridgecrest Field Office:

- \*6 AML incidents including; falls, injuries, fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory has approximately 20,000 to 30,000 total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*Most sites have not been entered into the AMM database.

**Summary:**

According to Lynn Gum, he is aware of many AML sites where people have fallen into AML sites and have been injured or died on BLM property, but BLM does not track injuries and fatalities in his office. He could not provide a BLM list with all injuries and fatalities that have occurred on BLM property. He did state that he had entered two incidents into the SMIS database because he was directed to do so. However, there is no standard practice to enter incidents into the SMIS database when injuries and fatalities occur. He identified that there are approximately 20,000 - 30,000 mine shafts and openings on BLM property in the Ridgecrest Field Office area. Most of these are not on an inventory, but the general areas where mining occurred are well known. Lynn stated that he does not enter sites into the AMM because there are far too many sites to be entered. Therefore, he stated that most sites have not been entered into the AMM database. Lynn stated that there are many high priority areas where AML sites are close to populated areas or near recreational sites. Lynn stated that he focuses on these areas for site mitigation and remediation. Lynn identified Spangler hills and Rodimockers as two high priority areas that his office is focusing on remediating. Lynn identified a number of AML incidents that have occurred at AML sites on BLM land. Listed below are only the incidents that Lynn could remember from his own knowledge, but he could not provide a list of all incidents because his office does not track these incidents. The incidents he could recall included:



Submission: Submitted Stephanie Christian 06/01/2007 12:44 57 PM  
 Level 1 Approval: Approved William McMullen 06/12/2007 10:44:15 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 09:45 56 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 06/28/2007 08:13:32 AM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Thu 06/28/2007 08:13 AM. For original text, refer to the field(s) above.

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Ridgecrest Field Office:

- \*6 AML incidents including; falls, injuries, fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory has approximately 20,000 to 30,000 total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*Most sites have not been entered into the AMM database.

**Summary:**

According to Lynn Gum, he is aware of many AML sites where people have fallen into AML sites and have been injured or died on BLM property, but BLM does not track injuries and fatalities in his office. He could not provide a BLM list with all injuries and fatalities that have occurred on BLM property. He did state that he had entered two incidents into the SMIS database because he was directed to do so. However, there is no standard practice to enter incidents into the SMIS database when injuries and fatalities occur. He identified that there are approximately 20 000 - 30,000 mine shafts and openings on BLM property in the Ridgecrest Field Office area. Most of these are not on an inventory, but the general areas where mining occurred are well known. Lynn stated that he does not enter sites into the AMM because there are far too many sites to be entered. Therefore he stated that most sites have not been entered into the AMM database. Lynn stated that there are many high priority areas where AML sites are close to populated areas or near recreational sites. Lynn stated that he focuses on these areas for site mitigation and remediation. Lynn identified Spangler hills and Rodimockers as two high priority areas that his office is focusing on remediating. Lynn identified a number of AML incidents that have occurred at AML sites on BLM land. Listed below are only the incidents that Lynn could remember from his own knowledge, but he could not provide a list of all incidents because his office does not track these incidents. The incidents he could recall included:

[REDACTED]

**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 05 **Subsection** Survey C.1& C.2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Folsom Field Office

**Origination Doclink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Tim Carroll	Geologist	BLM CA- Folsom Field Office	916-985-4474	

**Location** Telephone Conversation

**Date/Time**

03/09/2007 08 50 AM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Folsom Field Office:

- \*1 injury has occurred at a BLM AML sites that was identified by BLM.
- \*No Inventory of total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*Most sites have not been entered into the AMM database.

**Summary:**

According to Tim Carroll, he knows of only one AML site where an injury has occurred on BLM property, but BLM does not track injuries and fatalities in his office. The incident occurred in the [REDACTED] and a man fell into an [REDACTED]. Tim stated that there is no inventory for all AML sites in his field office area. He stated that a lot of sites were moved over from AMLIS into the AMM database, but there is no field verification of the sites that has been conducted. Only sites that were moved over from AMLIS would be in AMM for his field office area. He said that his office just started their AML program four years ago and they only began mitigating sites in 2004. He said they are focusing on sites near residential and recreational areas for site mitigation and remediation. His area has a large section of historic mining called the motherload area, but he stated that this area has not been visited by BLM to identify AML sites. He said that there is no active inventory process in place to update AML sites and he does not currently enter sites into the AMM database.

Submission: Submitted Stephanie Christian 06/01/2007 12:57 29 PM  
 Level 1 Approval: Approved William McMullen 06/12/2007 10:45:11 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 09:46 39 AM

[Linkage Information](#)

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

C.BLM 06 BLM CA - Palm Springs Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 06 **Subsection** Survey C.1&2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Palm Springs Field Office

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Cheryl Martinez	Geologist	BLM Palm Springs Field Office	760-251-4847	

**Location** Telephone Conversation

**Date/Time**

03/07/2007 04 00 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Palm Springs Field Office:

- \*1 injury at BLM AML site called Steel Peak in which a [REDACTED] However, this field office does not have a process to identify and track injuries and fatalities.
- \*No complete inventory of AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database because the Cheryl does not know how to use AMM and enter sites.

**Summary:**

According to Cheryl, there was one injury at a BLM AML site that she has heard about since she became the AML lead. The AML site where the injury occurred, is called steel peak. A man fell down a [REDACTED] This shaft has been fenced and a sign has been posted, however, no permanent remediation has occurred to close the site. Cheryl indicated that she does not have a complete inventory of AML sites and there is no active inventory process in place to locate AML sites. Cheryl also stated that she has not entered any sites into the AMM database because she does not know how to enter sites.

Submission: Submitted Stephanie Christian 06/20/2007 02:11 31 PM  
 Level 1 Approval: Approved William McMullen 06/21/2007 07:52 34 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 09:47:18 AM

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**History**

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**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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C.BLM 07 BLM CA - Barstow Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 07 **Subsection** Survey C.1&2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Barstow Field Office

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Jamie Livingood	Geologist	BLM CA Barstow Field Office	760-252-6000	

**Location** Telephone Conversation

**Date/Time**

03/08/2007 02:00 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Barstow Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory of AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**Summary:**

According to Jamie Livingood, there have been a number of injuries on property patented, but not still owned by BLM. Jamie stated that BLM went out to the sites to determine ownership and found the AML sites where the injuries occurred were no longer BLM property, but rather were patented pieces that are privately owned. Jamie stated that he has begun a list of AML sites, but it is only about 15 sites and includes only high risk sites that BLM is addressing. Jamie indicated that his field office receives less than \$6,000 per year to address AML sites. Jamie indicated that the small budget prevents his office from actively inventorying the AML sites. Jamie also indicated that he does not enter sites into the AMM database.

Submission: Submitted Stephanie Christian 06/20/2007 02:42:26 PM  
 Level 1 Approval: Approved William McMullen 06/21/2007 07:52:17 AM  
 Level 2 Approval: Approved John Illson 06/22/2007 11:23:18 AM

[Linkage Information](#)

**History**

Status Approved Request Review

C.BLM 07 BLM CA - Barstow Field Office

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

C.BLM 08 BLM CA - Redding Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 08 **Subsection** Survey C.1&2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Redding Field Office

**Origination Doclink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Ron Rogers	Geologist	BLM Redding Field Office	530-224-2127	

**Location** Telephone Conversation

**Date/Time**

03/09/2007 02:10 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Redding Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No formal inventory of AML sites. However, Ron did help complete the Saginaw project to list possible high priority AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**Summary:**

According to Ron, BLM does not keep a list or track injuries or fatalities at BLM AML sites. Ron also stated that he keeps no formal inventory of AML sites, but did help complete the Saginaw Project to list possible high priority AML sites. Ron stated that there is no active inventory process in his office for AML and he does not enter sites into the AMM database.

Submission: Submitted Stephanie Christian 06/20/2007 03:28 38 PM  
 Level 1 Approval: Approved William McMullen 06/21/2007 07:53:19 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 09:47:46 AM

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**History**

**Status** Approved **Request Review**  
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**Confidentiality** Standard  
**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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C.BLM 09 BLM CA - Bishop Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM 09 **Subsection** Survey C.1 & C.2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Bishop Field Office

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Cheryl Seath	Geologist	BLM CA Bishop Field Office	760-872-5024	

**Location** Telephone Conversation

**Date/Time**

03/08/2007 03:45 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Bishop Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No full inventory of AML sites, but the office does have a list of 255 AML sites needing to be closed from information provided by the Bureau of Mines.
- \*No active inventory process is in place to update AML sites.
- \*Some sites have been entered into the AMM database.

**Summary:**

According to Cheryl Seath, she knows of no injuries or fatalities at BLM AML sites, but her office does not track these types of incidents. She said that she does not have a full inventory of AML sites, but she does have a list of 255 AMM sites that need to be closed from information provided by the Bureau of Mines. Specifically, she said there are about 100 high priority sites that she knows about. However, her office has not conducted a full inventory of AML sites, nor do they have an active inventory in place to update AML sites. Cheryl indicated that she has entered some sites into AMM, but she does not have a lot of time to enter sites and only a small amount of the sites she has are in AMM. She indicated that she does know how to use AMM, but she has not had the time to enter the sites.

Submission: Submitted Stephanie Christian 06/21/2007 09:39 26 AM  
 Level 1 Approval: Approved William McMullen 06/21/2007 10:42:43 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 10:19 55 AM

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**History**

**Status** Approved **Request Review**  
**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

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**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

C.BLM.10 BLM CA - Eagle Lake Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.10 **Subsection** Survey C.1& C.2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Eagle Lake Field Office

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Russ Elam	Geologist	BLM CA Eagle Lake Field Office	530-252-5317	

**Location** Telephone Conversation

**Date/Time**

03/08/2007 03 30 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Eagle Lake Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No AML sites in this field office area.
- \*No active inventory process because there are no AML sites.
- \*No sites have been entered into the AMM database because there are no AML sites.

**Summary:**

According to Russ Elam, the Eagle Lake Field Office does not have any AML sites in their area and they have never had any. Therefore, there are no lists of injuries or fatalities, no inventory list, no active inventory process and no entry into the AMM database. Russ stated that there really is no AML program in his office due to the lack of sites.

Submission: Submitted Stephanie Christian 06/21/2007 09:45 09 AM  
 Level 1 Approval: Approved William McMullen 06/21/2007 10:43 04 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 10:44 09 AM

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**History**

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**Confidentiality** Standard  
**Add Document Readers**

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.BLM.10 BLM CA - Eagle Lake Field Office

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.11 **Subsection** Survey C.1& C.2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Alturas Field Office

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Claud Singleton	AML Contact	BLM CA Alturas Field Office	530-233-4666	

**Location** Telephone Conversation

**Date/Time**

03/22/2007 10:45 AM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Alturas Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No full inventory of AML sites, but the office did perform a check of AML sites 5 years ago and identified some smaller AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**Summary:**

According to Claud Singleton, he does not know of any injuries or fatalities at BLM AML sites, but there is no tracking done for this in his office. Claud stated that there is no full inventory of AML sites, but the office did perform a check of AML sites 5 years ago and identified some smaller AML sites. However, Claud stated that there is no active inventory process in place to identify AML sites. Claud also indicated that he does not enter sites into the AMM database.

Submission: Submitted Stephanie Christian 06/21/2007 10:11 36 AM  
 Level 1 Approval: Approved William McMullen 06/21/2007 10:43 24 AM  
 Level 2 Approval: Approved John Illson 06/25/2007 10:44 39 AM

**Linkage Information**

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Stephanie Christian/DEN/OIG/DOI  
**Confidentiality** Standard

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**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

C.BLM.12 BLM CA - Arcata Field Office

**Record of Discussion**

Prepared by: Stephanie Christian 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.12 **Subsection** Survey C.1&2  
**Program Name** Survey-Inventory  
**Subject** BLM CA - Arcata Field Office

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Hank Harrison	AML Contact	BLM CA Arcata Field Office	707-825-2318	

**Location** Telephone Conversation

**Date/Time**

03/22/2007 03:40 PM

**Purpose:**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope:**

BLM CA Field Offices

**Conclusion:**

Arcata Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No full inventory of AML sites, because there are only prospecting holes, no large AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**Summary:**

According to Hank Harrison, there are no injuries or fatalities at BLM AML sites, but his office does not track this information. Hank stated that there is no inventory of AML sites, but he thinks this is because there are only smaller prospecting holes, and no large AML sites. The prospecting holes are now in designated wilderness areas, so these sites are not seen as a serious hazard. There is no active inventory process and no sites are entered into the AMM database.

Submission: Submitted Stephanie Christian 06/21/2007 11:48:18 AM  
 Level 1 Approval: Approved William McMullen 06/22/2007 01:00 57 PM  
 Level 2 Approval: Approved John Illson 06/25/2007 10:45:11 AM

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**History**

**Status** Approved **Request Review**  
**In Progress Edit** Stephanie Christian/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.BLM BarstowFO.01 Field visit to Barstow FO

- No obvious mine workings were observed near the road through the mountains although Jamie noted that there were features but one had to have an OHV to access them.
- Little or no mitigation work has been done in this area according to Jamie.
- Jamie was aware of the accident near Joshua Tree National Park which he thinks was on Barstow BLM land although there was some initial thought that it might have occurred on lands managed by the Palm Springs FO. The site, Goat Basin, is quite remote and Jamie had never visited the specific site. He thought some mitigation had been done but was not sure of the specifics.
- Jamie knew of no other incidents related to AML in the field office area.

Submission: Submitted William McMullen 01/11/2008 08:46:42 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:03 53 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/09/2008 01:49:17 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Wed 01/09/2008 01:49 PM. For original text, refer to the field(s) above.

Purpose:  
Determine status of AML program at Barstow Field Office.

Scope:  
BLM Barstow Field Office.

Conclusion:  
Barstow FO does not have a formal AML inventory or prioritized list of sites.

- The FO did not respond to the Saginaw IM according to the FO AML lead.
- There are numerous open shafts in the Coolgardie Historic Mining District nor hwest of Barstow; the area is routinely used for OHV recreation and rockhounding.
- Did not visit the site of a fatality near Joshua Tree National Park on BLM land as it was quite remote and the Barstow FO geologist had not been there.
- FO representative did not know of any other incidents related to AML at Barstow FO.

Summary:

Visited Barstow FO to tour BLM lands and observe abandoned mines with physical safety features. Discussed status of program with Jamie during our drive to and from sites. Key points:

- Jamie is the FO Geologist responsible for minerals royalty programs, leasables, claims, and abandoned mine lands. He has been with BLM for about 4 years.
- Barstow manages about 3.2 million acres in southern California. The area includes several designated off-highway-vehicle (OHV) recreation areas.
- The area receives substantial recreational visitation during key holidays; Jamie did not have estimates of numbers.
- Jamie stated that no comprehensive inventory of AML sites in Barstow has been done; in fact, the attitude of management, according to Jamie, is that to have an inventory is to incur liability for not mitigating hazards at the sites on the inventory. Inventories are done in a local area when staff and materials are available to conduct the mitigation/remediation at the same time.
- Barstow works with CA State AML to mitigate sites; BLM performs NEPA reviews and the State does the on-the-ground work.
- Jamie thinks "strike teams" with biologists, archeologists, historic preservation people, and mitigation/remediation people are the way to deal with AML; need dedicated staff who can move from site to site, deal with NEPA and process issues and mitigate the hazards.
- There are many claims in the area on BLM land, some active, some not, and many uncertain.
- Jamie was not aware of any FO response to the Saginaw IM.
- Jamie was not aware of any prioritized lists of AML's with physical safety hazards in the FO area.
- We visited the Coolgardie Historic Mining District approx 20 miles northwest of Barstow.
  - The area is a BLM "limited use" area where visitors are supposed to remain on designated trails but there are OHV tracks and trails throughout the area.
  - Rockhounters were in evidence during the visit sifting through diggings.
  - We observed many open shafts (some claims) near roads and trails as shown below:



coolgardie shafts c.JPG



coolgardie shaft 1 c.JPG



inside coolgardie shaft 1 c.JPG



coolgardie shaft 3 c.JPG



coolgardie shaft 4 c.JPG



downhole coolgardie shaft 4 c.JPG



coolgardie shaft in road c.JPG

- Physical safety hazards are apparent from the photos (open shafts or minimally covered shafts near roads).
- Little to no mitigation work has been done in the Coolgardie area with the exception of some fencing around some sites and no signs were evident near the hazards.
- We visited the Calico Mountains area north of Barstow. A fatality occurred in this area (subject of \$11.5 million lawsuit against San Bernardino County) on private land. We drove through the Calico Mountains on Mule Canyon Road.
  - No obvious mine workings were observed near the road through the mountains although Jamie noted that there were features but one had to have an OHV to access them.
  - Little or no mitigation work has been done in this area according to Jamie.
- Jamie was aware of the accident near Joshua Tree National Park which he thinks was on Barstow BLM land although there was some initial thought that it might have occurred on lands managed by the Palm Springs FO. The site, Goat Basin, is quite remote and Jamie had never visited the specific site. He thought some mitigation had been done but was not sure of the specifics.
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History

C.BLM BarstowFO.01 Field visit to Barstow FO

**Status** Approved **Request Review**  
**In Progress Edit** John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

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**Record of Discussion**

Prepared by: Stephanie Christian 04/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.CAStoffice.01 **Subsection** Survey C.1 and C 2  
**Program Name** Survey-Inventory  
**Subject** BLM CA State Office - Inventory Discussion

**Origination Doclink** ■

**Participants**

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George Stone	Senior Abandoned Mine Lands Specialist	Washington Office	202 557 3573	george_stone@blm.gov
Richard Garbowski	Asst. State Director	2800 Cottage Way - Suite W-1834	916-978-4361	Richard_Garbowski@blm.gov
Dave Lawler	Coordinator - AML program	2800 Cottage Way - Suite W-1834	916-978-4364	dlawler@ca.blm.gov

**Location** BLM CA State Office

**Date/Time**

03/26/2007 02:00 PM

**Purpose:**

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BLM CA State Office ensures that identified AML sites with safety issues are included on an inventory.

**Scope:**

BLM Inventory

**Conclusion:**

BLM does not have a complete inventory of all sites it knows about, nor has BLM created a targeted inventory of high priority sites meeting the Saginaw Hill IM criteria. Many of the CA field offices refused to participate in the identification/inventory of high priority sites as required by the Saginaw Hill IM. Only approximately 1% of BLM sites in CA have been entered into the AMM database. The lack of a targeted inventory required by the Saginaw Hill IM has been caused by a lack of management support at the field office level, lack of priority being placed on the AML program and the BLM culture of "don't ask - don't tell". A team of dedicated staff are needed to create a targeted inventory of high priority sites.

**Summary:**

The audit team developed a list of questions for the different audit areas covered under AML. The inventory questions are outlined below and were reviewed for the BLM CA State Office during our survey site visit.

**Questionnaire for BLM State Offices**

**Obtain appropriate documentation to support procedures in place for all Questions**

**Inventory**

1. Is there a designated AML coordinator in each field office? If so, please provide their contact information. If not, why not?

There is a contact at each office, but some may not be a trained formal AML person. Some of the offices have very little activity, so there is not a formal AML program. If there is a larger program, then there is a geologist that has a collateral duty in a field office. Dave Lawler is the only full time AML person in the state. There are no full time individuals at the field office level.

2. *Has the AML coordinator for each field office and for the state office received training, what type (obtain certificates), and do you have the knowledge required to properly enter AML sites into the AMM system?*

There is only one class on characterization on AML sites. George gave a list from the National training center on who has taken the course. The class name is Characterization of AML Sites.

3. *How would you describe the level of management support for and commitment to the AML program in your office? Besides limited funding, are there roadblocks that are impacting the program's ability to achieve on the ground results?*

The support varies at the management level. Some field managers are supportive, but some are not. One of the problems is that it takes a long time to get cooperation at the field office level to get sites mitigated. There is no line authority from the state office AML program to the field office level. Virtually every major place where there have been significant AML problems, there have been problems getting support at the field office level. The problem is that any action that is taken, the decision authority on the EECA or NEPA evaluation is at the field office level. For the major decision, it is done at the State Director level. There has to be buy in from the field office level in order to get the AML and hazmat areas cleaned up. The backbone of the problems is the don't ask don't tell culture, which must be eliminated to get any progress completed.

4. *How many of state sites with significant physical safety hazards have been entered into AMM for CA?*

There are only 400 sites on AMM for CA. Gery Olson (a contractor hired by the BLM CA state office to inventory sites) completed field verification of about 200 AML sites and entered them into the AMM. There are approximately 1% of the total CA BLM sites have been entered into the AMM. The state of CA has found many sites on BLM property that BLM has not checked, nor are they in the BLM AML inventory. The state of CA is also collecting its own data on AML sites, including those on BLM land. CA has more than 300 additional sites that it has field checked on BLM property that are not in the AMM database.

There is a number of lists for AML information and none of them is a complete picture of the BLM AML problem. There is the CA list compiled by the state, the AMM list compiled by BLM field offices, Gery Olson's list from 97-98 (50-100 sites received from the field offices and these have been field checked – these are the only field checked sites except for Ridgcrest. Examples of Saginaw sites – Longfellow), individual field office lists and the Saginaw list. These lists have all been compiled separately. There is no real list of all known sites, nor is there a targeted list of sites meeting the Saginaw Hill IM requirements that has been field checked. In most of the field offices the list of high priority sites has not even been created.

IM 2000-182 – This was an earlier effort to identify high priority sites. But there are still only a few sites that have really been field checked.

Some field offices were very reluctant to help in the progress of identifying/inventorying high priority sites and some refused to participate at all in the identification/inventory of high priority sites. Half of the CA field offices did the project and the other half did not complete the project at all. All the Desert District except for Ridgcrest refused to do the Saginaw project including; Needles, Electro, Barstow and Palm Springs. Prior to the Saginaw request there was no paper inventory of the sites that met the Saginaw criteria. Gery Olson did a list of 50-75 sites he collected, but this was before the AMM and the information was not in AMM.

We need to request full disclosure from the field offices to get the sites they really have, but have not reported. There are only a few sites that are high priority that have already been identified, but there are hundreds of sites (in the realm of 500 sites) that still need to be identified. This problem has been caused due to the lack of emphasis, priority and funding for the entire AML program. Most of the problematic sites in CA are the old mill sites. A good place to start is by creating a list of all of the old mill sites where major mining occurred. This would help to determine the truly problematic areas with both physical safety hazards and hazmat components.

Congress has never mandated an inventory of hard rock mining AML sites. There was a mandate for the coal sites, but not for non-coal sites. No other agency has created an inventory either. One way of addressing this problem is by creating a team to go out and look at the sites that meet the Saginaw criteria. Mass Mills data is a good place to start. If it was a significant mill it was in the database and then you look at the type of minerals that were mined at each site and then you need to go out and field check the sites.

5. *How many sites with significant physical safety hazards (Saginaw Level) would you estimate have not been entered into the AMM for CA?*

There were 166 sites that met the Saginaw criteria. Some of the 166 sites are in AMM and some were not. The 166 sites are within 1 mile of a populated area. This project is a beginning of the targeted inventory, but it is not complete and has limited information. Very little work has been done to field check the sites to determine the mitigation needed at each site. This inventory does not involve going out into the field and determining the cost for mitigation; most of the inventory requires field check and has the associated costs for field office personnel to go out and field check the site for physical and environmental hazards. If the site is known about then the field office has a rough estimate on the cost for mitigation of the site. But this has only been done for the sites that are currently known about. Only the cost for a field check is included for those sites that have not been reviewed or field checked.

6. Does the state office have any inventories of sites not on the AMM?

These are being provided by each field office. George Stone indicated that he has received field office inventories from some offices which are not currently in the AMM.

7. Have you prioritized (with what procedures?) either set of inventories for mitigation on a statewide basis?

On the 1010 (water quality) side there is prioritization for sites. On the other sites (non-water quality) for the special cleanup fund allocation, there is a request made through BPS in August each year to outline the significance of the site and the cost for remediation. Each field office must submit their request through BPS for their project to be considered for remediation. Then items are chosen from those sites for funding. Some sites where there has been an injury or death are ranked higher and may delay other projects. However, the state hazmat funding is used at the discretion of each State Office for project selection and prioritization.

8. To what extent did your office collaborate with other government and NGOs in establishing priorities, strategic plans, and funding for mitigation actions?

Collaboration occurs in a number of ways with NGOs. There are a number of groups that BLM works with to coordinate efforts. There are about 40 NGOs total that BLM works with. This is currently done by watershed. There is a list of NGO's that BLM works with. Some of these organizations have brought money to the table or do in kind work with BLM. Some bring funds and some bring resources to the table for work on AML sites. These organizations have provided a variety of assistance which has been helpful for cleanup of AML sites. This cooperation is strictly on the water quality side, there is no collaboration for just physical safety problems. There are a number of eagle scout projects that BLM has worked with to fence AML sites. There have been some grant work done to help pay for the NEPA process. This money has come from the State of CA green sticker initiative.

9. What information is required from the field to assist in the prioritization process?

Prioritization is done for the special cleanup fund prioritization at the HQ level. At the CA State Office level, field offices are asked to enter their projects into BPS so they can be reviewed and prioritized. There is a ranking level entered into the BPS by John Key and Dave Lawler. These sites are prioritized based upon the ranking level for each site. Focus is put on number 1 priorities. Some of the field offices including: Bishop, Bakersfield, Folsom, Ridgecrest, El Centro, and Barstow have sent in projects, but the rest have not sent in any BPS projects. There are a variety of problems that have caused the rest of the field offices not to send in projects, including the don't ask - don't tell culture that BLM has created. In addition, the field offices do not put priority on the program.

10. Has your office entered or reviewed funding requests submitted through the Budget Planning System? What were the results for the most recent three years?

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Submission:	Submitted	Stephanie Christian	04/10/2007 10:44:47 AM
Level 1 Approval:	Approved	William McMullen	04/10/2007 11:03 25 AM
Level 2 Approval:	Approved	John Illson	05/02/2007 09:53 34 AM

**Linkage Information Set By Stephanie Christian/DEN/OIG/DOI On 01/07/2008 05:14:36 PM**

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Collaboration occurs in a number of ways with NGOs. There are a number of groups that BLM works with to coordinate efforts. There are about 40 NGOs total that BLM works with. This is currently done by watershed. There is a list of NGO's that BLM works with. Some of these organizations have brought money to the table or do in kind work with BLM. Some bring funds and some bring resources to the table for work on AML sites. These organizations have provided a variety of assistance which has been helpful for cleanup of AML sites. This cooperation is strictly on the water quality side, there is no collaboration for just physical safety problems. There are a number of eagle scout projects that BLM has worked with to fence AML sites. There have been some grant work done to help pay for the NEPA process. This money has come from the State of CA green sticker initiative.

*9. What information is required from the field to assist in the prioritization process?*

Prioritization is done for the special cleanup fund prioritization at the HQ level. At the CA State Office level, field offices are asked to enter their projects into BPS so they can be reviewed and prioritized. There is a ranking level entered into the BPS by John Key and Dave Lawler. These sites are prioritized based upon the ranking level for each site. Focus is put on number 1 priorities. Some of the field offices including; Bishop, Bakersfield, Folsom, Ridgecrest, El Centro, and Barstow have sent in projects, but the rest have not sent in any BPS projects. There are a variety of problems that have caused the rest of the field offices not to send in projects, including the don't ask - don't tell culture that BLM has created. In additoin, the field offices do not put priority on the program.

*10. Has your office entered or reviewed funding requests submitted through the Budget Planning System? What were the results for the most recent three years?*

On the 1010 (water quality) side there is prioritization for sites. On the other sites (non-water quality) for the special cleanup fund allocation, there is a request made through BPS in August each year to outline the significance of the site and the cost for remediation. Each field office must submit their request through BPS for their project to be considered for remediation. Then items are chosen from those sites for funding. Some sites where there has been an injury or death are ranked higher and may delay other projects. However, the state hazmat funding is used at the discretion of each State Office for project selection and proritization.

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



There are a number of factors including a cleanup and abatement order which puts a site at the top of the list. BLM also works with Forest Service to prioritize sites which may be on both agencies lists for mitigation. Fatalities and injuries also drive the list of priorities. Sites with injuries and fatalities are put on the top of the priority list for mitigation. The field office also ranks their sites and the State Office tries to address the #1 ranked priorities at the field office level. The state offices goes through the field office applications and determines the priorities for what sites will be mitigated. There is a ranking system for the water quality sites that is used to fund projects out of the water quality funding 1010. These projects are also peer reviewed at the national meeting. The State Office assists the field in completing the ranking system process to ensure the paperwork is properly filled out. The peer group meets twice a year and then reviews the projects for a given physical year to determine what is getting funded. All of the projects are ranked in the BPS system as well.

3. *What guidance do you provide to the field to ensure that AMM is continuously updated and ensure all sites are entered?*

There is no guidance to ensure that AMM is continuously updated and entered into AMM. There are a number of people that don't even know how to enter sites into the AMM system. In June of 06, there was a Saginaw Hills meeting to discuss the need for sites to be entered into the AMM system. However, there has not been any training for AMM since it started. There is a manual for the AMM, but there has been no formal training. This is an area that needs to be addressed because no training has been provided. The state database has more sites that CA has in the AMM database, which indicates a significant problem because sites are not being put into the database. However, the CA sites have not been reviewed to ensure all sites the state has identified have also been identified by the BLM field offices and entered into the AMM database. The field offices do not have the qualified staff to gather and enter information into the AMM. The state office staff believe that the field office needs to have experience in the environmental components to know what needs to be identified and entered into AMM. CA field office staff do not have the training, management support, necessary skills, and program priority to do the AML work that needs to be done. The state director has line authority over the field offices and he needs to take action to ensure these sites get reported.

There are a number of issues which have prevented BLM staff from entering sites into AMM. One of the main problems is the BLM culture which pushes staff not to report sites. There have been repercussions for the field office staff to report sites. There are sites that the field office has known about for years that they are unwilling to report to the manager because of fear of repercussions.

For example, there are sites which BLM acquired that have contamination on them that are not being reported. These sites have mercury mines and sledge mines and contain contamination. These sites include:

- Oat Hill Extension
- Ukiah
- Hollister – Molina Mine
- Poison lake – Folsom Resource area

There are also sites that BLM has conveyed to private individuals that had contamination and AML problems on the site. These sites include:  
Kings Mine and Rinconada

Land exchanges are a real problem because hazmat problems on land are being acquired and are being given to private individuals.

Submission:	Submitted	Stephanie Christian	04/13/2007 11:01 04 AM
Level 1 Approval:	Approved	William McMullen	04/13/2007 11:31:45 AM
Level 2 Approval:	Approved	John Illson	08/21/2007 08:12:13 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/07/2008 11:49:11 AM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Mon 01/07/2008 11:49 AM. For original text, refer to the field(s) above.

Purpose:

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BLM CA State Office ensures that identified AML sites with safety issues are included on an inventory.

Scope:

BLM Inventory

Conclusion:

There have been no reviews of the AML program. CA uses a number of different criteria to determine sites for mitigation including; accidents at sites with cleanup and abatement orders, and field office priorities. There has been no guidance or training provided for staff to ensure sites are entered into the AMM database. In fact, many staff in CA have no idea how to enter sites into the AMM. ■ There is also a BLM cultural problem which prevents staff from reporting sites for fear of retribution. ■ This problem has also led to BLM conveying and accepting land exchanges of land that has both AML and contamination issues.

Summary:

The audit team developed a list of questions for the different audit areas covered under AML. The inventory questions are outlined below and were reviewed for the BLM CA State Office during our survey site visit.

## Questionnaire for BLM State Offices

### Obtain appropriate documentation to support procedures in place for all Questions

#### Program Oversight

1. Provide copies of any and all HQ, S.O. or regional reviews (MCR's, AMCR's, Peer reviews etc.) of the AML program.

No reviews have been done of the program on a formal oversight. There are no state office reviews. There are also no field office reviews.

2. What criteria do you use at the state office to determine what sites will be mitigated?

There are a number of factors including a cleanup and abatement order which puts a site at the top of the list. BLM also works with Forest Service to prioritize sites which may be on both agencies lists for mitigation. Fatalities and injuries also drive the list of priorities. Sites with injuries and fatalities are put on the top of the priority list for mitigation. The field office also ranks their sites and the State Office tries to address the #1 ranked priorities at the field office level. The state offices goes through the field office applications and determines the priorities for what sites will be mitigated. There is a ranking system for the water quality sites that is used to fund projects out of the water quality funding 1010. These projects are also peer reviewed at the national meeting. The State Office assists the field in completing the ranking system process to ensure the paperwork is properly filled out. The peer group meets twice a year and then reviews the projects for a given physical year to determine what is getting funded. All of the projects are ranked in the BPS system as well.

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Land exchanges are a real problem because hazmat problems on land are being acquired and are being given to private individuals.

**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Stephanie Christian 04/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.CAStoffice.03                      **Subsection** Survey C.1 & C.2  
**Program Name** Survey-Inventory  
**Subject** CA Targeted Inventory

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader	134 Union Blvd	303-236-9119	John_Illson@doioig.gov
Stephanie Christian	Evaluator	134 Union Blvd	303-236-9112	Stephanie_Christian@doioig.gov
Leroy Mohorich	Chief of the Energy and Minerals Branch	CA State Office	916-978-4363	

**Location** CA State Office

**Date/Time**

03/28/2007 08 00 AM

**Purpose:**

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BLM CA State Office ensures that identified AML sites with safety issues are included on an inventory.

**Scope:**

BLM Inventory

**Conclusion:**

The lack of resources and funding are the primary causes of a lack of targeted inventory for high priority sites. BLM CA has also not had the AML program as a priority and has not identified the high significant sites. Managers need to have their staff look at the extent and the potential of the problems that exist at AML sites to ensure that high priority sites are reported. There needs to be additional staff in the field to go out and find sites and address them once found.

**Summary:**

3/28/07 - 8:00 AM - Meeting with Leroy Mohorich – Chief of the Energy and Minerals Branch  
 Phone: 916-978-4363

The lack of resources and funding are the primary causes of a lack of targeted inventory for high priority sites. The awareness has been picking up, but the critical issues like Kelly never came up even when property was being transferred to residents in the area. Fundamentally in BLM CA has also not had the AML program as a priority and has not identified the highly significant sites. The role of the state office is to be non-operational, which means that the field is left to do their own work in their area. The state office needs to have more oversight and program guidance to ensure that Kelly type sites are found productively and are mitigated. The funding, the priority and the emphasis has not been placed on the AML program. The field office should be reporting these sites to the state office, but this is not occurring. No one has been aware of the problems at Kelly. The problem goes straight to the top, BLM officials should have known about the problem. However, no one in the community ever brought the problem to BLM’s attention. But it is clear that something that big should have been brought to the BLM’s attention. The general population is not familiar with the by-products of mining and the contaminants that exist in a tailings pile. 9 out of 10 people would probably not know what is contained in a tailings pile. CA has not started to make a targeted inventory to address the high priority sites.

Make field office managers aware of the situation is critical to reporting of critical sites. The managers need to have their staff look at the extent and the potential of the problems that exist at AML sites. There is no documented policy on the program and the reporting mechanism. The program leads need to help educate the field staff and provide assistance to the field offices to deal with the problems. There needs to be additional field people to go out and find sites and address them once found. The field has never taken the initiative and bought into the AML program. Sites are not being taken seriously and are not being entered in to the AMM database. Most of the entries in AMM have been entered by an outside person and now that he is no longer with BLM, no one is entering the data into the AMM. The state office AML program does not have line authority over the field office, so they can not mandate action. There are additional areas that can be improved without additional resources. The state office needs to work with all of the field offices and then they need to get on the management meeting with the field managers to explain the importance of the AML program. If sites are going to be identified, they need to be entered into the AMM system so that the problems can be brought to everyone’s attention. There may be additional work done with existing resources if the resources are brought

together as a team to get all of the AML work done.

Submission:	Submitted	Stephanie Christian	04/13/2007 12:10:45 PM
Level 1 Approval:	Approved	William McMullen	04/13/2007 12:16:15 PM
Level 2 Approval:	Approved	John Illson	05/02/2007 09:59 20 AM

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**Purpose:**

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BLM CA State Office ensures that identified AML sites with safety issues are included on an inventory.

**Scope:**

BLM Inventory

**Conclusion:**

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**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Stephanie Christian/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.BLM.CAStoffice.03 CA Targeted Inventory

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Stephanie Christian 04/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.CAStoffice.04 **Subsection** Survey C.1. & C 2  
**Program Name** Survey-Inventory  
**Subject** BLM Inventory - Don't Ask Don't Tell

**Origination Doctlink** ■

**Participants**

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Stephanie Christian	Evaluator	134 Union Blvd	303-236-9112	Stephanie_Christian@doioig.gov
John Key	Environmental Protection Specialist	2800 Cottage Way - Suite W-1834	916-978-4384	john_key@ca.blm.gov
George Stone	Senior Abandoned Mine Lands Specialist	Washington Office	202 557 3573	george_stone@blm.gov

**Location** CA State Office

**Date/Time**

03/28/2007 01 00 PM

**Purpose:**

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BLM CA State Office ensures that identified AML sites with safety issues are included on an inventory.

**Scope:**

BLM AML Program

**Conclusion:**

There are two main issues with the AML program that have inhibited the inventory of AML sites. First, there is a culture of don't ask, don't tell. This means that AML staff are discouraged and in some cases told not to report a site. Second, almost half of the hazmat budget for BLM CA is taken for the State Director's contingency funds. Out of the \$1.4 million in hazmat funding, \$600,000 goes into the contingency fund and only \$300,00 is actually spent on projects. These two issues have been the leading reason that sites have not been inventoried and remediated.

**Summary:**

3/28/07 - Meeting 1 PM with John Key – Program lead for AML and Hazmat

There are two main issues with the AML program that have inhibited the inventory of AML sites. First, there is a culture of don't ask, don't tell. This means that AML staff are discouraged and in some cases told not to report a site. Second, almost half of the hazmat budget for BLM CA is taken for the State Director's contingency funds. Out of the \$1.4 million in hazmat funding, \$600,000 goes into the contingency fund and only \$300,00 is actually spent on projects. These two issues have been the leading reason that sites have not been inventoried and remediated.

The first main problem with the AML program is the reporting of sites. There are some real problems with BLM culture of don't ask don't tell. Staff are discouraged and in some cases told not to report sites. In fact, John was ordered by his boss, Leroy, not to report any sites. John indicated that in the State of CA, it is a felony not to report hazmat sites. John has been told he may no longer go to the field because he may find and report additional sites. This has prevented sites from actually being reported and an accurate inventory from being created.

The second problems is the allocation of funding received for hazmat and AML. The money that is received for hazmat and water quality is not controlled by the program lead. The budget people make all of the cuts and determine where money gets spent. Also, almost half of the funding is not actually spent on the hazmat and AML program. There is about \$1.4 million in hazmat. About \$600,000 goes into the State Director's contingency funds. Only \$300,000 is actually spent on projects. The rest of the money is spent on labor expense for support of the field offices.

Submission: Submitted Stephanie Christian 04/13/2007 05:31:12 PM  
 Level 1 Approval: Approved William McMullen 04/16/2007 09:05 24 AM  
 Level 2 Approval: Approved John Illson 05/18/2007 09:30 56 AM

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**Purpose:**

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**Conclusion:**

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■ The first main problem with the AML program is the reporting of sites. There are some real problems with BLM culture of don't ask don't tell. ■ Staff are discouraged and in some cases told not to report sites. In fact, John was ordered by his boss, Leroy, not to report any sites. John indicated that in the State of CA, it is a felony not to report hazmat sites. John has been told he may no longer go to the field because he may find and report additional sites. This has prevented sites from actually being reported and an accurate inventory from being created.

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

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### Assignment Workpaper

Prepared by: William McMullen 03/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM.Cedar City FO.01                      **Subsection** Survey C.1  
**Program Name** Survey-Inventory  
**Subject** BLM AML Inventory- Cedar City FO

**Origination Doctlink** ■

**Purpose:**  
Document inconsistency of inventory information.

**Scope:**  
BLM AML national inventory (Abandoned Mines Module- AMM) and Utah Cedar City Field Office Inventory

**Source:**  
Email forwarded from George Stone on 3/23/2007 as shown in the link below:  
■

- Conclusion:**
- Not all abandoned mine inventory information collected by field offices is being transmitted to State BLM offices
  - Not all abandoned mine inventory information collected by field offices is being input to BLM's national AML inventory (AMM).
  - Hence, the national BLM AML program is not aware of all of the potential physical safety hazards existing at abandoned mines on BLM lands and cannot most effectively plan or allocate budgets.

**Details:**  
Applicable sections of the email are copied below:

#### Email Content

The email documents an example from the Utah BLM Cedar City Field Office that some abandoned mine inventory information is not transmitted to the State BLM Office or input to the national BLM AMM database. Without an accurate inventory, national level BLM AML planning and budget allocations targeting the most dangerous sites cannot be as effective as possible.

**Methodology:**  
Reviewed email Source document.

Submission:      Submitted                      William McMullen                      04/10/2007 10:10 51 AM  
Level 1 Approval:  
Level 2 Approval:      Approved                      John Illson                      05/18/2007 09:31:17 AM

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#### History

**Status**                      Approved                      **Request Review**  
**In Progress Edit**                      John Illson/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality**                      Standard

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C.BLM.Cedar City FO 01 BLM AML Inventory- Cedar City FO

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## Assignment Workpaper

Prepared by: William McMullen 11/30/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C BLM FolsomFO 01 Subsection Survey C.1  
Program Name Survey-Inventory  
Subject Site Inspections

Origination Doctlink ■

### Purpose:

Perform site inspections of AML sites in BLM Folsom Field Office area.

### Scope:

BLM AML Program.

### Source:

OIG trip (John Illson) to Folsom Field Office on March 24, 2007.

### Conclusion:

- The prior Folsom Resource Area Manager directed Dave to not identify AML sites and Dave Lawler's supervisor threatened retaliation for identifying them.
- Land acquisitions and exchanges may be performed without adequate environmental assessments. Dave cited the Comingder site and Kelly Mine appears to be another site where this occurred.
- ■ The South Yuba Campground had a significantly dangerous mine shaft within about 200' of a pay as you go campground. The shaft previously had a substandard closing performed which subsequently failed. There were also no fences restricting access to the site.

### Details:

OIG, Illson, visited AML sites located on lands administered by BLM Folsom Field Office on March 24, 2007. He was accompanied by George Stone, BLM HQ AML Program Lead, Dave Lawler, CA State AML Coordinator and Tim Carroll, BLM Folsom FO Geologist.

During this field trip we performed site inspections at 8 AML sites including the You Bet Mine, Upper You Bet Sluice Tunnel, Boston Tunnel, Starr Pit, Green Creek, Davis Stamp Mill, Kenebec Shaft, and the South Yuba River Campground.

Of the 8 AML sites visited only one had significant unmitigated conditions. The South Yuba River Campground had an open sluice tunnel on one of its two entrances. It was explained that both entrances had been sealed with a bat gate on one side and with rock fill on the other. The rock fill had collapsed leaving a 15' vertical shaft with no escape from the other bat gated entrance. This site was significant because the open entrance was within 200 feet of a BLM developed campground which charged a nightly fee. Both Dave and George commented that this was a substandard closure which should not have been made. There were also no fences restricting access to the site. The campground was closed for the season and would open in a month. Tim Carroll noted there was no money in this year's budget for a permanent closure but, that he would see to it that the site was fenced prior to opening the campground.

During these site visits I discussed AML issues with Dave who disclosed that management had opposed the identification of AML sites and including Hazmat identification in environmental assessment that were performed.

■ Dave was told specifically not to identify AML sites by the prior Folsom Resource Area Manager (Dean Swickerd) as it interfered with the office's land management activities. In addition Dave's boss (Leroy Mahorich Branch Chief) has joked that Dave should not identify AML sites. He noted Dave could get fired for reasons other than identifying AML sites. Dave noted he knows Leroy well enough to know he's not joking.

Dave noted land acquisitions were often performed without having hazmat identification included in the Environmental Assessments. Dave has opposed these actions in the past both successfully and not. For example, Dave noted BLM had acquired land around Clear Creek which included the Comingder lands which were subsequently identified as having mercury pollution from prior mining activities. Dave's input on these acquisitions has been verbally objected to. Acquisitions and disposals often are planned and executed by realty personnel and input is not solicited from other program personnel. Politics often drive these transactions and the speedy execution of them is sometimes the top priority.

Tim also provided the following information:

He's had no training on AMM and has never entered a site. AML is a collateral duty which constitutes about 33 percent of his time. Tim estimates 100 to 200 significant physical safety sites exist in the region and none of these sites are in AMM. These sites include known but not field truth sites and an estimate of sites which remain unknown. There hasn't been an injury related to AML on BLM land since 1981.



IMG\_0143tiny.jpg Photo of discolored water

**Methodology:**

N/A

Submission: Submitted William McMullen 01/11/2008 08:47 01 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:05 51 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 05/01/2008 02:13:04 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Thu 05/01/2008 02:13 PM. For original text, refer to the field(s) above.

**Purpose:**

Perform site inspections of AML sites in BLM Folsom Field Office area.

**Scope:**

BLM AML Program.

**Source:**

OIG trip (John Illson) to Folsom Field Office on March 24, 2007.

**Conclusion:**

The prior Folsom Resource Area Manager directed Dave to not identify AML sites and Dave Lawler's supervisor threatened retaliation for identifying them. ■

- Land acquisitions and exchanges may be performed without adequate environmental assessments. Dave cited the Comingder site and Kelly Mine appears to be another site where this occurred.
- ■ The South Yuba Campground had a significantly dangerous mine shaft within about 200' of a pay as you go campground. The shaft previously had a substandard closing performed which subsequently failed. There were also no fences restricting access to the site.

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■

C.BLM FolsomFO.01 Site Inspections



IMG\_0143tiny.jpg Photo of discolored water

Methodology:

N/A

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### History

**Status** Approved **Request Review**

**In Progress Edit** William McMullen/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Stephanie Christian 04/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM HQ 01 **Subsection** Survey C.1 and C 2  
**Program Name** Survey-Inventory  
**Subject** BLM HQ Meeting with George Stone

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader	134 Union Blvd	303-236-9119	John_Illson@doioig.gov
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Sean Pettersen	Auditor	134 Union Blvd	303-236-9133	Sean_Pettersen@doioig.gov
Bill McMullen	Evaluator	134 Union Blvd	303-236-9123	Bill_McMullen@doioig.gov
Leslie Torrence	Abandoned Mine Lands Specialist	Engineering & Environmental Services (WO 360)	202-557-3579	Leslie_Torrence@blm.gov
George Stone	Senior Abandoned Mine Lands Specialist	Engineering & Environmental Services (WO 360)	202 557 3573	George_Stone@blm.gov

**Location** BLM HQ Office - Engineering & Environmental Services (WO 360)

**Date/Time**

03/13/2007 01 00 PM

**Purpose:**

To review the BLM AML program for inventory, priority listing, areas not covered by the AML program, injuries and deaths.

**Scope:**

BLM AML program

**Conclusion:**

**BLM Program Problem Areas:**

1. BLM does not have a repository to collect data for injuries and fatalities that occurred on BLM AML sites.
2. BLM has no requirements in place to ensure they have a complete and accurate inventory of all known AML sites on BLM land.
3. BLM has no requirements for BLM state offices to prioritize sites for cleanup, nor does the BLM HQ office prioritize lists for cleanup on AML physical safety sites.
4. Post-FLPMA mining sites are not entered into AMM. BLM money is not going to be used to fix these sites. These sites are being left without anyone to mitigate the safety hazards at the site.
5. No definition of an abandoned mine. Specifically, there are no abandoned mine definitions for sites that were abandoned before 3809 legislation was enacted.
6. Quarries are not included as a part of the AML program. However, no one is dealing with mitigating abandoned quarry sites.

**Summary:**

Meeting with George Stone and Leslie Torrence:

3/13/07 Meeting 1 PM

**Injures and Fatalities on BLM AML sites:**

According to George Stone, there is no repository of data for injuries and fatalities. SMIS had only 5 injuries and fatalities. There is no law or regulatory requirement to document injuries and fatalities. If BLM does not know where all injuries and fatalities occur, BLM cannot ensure that those sites are mitigated. BLM has agreed that they could add information regarding injury and fatalities in the AMM database. There are not thousands of accidents, but there are quite a number of deaths. No requirement to enter injury and fatalities in SMIS or AMM databases. **D.DOI.01 SMIS Reporting Requirements** ■

According to Leslie Torrence, BLM tried to focus on recognizing that there is a different standard when it comes to tort claims. The bureau has more responsibility for recreation areas and areas where BLM charges the public to visit. Accidents result in a site receiving a high priority for mitigation. A proactive stance has been to target high use areas.

**BLM AML Inventory of sites:**

I asked George if bureau staff are required to enter sites into the AMM database? George indicated that BLM is between requirements and there are no requirements currently in place. The AML manual, which is in draft, may require entering data into the AMM database.

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.BLM HQ.01 BLM HQ Meeting with George Stone

John Illson asked George if there is a method for identifying sites – naming process? (unique identifier for sites?) George indicated that BLM is all over the board on the naming process. The BLM inventory history goes back to the mid to late 1980s. There have been various naming conventions and methods for entering sites, but not all are the same.

Leslie indicated that here is no money to do the inventory work. Some of the field offices did inventory work, while others did not. Some offices were proactive and some were not proactive. Some data came from the state government information. Location is the only unique identifier for a site. George indicated that BLM decided not to perform an inventory on all BLM land, but if a site is found it should be in AMM database.

George indicated that BLM has an additional system in which BLM collects information regarding AML. This system is called the LR2000 – Case recordation system. The system includes a legal description and a list of descriptions on the site and what happened there. This is a documentation system to keep documents related to a site. These are done for the bigger AML sites.

Leslie stated that there is a training manual for the AMM. This should be held at the state office level. (Cheryl in IT has this training manual). Each state office has a AML program lead that should be providing this information to the field office level. There is no required training for AMM.

According to George, since 1996 there has not been any movement to inventory sites until Saginaw. NV is where the most sites were entered since 1996. George asked the states to do a couple of things in response to Saginaw. He asked the field to tell BLM if the sites are close to populated areas. The other part was – BLM gave sites that were not in AMM and asked BLM FO if they knew about any of the sites. Then based on geo special analysis – they look like they are close to populated area and most likely are on BLM land. Asked BLM to determine a cost estimate for either field checks or for mitigation if the site is already known.

John asked if there is a definition of physical characteristics that determine if a site is an AML site or not? According to George there is no standards set for what characteristics make a site (3 ft hole vs. 900 ft hole) (10 adits or 1 adit).

**Prioritization of AML Sites for Mitigation or Remediation:**

George stated that the states are given money and they can decide where the hazmat (14.7 million) money can be spent. This hazmat money can be spent on AML sites, but no specific requirement is made on sites to be cleaned up. Money for hazmat is done on the overall workload and it is not specified for AML projects. The majority of the AML cleanup comes out of this money. There is no requirement for AML cleanup. States can determine how to spend the hazmat projects. States are reporting to have spent \$1.5 million of their hazmat money to mitigate AML sites. Sites do not go through the priority list, each state has the discretion to determine what and how they want to clean up. George also indicated that his office does not prioritize AML physical safety sites for mitigation. There is 1.3 million set aside in the special clean up fund for AML sites. There is a special clean up fund run by the AML group and states have to compete for that money. This is the dedicated physical safety money is \$400,000-500,000 out of the hazmat fund. This is the only money that goes through the prioritization process. States have to submit a request. There is a peer review team to decide what gets funded based on the write-up done by the state. Each project is a larger project costing more than \$50,000 per site.

**Areas Not Covered by the AML Program:**

The mining claimant must have caused the physical safety to be responsible for mitigating the site. According to George, it is not enough for an individual to have an active claim on a site, the claimant must have been the person who created the physical safety hazard in order to be held responsible for mitigating the site.

There are three large discrepancies with the BLM program.

1. Post-FLPMA mining sites are not entered into AMM. BLM money is not going to be used to fix these sites. These sites are being left without anyone to mitigate the safety hazards at the site.
2. No definition of an abandoned mine. Specifically, there are no abandoned mine definitions for sites that were abandoned before 3809 legislation was enacted.
3. Quarries are not included as a part of the AML program. However, no one is dealing with mitigating abandoned quarry sites.

Submission:	Submitted	Stephanie Christian	04/03/2007 11:41 51 AM
Level 1 Approval:	Approved	William McMullen	04/10/2007 09:47 34 AM
Level 2 Approval:	Approved	John Illson	05/18/2007 09:33:49 AM

**Linkage Information**

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Stephanie Christian/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

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C.BLM HQ.01 BLM HQ Meeting with George Stone

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: William McMullen 04/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM RidgcrestFO.02 **Subsection** Survey C.1, C.2, D.1, E.1, F 2  
**Program Name** Survey-Inventory  
**Subject** AML Activities in Ridgcrest FO and California Desert District

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
W. McMullen	Evaluator	Lakewood OIG	303 236 9123	william_mcmullen@doioig.gov
Steve Borchard	California Desert District Manager	BLM California Desert District, Moreno Valley	951 697 5204	Steven_J_Borchard@blm.gov
Hector Villalobos	Ridgcrest Field Office Manager	BLM Ridgcrest Field Office	760 384 5405	Hector_Villalobos@ca.blm.gov
Robert Weiwood	California Desert District Staff	BLM California Desert District, Moreno Valley	951 697 5306	Robert_Waiwood@ca.blm.gov
Linn Gum	Ridgcrest FO Lands and Minerals Staff Chief	BLM Ridgcrest Field Office	760 384 5450	Linn_Gum@ca.blm.gov

**Location** BLM Ridgcrest Field Office

**Date/Time**

03/27/2007 07:30 AM

**Purpose:**

Discuss AML program as reflected by activities in the California Desert District and the Ridgcrest Field Office.

**Scope:**

Ridgcrest FO and CDD AML programs.

**Conclusion:**

- No formal AML program exists with funding, guidance and dedicated, trained staff.
- Many AML sites are known but have not been entered into the AMM; the CA GEM database may provide a useful source of AML data.
- Priorities for AML sites generally reflect their proximity to people, roads and recreational sites.
- Ridgcrest FO has prioritized areas (Rademacher Hills, Spangler, El Paso Mountains, Red Mountain/Randsburg)
- An inventory of the Rademacher Hills ranked the top 20 sites as to safety hazards.
- FO staff did report two incidents (not on BLM land) to SMIS but they admit reporting of incidents is ad-hoc at best.
- AML efforts are funded piecemeal from several budget sources and cooperation with the state of CA has been essential in mitigating sites.
- Mitigation/remediation of sites is often delayed by the NEPA review process, especially review of cultural resources which has to be done on a feature-by-feature basis. This is prevented even fencing of some sites until reviews are completed.

**Summary:**

I met with the individuals listed above together and individually all day on March 27 to discuss AML issues. We discussed the following topics:

• **AML Guidance**

- Robert Waiwood noted that:
  - there is no formal BLM AML program with associated funding, so guidance to the field is minimal.
  - other field offices in the CDD were less active and, he thought, had less AML issues than Ridgcrest.
  - most field offices are reactive with regard to AML and not proactive.
  - no special training is provided to AML staff other than confined space entry training per BLM's 1992 confined space policy.
  - although IM 2000-182 has expired, it still remains in force as policy as far as the field is concerned until it is replaced or a manual chapter or handbook is issued; the "benefitting subactivity concept" mentioned in the IM is still in force.
  - no legal requirements exist for public safety except FLPMA.
  - there is no Denver Service Center guidance on physical safety.
- Linn noted that:
  - he is the only AML person in Ridgcrest and he allocates about 25% time to AML.
  - IM 2000-182 did deal with AML physical safety.
  - BLM's policy guidance is for employees not to enter AML mines.

- **AML Inventory**

- Robert noted that:
  - the CDD has an extensive inventory of mine features in their Geology Energy and Minerals database (GEM). Most of these features have not been "ground truthed" so they have not been entered into the national AMM database.
  - BLM spent about \$2M in the 1978-1982 timeframe to collect this mineral inventory.
  - GEM has about 840 sites within 10 meters of an existing road.
  - in the 1984-85 timeframe, as a result of a tort case, BLM was held liable if they knew of features and did nothing to mitigate; BLM was not held liable in another similar case.
- Linn noted that:
  - J. Olsen conducted an inventory of the Rademacher Hills area near Ridgecrest and identified the top 10 safety hazards. Overall, about 150 features were identified but this information was not entered into AMM; Linn had no training on use of AMM.
- Hector noted that:
  - with limited staff, inventory has not been a focus or priority for the FO.
  - other FO staff are not trained, equipped or asked to note AML sites as they conduct their own field work.
  - inventory became more important when the State began a program funded by a mineral fee which helped support the CA AML program.

- **AML Prioritization**

- Robert noted that:
  - GEM captures some important safety characteristics such as proximity to people, roads and recreational use.
  - GEM needs to be "ground truthed" with staff and \$\$ if a good prioritized inventory is wanted.
- Hector noted that:
  - the FO priority areas for physical safety are
    1. Rademacher Hills south of Ridgecrest, [C.BLM.RidgecrestFO.03 Ridgecrest FO Rademacher Hills AML Data and Site Visit](#)
    2. the Spangler Hills open off-highway vehicle (OHV) area east of Ridgecrest, [C.BLM.RidgecrestFO.05 Spangler Hills OHV Area](#)
    3. the El Paso Mountains south of Ridgecrest and [C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program](#)
    4. the Red Mountain/Rand Mountains area 25 miles south of Ridgecrest. [C.BLM.RidgecrestFO KellyMine.01 Red Mountain Kelly Mine Area and Hazards](#) [C.BLM.RidgecrestFO Randsburg.01 Arsenic Contamination in Randsburg and BLM Rd 110.](#) [C.BLM.RidgecrestFO.04 GEM Data and Aerial Photos Ridgecrest FO](#)
  - priorities are also reflected by public input; sites are reactively mitigated if there is an incident (injury or fatality that BLM is aware of) or a safety concern in reported by the public.
- Linn noted that:
  - Jerry Olsen conducted a detailed inventory of the Rademacher Hills area for the FO, visited about 50 sites with perhaps 75 total features; he ranked these sites as to the top ten and next ten safety hazards. [C.BLM.RidgecrestFO.03 Ridgecrest FO Rademacher Hills AML Data and Site Visit](#)

- **AML Injuries and Fatalities**

- Linn noted that:
  - he input incident data to SMIS at the request of the State office for incidents that did not even occur on BLM land.
- Hector noted that:
  - incidents are reported through periodic State BLM management team conference calls.
  - reporting is ad-hoc and without a program focus.
- Robert noted that:
  - there is no system set up to report incidents related to AML.

- **AML Funding**

- Robert noted that:
  - funds used so far for AML have come from 1010 (air, water, soil), 1640 (haz mat), 5320 (repair of public lands), and 1990 (historically although Northwest Mining Association has contested further use of these funds for AML).
  - 5320 funds cannot be used to hire staff.
  - BLM cooperates with the CA AML Program that provides on-the-ground materials and staff to mitigate sites and BLM provides labor to conduct NEPA reviews.
  - complaints from the Northwest Mining Association over the use of 199 funds for AML forced the El Centro FO to "backout" about \$200k in such funds they had used for mitigation.
- Hector noted that:
  - funding from 1010 in 2005 was about \$10k and from 1640 was less than \$100k.
  - FO has gotten about \$200k over the last 5 years for AML mitigation/remediation.
- Linn noted that:
  - CA AML Program provides about \$10-15k per year over the last 5 years
  - FO got about \$100k in 1990 funds in 1999 that were used to mitigate sites but further use of this source was stopped by complaints from the Northwest Mining Association.

- **AML Mitigation**

- Robert noted that:
  - in the late 1960's, BLM was very proactive in fencing AML sites but now is reactive and not keeping up as more sites become higher priority from encroaching cities or OHV use.
  - efforts are limited due to lack of funding.
  - the possibility exists that State grants (funded from OHV registrations) could be used to mitigate safety hazards.
  - mitigation takes longer because of the NEPA review process; need a programmatic NEPA review that allows some safety mitigation, e.g., a categorical exclusion that would allow immediate fencing would help; getting biologists and cultural resources people available to review sites and make decisions is a major stumbling block.

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.BLM RidgcrestFO.02 AML Activities in Ridgcrest FO and California Desert District

- thinks DOI needs to develop a consistent AML approach with a NEPA process that accelerates mitigation.
- for biology (threatened and endangered species), a manager can override these issues to mitigate but this flexibility is not available for cultural resources; all cultural resources reviews are site-specific and archeologists are reluctant to allow rapid mitigation measures.
- Hector noted that:
  - he thinks all sites on BLM FO lands where incidents have occurred have been mitigated.
- Linn noted hat:
  - several sites in the Rademacher Hills have been mitigated (fencing) and some areas with many features have been remediated (filled in, cupolas, bat gates) with the help of the CA AML Program.
  - remediation is held up by cultural reviews of each feature under NEPA; archeological staff are reluctant to "fast track" even mitigation efforts.
  - several sites in the Spangler Hills area that were mitigated have been vandalized so that mitigation measures have been destroyed.
  - Ridgcrest FO did work successfully with Rand Mining to use \$58,000 in reclamation funds for remediation of AML features near Johannesburg in lieu of compelling the company to use the funds to fill in their mine pit.

Submission: Submitted William McMullen 07/18/2007 09:52:11 AM

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Level 2 Approval: Approved John Illson 01/09/2008 11:11 24 AM

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**Confidentiality** Standard

Add Document Readers

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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### Assignment Workpaper

Prepared by: William McMullen 04/03/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C BLM RidgcrestFO.03 Subsection Survey C.1. C.2  
Program Name Survey-Inventory  
Subject Ridgcrest FO Rademacher Hills AML Data and Site Visit

Origination Doctlink 

**Purpose:**  
Document BLM efforts to inventory and prioritize AML sites near Ridgcrest in the Rademacher Hills area.

**Scope:**  
BLM Ridgcrest FO AML Inventory

**Source:**  
Paper documents provided by Linn Gum, Ridgcrest FO during a site visit by W. McMullen on March 27 and 28, 2007. Photographs taken by W. McMullen on March 28, 2007.

- Conclusion:**
- The Rademacher Hills area just south of Ridgcrest CA is dotted with numerous AML sites and features.
  - An inventory was conducted that mapped sites and features.
  - Sites and features were ranked according to degree of hazard and accessibility.
  -  While many features were fenced, most fences had been vandalized to allow access to features.
  - There were few warning signs posted near open shafts and adits.

**Details:**  
According to Linn Gum, BLM Ridgcrest Field Office Lands and Minerals Staff Chief, Jerry Olsen (an ex-BLM employee) conducted an inventory of AML sites near Ridgcrest in the Rademacher Hills area to the south of the town. This area presented a number of AML safety features and is prioritized by the FO as the most important AML area with regard to safety. Much of the concern relates to the fact that AML features (open adits and shafts) are located near a residential area and a junior college as shown on the map in the tab below:

#### Rademacher Hills AML Sites

Mr. Olsen evaluated these sites from a safety perspective and rated them using a 1-10 scale for 1) hazard and 2) access. He then determined the top ten and next ten sites with the most significant safety hazards (most of these are in circled shaded areas of the map). His analysis is attached:



Rademacher Hill Priority List.pdf

During the site visit, the auditor also took photographs of sites in the Rademacher Hills area as shown in the tab below:

#### Rademacher Hills AML Photos



Adit near residence compress.JPG



Adit where kids party compress.JPG



Open shaft near road.JPG



Shaft near road with vandalized fencing.JPG

While these was evidence of fences at some features almost all of the fences had been cut or posts pulled down to allow access to shafts. We noted that there were few signs at shafts and adits warning of safety hazards.

**Methodology:**  
Collected relevant documents from Ridgcrest FO and scanned into pdf for archiving.

Submission: Submitted William McMullen 01/11/2008 08:47:48 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:12:44 AM

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**Confidentiality** Standard

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### Assignment Workpaper

Prepared by: William McMullen 04/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM RidgecrestFO.04                      **Subsection** Survey C.1  
**Program Name** Survey-Inventory  
**Subject** GEM Data and Atolia Photos: Ridgecrest FO

**Origination Doctlink** ■

**Purpose:**

Document AML features on lands managed by the BLM Ridgecrest Field Office in the Randsburg Mining District that are catalogued in the CA BLM Geology, Energy and Minerals (GEM) database. Document safety hazards with photographs taken during a field visit.

**Scope:**

BLM Ridgecrest Field Office AML Inventory

**Source:**

Aerial photo with AML features from the GEM database for the Ridgecrest FO/Randsburg Mining District was provided to the auditor by Linn Gum, Ridgecrest FO Lands and Minerals Staff Chief during a site visit on March 27-28, 2007.

Photographs taken by the auditor during a field visit on March 26, 2007 to the Randsburg Mining District, particularly near the towns of Red Mountain and Atolia.

**Conclusion:**

- The California Desert District GEM database catalogues a number of AML features in the Randsburg Mining District of the Ridgecrest Field Office but many features have not been validated with a site visit to determine the degree of physical hazard they present.
- Photographs depict AML safety hazards near Red Mountain and Atolia in the Ridgecrest Field Office area.

**Details:**

During the auditor's site visit to the Ridgecrest FO on March 27-28, 2007, the auditor viewed samples of the data and overlays contained in the GEM database managed by the California Desert District office of BLM. The data has not been input to the national AML AMM database because many of the features have not been validated by site visits. However, as the photo in the tab below shows, there are numerous features and sites throughout the area

**Randsburg Mining District GEM AML Features**

During a field visit to the Randsburg Mining District on March 26, 2007, he auditor took photographs as shown in the tab below of examples of ■ safety issues around Atolia. The auditor observed that the area had open shafts that were not fenced, unrestricted access and no warning signs were posted. Photos near Red Mountain are located in workpaper C.BLM.RidgecrestFO KellyMine.01 Red Mountain Kelly Mine Area and Hazards ■.

**Randsburg Mining District near Atolia: AML Photos**



atolia dump 1c.JPG



atolia shaft 1 c.JPG



atolia shaft with tracks c.JPG

**Methodology:**

Viewed maps from the GEM database at the Ridgecrest FO and obtained an aerial photo of FO lands with AML features overlaid in the area of the Randsburg Mining District. This area includes the mining towns of Randsburg (site of the Yellow Aster Gold Mine), Red Mountain (site of the Kelly Silver Mine), Johannesburg and Atolia..

Submission: Submitted William McMullen 01/11/2008 08:48:41 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:13 23 AM

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**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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### Assignment Workpaper

Prepared by: William McMullen 04/05/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C BLM RidgcrestFO.05 Subsection Survey C.1  
Program Name Survey-Inventory  
Subject Spangler Hills OHV Area

Origination Doctlink 

**Purpose:**  
Document safety hazards in Spangler Hills area of Ridgcrest Field Office.

**Scope:**  
Ridgcrest Field Office Spangler Hills area AML sites

**Source:**  
Photos taken by auditor on field visit on March 28, 2007 and discussions with Ridgcrest Field Office staff during field visit.

- Conclusion:**
- Spangler Hills is an OHV (off highway vehicle or ORV off-road vehicle) area near Ridgcrest that receives heavy periodic recreational use.
  -  BLM encourages heavy use of the area and has even discussed holding national events in the area with OHV groups.
  - The area has numerous open shafts and adits with few fences and warning signs.
  - Mitigation attempts (short of filling in holes or blasting holes closed) have not been successful.

**Details:**  
 The Spangler Hills area is a BLM open off-highway vehicle (OHV/ORV) area approximately 5 miles east of Ridgcrest CA where BLM invites the public to recreate. According to Linn Gum and Hector Villalobos, the area is used extensively by OHV's for recreational purposes; on some weekends, thousands of RV's with OHV's can be found camped at the entrance to the area. The area includes many large boulders and Hector noted that BLM had talked with a trials motorcycle group (climbs boulders on motorcycles) about the potential for holding a national trials event at Spangler Hills. The area is also pocked with open shafts and adits; we visited a number of these in the area of the Stephen's Holding Mine as shown in the tab below: There were few fences and signs warning of the dangerous shafts and adits.

#### Spangler Hills AML Features



spangler adit 2 c.JPG spangler adit 3 c.JPG spangler adit 4 c.JPG spangler adit 5 c.JPG spangler door 1 c.JPG spangler shaft 2 c.JPG spangler shaft 3 c.JPG spangler trails: stephens holding mine area c.JPG

Some formal mitigation measures have been attempted as shown in the photos (spangler door 1 c) and less formal measures have been applied as shown in photo (spangler adit 3 c). The formal closure of the adit with a steel door was defeated as shown in the photo by bullets and the informal measures almost invite visitors rather than inhibit their interest in the feature.

**Methodology:**  
Visited Spangler Hills area near Ridgcrest Field Office with Linn Gum, Hector Villalobos, and Steve Borchard. **C.BLM.RidgcrestFO.02 AML Activities in Ridgcrest FO and California Desert District** 

Submission: Submitted William McMullen 01/11/2008 08:49:39 AM  
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C.BLM RidgecrestFO.05 Spangler Hills OHV Area

**In Progress Edit** John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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### Assignment Workpaper

Prepared by: William McMullen 04/05/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C BLM RidgcrestFO.06 Subsection Survey C.1  
Program Name Survey-Inventory  
Subject BLM "Adopt a Cabin" Program

Origination Doctlink [REDACTED]

**Purpose:**  
Document example of hazards associated with an "Adopt a Cabin" site.

**Scope:**  
Ridgcrest Field Office "Adopt a Cabin" Program

**Source:**  
Field visit on March 28, 2007 and discussions during the visit with Linn Gum and Hector Villalobos C.BLM.RidgcrestFO.02 AML Activities in Ridgcrest FO and California Desert District [REDACTED].

- Conclusion:**
- BLM "Adopt a Cabin" Program as evidenced by the Edith E cabin site in the El Paso Mountains south of Ridgcrest CA attracts visitation to areas with known safety hazards.
  - At Edith E, the open shafts and adits are actively claimed but have not been secured from public access and no warning signs have been posted yet a BLM "Adopt a Cabin" structure is located adjacent to the safety hazards. [REDACTED]
  - By "inviting" visitors to sites such as the Edith E even if near active claims BLM is increasing the risk to the public of incidents associated with safety hazards near the Edith E.

**Details:**  
According to Linn Gum, some time ago, BLM decided to preserve several old mining cabins and offer them for "adoption" by interested parties. While BLM does not charge visitors to use the cabins, they are attractions. When we visited the Edith E cabin, three people were obviously staying in the cabin and were making preparations to enter actively claimed adits near the cabin. Because the shafts and adits near the cabin are actively claimed, BLM has, according to Linn and Hector, no authority to fence those features in any way that might restrict the claimant's access to them. [REDACTED] As a result, the open features remain completely accessible to the public. While the claimant, according to Linn and Hector, bears liability for incidents occurring in the shafts or adits, BLM is increasing the risk of incidents by keeping cabins such as the Edith E as attractions for visitors. These hazardous features were also not posted with warning signs.

#### Edith E Cabin Photos



edith e 1.JPG



edith e 3 c.JPG



edith e 4 c.JPG



edith e 5 c.JPG

**Methodology:**  
Visited site of Edith E cabin in the El Paso Mountains approximately 10 miles south of Ridgcrest CA.

Submission:	Submitted	William McMullen	01/11/2008 08:51 23 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/11/2008 11:15 22 AM

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**Purpose:**  
Document example of hazards associated with an "Adopt a Cabin" site.

**Scope:**  
Ridgcrest Field Office "Adopt a Cabin" Program

C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program

Source:

Field visit on March 28, 2007 and discussions during the visit with Linn Gum and Hector Villalobos C.BLM.RidgecrestFO.02 AML Activities in Ridgecrest FO and California Desert District

Conclusion:

BLM "Adopt a Cabin" Program as evidenced by the Edith E cabin site in the El Paso Mountains south of Ridgecrest CA attracts visitation to areas with known safety hazards.

- At Edith E, the open shafts and adits are actively claimed but have not been secured from public access and no warning signs have been posted yet a BLM "Adopt a Cabin" structure is located adjacent to the safety hazards.
- By "inviting" visitors to sites such as the Edith E even if near active claims BLM is increasing the risk to the public of incidents associated with safety hazards near the Edith E.

Details:

According to Linn Gum, some time ago, BLM decided to preserve several old mining cabins and offer them for "adoption" by interested parties. While BLM does not charge visitors to use the cabins, they are attractions. When we visited the Edith E cabin, three people were obviously staying in the cabin and were making preparations to enter actively claimed adits near the cabin. Because the shafts and adits near the cabin are actively claimed, BLM has, according to Linn and Hector, no authority to fence those features in any way that might restrict the claimant's access to them. As a result, the open features remain completely accessible to the public. While the claimant, according to Linn and Hector, bears liability for incidents occurring in the shafts or adits, BLM is increasing the risk of incidents by keeping cabins such as the Edith E as attractions for visitors. These hazardous features were also not posted with warning signs.

Edith E Cabin Photos



edith e 1.JPG



edith e 3 c.JPG



edith e 4 c.JPG



edith e 5 c.JPG

Methodology:

Visited site of Edith E cabin in the El Paso Mountains approximately 10 miles south of Ridgecrest CA.

History

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
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### Assignment Workpaper

Prepared by: William McMullen 10/24/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C BLM RidgcrestFO.07 Subsection Survey C.1  
Program Name Survey-Inventory  
Subject Site Visits: Ruth and Darwin

Origination Doctlink 

**Purpose:**  
Document site visits to AML locations in Ridgcrest Field Office.

**Scope:**  
BLM AML Program.

**Source:**  
OIG site visit (John Illson and Bill McMullen) accompanied by Peter Graves, BLM Ridgcrest FO on 5/24/07.

**Conclusion:**  
Documented photographically AML sites at Ruth Mine and Darwin townsite as shown below and noted hazardous features..

**Details:**  
The Ruth Mine, about 15 miles northwest of Trona, CA, is in a remote canyon upstream from a small community.  The site has a large, eroded tailings pile several deteriorating mill structures an old residence and other outbuildings and an open adit (bat gate was open). There was evidence of recent trespass in the residence and there were no warning signs posted near the open adit or old mill structures. At the time of our visit, no sample results had been obtained regarding contamination at the site.



 Darwin is a small "arts" town about 80 miles north of Ridgcrest. There is a fairly new mill, now abandoned, just west of town that presents safety hazards with deteriorating structures, open access, tailings piles and no warning signs. At the time of our visit, no sample results had been obtained regarding contamination at the site.



**Methodology:**  
N/A

Submission: Submitted William McMullen 01/11/2008 08:52 31 AM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 01/11/2008 11:16 03 AM

[Linkage Information](#)

**History**

Status Approved Request Review  
In Progress Edit William McMullen/DEN/OIG/DOI  
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**Record of Discussion**

Prepared by: William McMullen 04/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM RidgcrestFO\_KellyMine.01      **Subsection** Survey C.1 and C 2  
**Program Name** Survey-Inventory  
**Subject** Red Mountain Kelly Mine Area and Hazards

**Origination Doclink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
W. McMullen	Evaluator	Lakewood OIG	303 236 9123	william_mcmullen@doioig.gov
Richard Forester	AML Project Manager	BLM Sacramento	916 978.4376	richard_forester@ca.blm.gov

**Location** Red Mountain California/Kelly Mine Site and surrounding BLM lands

**Date/Time**

03/26/2007 01 00 PM

**Purpose:**

Visit Kelly Mine site for an overview tour from Richard Forester, the AML Project Manager responsible for CERCLA actions at the site.

**Scope:**

Kelly Mine site and surrounding areas; environmental and physical safety hazards.

**Conclusion:**

- The area around Red Mountain CA has numerous mine features that prompted BLM to address the site (and the surrounding areas of Randsburg and Johannesburg) under a CERCLA-managed emergency remediation.
- The area is used by many recreationists such as OHV riders during peak periods (holiday weekends) in the fall winter and spring.
- The features include open shafts and pits and a deteriorating head frame and mill (physical safety issues), and extensive waste rock and mill tailings piles (environmental contamination issues).
- [REDACTED] Some remediation efforts have taken place around Red Mountain during 2006 and others are planned in 2007 if funding is available.
  - [REDACTED] two cupolas were installed to close open shafts
  - 40,000 cu yds of contaminated tailings near a residence were relocated
  - [REDACTED] [REDACTED] additional sampling efforts are planned in 2007 particularly in or around residences.
  - a fence is planned to be installed around the Kelly Mine site and
  - more open shafts are to be closed or covered.
  - [REDACTED] Longer-term, tailings piles and contaminated tailings in area streambeds will have to be addressed.
- Existing claims and potential remilling activities complicate mitigation efforts at the site.

**Summary:**

Met Richard to tour the area around Red Mountain. Red Mountain is located on US Highway 395 approximately 60 miles north of the intersection with Interstate 15. The intersection is approximately 10 miles south of Victorville. The town is the site of the Kelly Mine, an extensive old silver mine that was worked in the early to mid 20th century; the mined silver existed in an arsenate ore. The mine apparently ceased operation in the mid-1900's. Extensive tailings piles surround the mine near the town. [REDACTED] During the tour Richard explained that the area is used by many people for recreation (off-highway vehicles- OHV, rockhounds, hunters). Peak periods of OHV use are generally on holiday weekends in the fall winter and spring (e.g. Thanksgiving, Xmas, New Year's, President's Day, and Easter); summers are too hot for OHV riders to recreate in the area. He noted that BLM did not take notice of environmental or safety issues until late 1995 during a site visit from the State Office. At that time, soil samples were taken and open shafts (a 1600' shaft near US Highway 395 and a Red Mountain residence) noted. We viewed several open shafts near a road running west of Red Mountain toward the Kelly Mine site and others scattered across the hills west of the town somewhat removed from the mine (and perhaps not a part of the Kelly Mine itself).

As a very ineffective precautionary measure, we noted that yellow police barrier tape was placed around some open shafts in the area; others had no such warning. Few warning signs were in evidence. The Kelly Mine head frame has collapsed and the Kelly Mill is deteriorating badly; both present potentially significant safety hazards although given claims (see below), it is unclear what BLM can do to mitigate these hazards. There are several other mines on BLM property that have open shafts and tailings piles that need mitigation and remediation.

Some residential areas in Red Mountain are still in trespass with fence lines on federal property. No sampling of soils in the trespass areas has been done to date to determine if remediation of these areas should be done before lands are processed for ownership by the current residents.

[REDACTED] Richard noted that mitigation/remediation efforts at the Kelly Mine were complicated by existing current mining claims; Minerals Exploration Inc owns the current Kelly claim but 999 Plus has expressed interest in buying

he claims and possibly remilling the tailings and conducting explorations of underground deposits. He also noted that 999 Plus might oppose mitigation if it interfered with their mining activity this concern was expressed by Mines Exploration the company from whom 999 Plus might buy the claim to the Kelly Mine. F.02.01 Red Mountain land conveyances (see last tab) Richard also noted that BLM had interest in re-mining because any company that remined the site would have to post a reclamation bond and that could minimize the amount of money BLM would need to contribute to ultimate remediation of the site.

Richard stated that he knew of no injuries or fatalities that had occurred in the Red Mountain area as a result of old mines.

The safety hazards and environmental issues prompted BLM to assume authority under CERCLA in 2006 to manage remediation of the site. As noted in the Action Memorandum, arsenic levels in Kelly mill tailings exceed EPA limits by 4700 times.



CERCLA Action Memorandum.pdf

E.04.02 BLM CERCLA Handbook and Action Memo

### Red Mountain Safety Hazard Photos

Richard noted that remediation efforts around Red Mountain (per the CERCLA Action Memorandum) had proceeded since 2005. In addition to those time-critical actions initially proposed in the Action Memorandum E.04.02 BLM CERCLA Handbook and Action Memo, BLM took other short-term actions to mitigate some hazards and planned additional actions such as sampling.

- To date, a cupola was installed over the 1600' shaft near US Highway 395 and a Red Mountain residence and a cupola was installed over a shaft near where about 40,000 cu yds of contaminated tailings by a residence were relocated.
- Some tailings that had washed down toward 395 were removed and other areas contoured to reduce runoff.
- Some open shafts were "fenced" with yellow police tape but these and more need to be permanently closed or covered.
- Samples of soil have been taken from various sites around the town.
- Additional sampling is planned for 2007 particularly in or around residences.
- a fence was to be installed (assuming adequate funding) around the entire Kelly site (approx 5000'), and
- some shafts were to be either covered with cupolas or filled in after the NEPA process was completed (bat, desert tortoise and archeological surveys).
- Longer-term, tailings piles and contaminated tailings in area streambeds will have to be addressed.

Submission: Submitted William McMullen 07/18/2007 09:51 39 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 08/21/2007 08:14 06 AM

### Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/07/2008 10:41:07 AM

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Mon 01/07/2008 10:41 AM. For original text, refer to the field(s) above.

#### Purpose:

Visit Kelly Mine site for an overview tour from Richard Forester, the AML Project Manager responsible for CERCLA actions at the site.

#### Scope:

Kelly Mine site and surrounding areas; environmental and physical safety hazards.

#### Conclusion:

The area around Red Mountain CA has numerous mine features that prompted BLM to address the site (and the surrounding areas of Randsburg and Johannesburg) under a CERCLA-managed emergency remediation.

- The area is used by many recreationists such as OHV riders during peak periods (holiday weekends) in the fall winter and spring.
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CERCLA Action Memorandum.pdf

E.04.02 BLM CERCLA Handbook and Action Memo

#### Red Mountain Safety Hazard Photos



shaft by Red Mountain road.JPG



shaft by Red Mountain road closeup.JPG



cupola over 1600' shaft near Red Mountain residence.JPG



Kelly Mine area shafts.JPG



Kelly glory hole.JPG



Kelly mill.JPG



features near road.JPG

Richard noted that remediation efforts around Red Mountain (per the CERCLA Action Memorandum) had proceeded since 2005. In addition to those time-critical actions initially proposed in the Action Memorandum E.04.02 BLM CERCLA Handbook and Action Memo, BLM took other short-term actions to mitigate some hazards and planned additional actions such as sampling.

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#### History

Status Approved Request Review

In Progress Edit William McMullen/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: William McMullen 04/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BLM RidgcrestFO\_Randsburg 01      **Subsection** Survey C.1  
**Program Name** Survey-Inventory  
**Subject** Arsenic Contamination in Randsburg and BLM Rd 110.

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
W. McMullen	Evaluator	Lakewood OIG	303 236 9123	william_mcmullen@doioig.gov
Richard Forester	AML Project Manager	BLM Sacramento	916 978.4376	richard_forester@ca.blm.gov

**Location** Randsburg CA

**Date/Time**

03/26/2007 03:00 PM

**Purpose:**

Toured Randsburg and surrounding areas with Richard to view safety and environmental hazards.

**Scope:**

Randsburg Mining District: Randsburg site environmental contamination features.

**Conclusion:**

- BLM has not exercised emergency authority to close BLM Rt 110 near Randsburg due to high levels of arsenic contamination.
- ■ Tailings have washed downstream in Fiddler Gulch near Randsburg and have not been mitigated as observed by OIG during site visit and Fiddler Gulch photos shown below at tab "Randsburg Photos."

**Summary:**

The area around Randsburg CA was mined for many years (Yellow Aster Gold Mine) with resultant tailings piles, waste rock and other mining debris. Recently, the area has seen increasing recreational use by off-highway vehicles (OHV) (motorcycles, 4-wheelers, ATV's) and is a favorite spot for members of the California Off Road Vehicle Association (CORVA). Some of these OHV events are held on BLM designated trails, in particular BLM Rt 110 that runs uphill directly next to a large dam and on a tailings pile from the mine. The road has been used extensively and its surface now consists of very fine sandy tailings material.

Over the decades since the mine was worked, tailings materials have been washed into Fiddler Gulch, according to Richard Forester, BLM Randsburg CERCLA Project Manager. These materials can now be found some 20 miles downstream from the dam and tailings sites. Richard noted that various tailings piles and the material deposited in Fiddler Gulch have been sampled and show high levels of arsenic. Richard stated in a followup phone call on April 4th **F.BLM.RidgcrestFO Randsburg.01 Randsburg Area Sampling and Mitigation** ■, that no samples were taken from BLM Rd 110 or the hillclimb section of that road by the tailings dam. He stated that staff assumed the materials on the road were similar to those from the dam since that material had obviously washed or blown onto the road. Information on these areas was presented by the BLM CA State Director in the attachment to the following document ■ (see pages 11-13) shown in the tab below:

**Randsburg Environmental Issues**

During the auditor's field visit on March 26, 2007, additional photographs were taken of the area around Randsburg as shown in the tab below:

**Randsburg Photos**



According to Richard, sampling of the various areas around Randsburg began in late 2005 and early 2006. However, throughout 2006 and through March 2007, BLM Rt 110 has remained an open designated route in spite of known contamination. The Ridgcrest FO even developed a handout (see tab below) for use in public meetings that informs the public of issues at Randsburg but that emphasizes that BLM Rt 110 remains open. Richard did state that he expected the route to be closed in spring 2007 when an alternative route was developed away from the tailings pile. The fact remains that the route has remained open for over a year, used by many OHV'ers on holiday weekends (see third page of photos in the tab "Randsburg Environmental Issues") in spite of known arsenic contamination that, according to Richard, exceeds EPA standards by hundreds or thousands of times.

**Randsburg Visitor Information Handout and Newspaper Article**



Public notice.pdf [copy provided to auditor during field visit on March 29, 2007]

compromise the public's health and safety. The high levels of arsenic, a known human carcinogen, pose a serious health risk to the local residents, off highway vehicles riders, and the general public. Some of the affected areas have concentrations well over the standard enforced by the Environmental Protection Agency (EPA).

This notice reminds riders that all motorized vehicle activity is prohibited on the Descarga Mill Tailings dam, in Red Mountain Wash and in Fiddler Gulch. All designated routes in these areas are still open including BLM Route 110 that traverses the west side of the Descarga Mill Tailings dam and on designated routes that cross Fiddler's Gulch and Red Mountain Wash.



Newspaper article on arsenic.pdf [copy provided to auditor during field visit on March 29, 2007]

This story is taken from AP State Wire News at sacbee.com.

## Feds fear arsenic endangers SoCal off-roaders, residents

**The Associated Press**  
*Published 11:55 am PDT Wednesday, April 26, 2006*

RANDBURG, Calif. (AP) - Federal officials are concerned high levels of arsenic left after a century of gold and silver mining in the Southern California desert may pose a health risk to residents and off-roaders.

The U.S. Bureau of Land Management is considering closing dirt roads where off-road motorcycles and dune buggies kick up potentially hazardous dust.

Long-term exposure to arsenic, a naturally occurring element often left over when metals are extracted from ore, can cause cancer.

Recent soil samples showed "extremely" high arsenic concentrations near the desert towns of Red Mountain, Johannesburg and Randsburg, home to about 500 people and an increasingly popular off-road recreation spot.

The remote Mojave Desert towns are about 100 miles northeast of Los Angeles in the counties of Ken and San Bernardino.

The U.S. Environmental Protection Agency has asked the bureau to contain or clean up the arsenic from processed gold and silver ore, known as mine tailings. The waste piles can be seen throughout the area.

Submission:	Submitted	William McMullen	07/18/2007 09:46:17 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	08/21/2007 08:12:48 AM

### Linkage Information

### History

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.BLM RidgecrestFO\_Randsburg.01 Arsenic Contamination in Randsburg and BLM Rd 110.

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Stephanie Christian 04/06/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BOR 01 **Subsection** Step 1-2  
**Program Name** Survey-Inventory  
**Subject** BOR AML Inventory

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd	303-236-9112	Stephanie_Christian@doioig.gov
Mike Gobla	BOR AML Contact	Denver, CO	303-445-3032	

**Location** Telephone Conversation

**Date/Time**

03/06/2007 09 00 AM

**Purpose:**

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BOR ensures that identified AML sites with safety issues are included on an inventory.

**Scope:**

BOR AML Inventory

**Conclusion:**

BOR does not have any significant problems with AML sites. In Mike Gobla's area, he is only aware of 1 AML site, which has been mitigated. Mike also indicated that the hazmat people at each region review the environmental and physical safety issues at each site, and the hazards are addressed by the hazmat program.

**Summary:**

According to Mike Gobla, BOR does not have any significant problems with AML sites. Mike is only aware of 1 AML site in his area. This one AML site is part of a hazmat cleanup with EPA. This site is a drainage tunnel in Leadville, CO. BOR bought this drainage tunnel from the Bureau of Mines, but it was allowing contaminants to flow down river. BOR in conjunction with EPA, worked to build a water treatment plant and began to dilute the contaminants. The one shaft at the site, called Iron Mountain, was also back filled.

Mike indicated that the hazmat coordinators look at each BOR property for environmental and physical safety issues. This is done by each region at each BOR site. Mike knew of no other AML issues related to BOR.

Submission: Submitted Stephanie Christian 04/10/2007 10:45 05 AM  
 Level 1 Approval: Approved William McMullen 04/10/2007 11:03 37 AM  
 Level 2 Approval: Approved John Illson 06/04/2007 10:22:14 AM

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**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Stephanie Christian 04/06/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C BOR 02 **Subsection** Step 1-2  
**Program Name** Survey-Inventory  
**Subject** BOR Response to Data Call

**Origination Doclink** ■

### Purpose:

To determine how inventory data was compiled (e.g. ongoing process, land survey), what the process is for updating the inventory data, and how BOR ensures that identified AML sites with safety issues are included on an inventory.

### Scope:

BOR AML Sites

### Source:

Documentation was sent by The BOR Audit Liaison:  
Elaine Ferrari  
U.S. Bureau of Reclamation  
Audit Liaison Coordinator  
Single Audit Coordinator  
Phone: (303) 445-2788

Data Call was answered by:

Hank Kaplan  
BOR Hazmat Manager  
Water and Environmental Resources  
Office of Program and Policy Service  
Phone: 702-239-8060

### Conclusion:

BOR has only 3 AML sites remaining across the country. These projects have been entered into the EDL database as part of hazmat projects. Each of these sites has both environmental as well as AML components and will be handled by the hazmat program. BOR has no guidance from either the Department, nor from BOR HQ on the responsibilities or prioritization of AML sites. No accidents have occurred on BOR AML sites.

### Details:

March 23, 2007

Office of Program and Policy Services  
Responses to Questions Regarding OIG  
Audit of DOI Public Safety Issues on Abandoned Mines

1. Copies of all departmental and bureau policies, procedures and regulations (citations are acceptable for regulations) relating to departmental/bureau responsibilities for abandoned mines.  
*There is no Reclamation Land Management, Safety, or Hazardous Materials policy or directives and standards that specifically address the management of abandoned mine lands (AML). Based on available documentation, Reclamation has three sites (Spring Creek, 3 Kids, and Adair Park) that have AML. (See table below) This information is tracked by Reclamation via the departmental Environmental Disposal Liabilities (EDL) database.*
2. All specific departmental and bureau policies, procedures, and regulations (citations are acceptable for regulations) related to prioritizing abandoned mines for mitigation.  
*There is no AML specific guidance for prioritizing cleanup or mitigation on Reclamation lands.*
3. The most current inventories (database) of abandoned mines for all department/bureau lands with all data readily available.  
*Data is compiled and entered into the EDL database by the field and area offices and reviewed by the field solicitors office, the Reclamation Office of Program and Policy Services, and by the Reclamation Financial Policy Division.*

(See table below.)

4. Current lists of AML prioritized for remediation on all department/bureau lands with regard to mine contamination and physical safety hazards.  
*Remediation is prioritized at the regional office level. Lower Colorado Region has two AML sites and Mid-Pacific Region has the remaining one.*
5. All lists of all known abandoned mines which have been remediated since 1997 to mitigate mine contamination or physical safety hazards.  
*Reclamation has no record of mines on Reclamation lands being remediated since 1997.*
6. All lists of all known incidents of personal injury or fatality on abandoned mines on department/bureau lands since 1990.  
*Reclamation has no record of incidents resulting in personal injury or fatality on Reclamation mine lands. Additional information may be available through the departmental SMIS (Safety Mgmt Info System) Manager*

Site Code	Facility / Site Name	Site type	Location	Law / Reg.
3LC6	Adair Park / Old Mill	ABMINEMILL	Yuma, AZ, 85364	CERCLA
3LC5	3 Kids Mine	ABMINEMILL	Henderson, NV, 89015	CERCLA, RCRA, CAA
3MP6	Spring Creek Reservoir / Sediments	ABMINEMILL	Keswick, CA	CWA

**Methodology:**

Data Call was sent out to BOR for survey. Audit Liaisons Officer Elaine Ferrari gathered the documentation from Hank Kaplan and then provided the response to the data call.

Submission:	Submitted	Stephanie Christian	04/10/2007 10:45:43 AM
Level 1 Approval:	Approved	William McMullen	04/10/2007 11:04 02 AM
Level 2 Approval:	Approved	John Illson	06/04/2007 10:22 52 AM

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The FWS AML inventory was compiled in 1995 and there have been no additional inventories completed since then. The inventory created in 1995 was not based on field visits, but rather old mining data collected by BLM. There has been no field verified inventory created by the FWS.

**E-mail of FWS documentation provided by Jacob Lee on 2/22/07. Attachments to the e-mail are included in the source information.**

Jacob Lee/ARL/R9/FWS/DOI@FWS

02/22/2007 08:01 AM

To John Illson/DEN/OIG/DOI@OIG  
cc Sean Pettersen/DEN/OIG/DOI@OIG, Stephanie Christian/DEN/OIG/DOI@OIG, William McMullen/DEN/OIG/DOI@OIG, Zane Michael/DEN/OIG/DOI@OIG, Nancy Cipriano/ARL/R9/FWS/DOI@FWS, Michael Schwartz/ARL/R9/FWS/DOI@FWS  
Subject Re: Abandoned Mine Lands Managed by DO (C-IN-MOA-0004-2007)

Good Morning John,  
The inventory that was compiled in 1995 remains the inventory. I'll attach to this e-mail the response sent to me by the person who worked the 1996 GAO report. (Here is the link to that report <http://www.gao.gov/archive/1996/rc96030.pdf> See page 4 of the report for a quick number of FWS mines). The isn't a data base because our inventory is fairly static. The inventory letter is attached (mining history 1995).

I'm awaiting clarification on exactly what we have in Alaska. I understand that the sites we have aren't "mines" in the true sense of the word. That said, we have 241 mines sites in the lower 48 and the Pacific Islands. I'll supply the Alaska data as soon as I have a better understanding of it.



Abandoned Mines 1993.doc MiningHistory 1995.doc

Jacob Lee  
Management Analyst  
Division of Policy and Directives Management  
Fish and Wildlife Service  
Phone 703-358-2233  
Fax 703-358-2269

**Methodology:**  
N/A

Submission:	Submitted	Stephanie Christian	04/24/2007 07:06 08 PM
Level 1 Approval:	Approved	William McMullen	05/07/2007 11:51 22 AM
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materials cleanup projects at abandoned mine sites.

Please note this is not a list of all abandoned mine sites at FWS/refuge lands. These are mines we have dealt with through the Refuge (Hazardous Materials) Cleanup Program. Also note the Refuge (Hazardous Materials) Cleanup Program is for addressing all hazardous materials cleanup projects on refuges (not just abandoned mine sites), and also does not address just solid wastes issues, but all hazardous materials cleanup.

Region 2 (Southwest Region)

Antares Mine Cleanup Project	KOFA NWR
Renegade Mine Cleanup Project	KOFA NWR
Orion Mine Cleanup Project	KOFA NWR
Ross Mine Cleanup Project	Buenos Aires NWR
Ballesteros Mine Cleanup Project	Cabeza Prieta NWR

Region 7 (Alaska Region)

Snow Gulch Mining Site Cleanup Project	Togiak NWR
Surprise Creek Mining Site Cleanup Project	Kenai NWR

6. There are no known reports of personal injuries or fatalities associated with abandoned mines on FWS property. The safety officer for the Service, Mary Parkinson, sent me the following information:

\*I attempted to search SMIS (DOI Safety Management Information System) for any injuries or fatalities occurring on FWS lands and/or to FWS personnel related to abandoned mines. I found none.

\*I spoke to Bob Garbe, Office of Occupational Health and Safety, to request his office provide the IG the injury statistics for each of the bureaus involved in this audit. Bob says that the IG has the SMIS database and his office can provide the IG assistance in searching SMIS for the reports they are interested in.

\*I have been with FWS since 1998 and am unaware of any abandoned mine injuries occurring in FWS.

**E-mail of FWS documentation provided by Jacob Lee on 2/21/07.**

John Illson/DEN/OIG/DOI@OIG

Jacob Lee/ARL/R9/FWS/DOI@FWS

**Jacob Lee/ARL/R9/FWS/DOI@FWS**

02/21/2007 12:58 PM

To John Illson/DEN/OIG/DOI@OIG, Sean Pettersen/DEN/OIG/DOI@OIG  
cc Deborah GAO Liaison Williams/PFM/OS/DOI@DOI, Nancy Cipriano/ARL/R9/FWS/DOI@FWS, Michael Schwartz/ARL/R9/FWS/DOI@FWS  
Subject Abandoned Mine Lands Managed by DO (C-IN-MOA-0004-2007)

Good Afternoon,

We have gathered available data for Fish and Wildlife Service regarding your request for information on Abandoned Mine Lands. I've attached our response. Please contact me with any questions regarding his data call.



FWS response to Abandoned Mine Lands data request.doc

Regards,

Jake

Jacob Lee  
Management Analyst  
Division of Policy and Directives Management  
Fish and Wildlife Service  
Phone 703-358-2233  
Fax 703-358-2269

**Methodology:**

N/A

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Level 1 Approval:	Approved	William McMullen	05/07/2007 11:52 51 AM
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## Assignment Workpaper

Prepared by: Stephanie Christian 04/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C FWS.03 **Subsection** Survey Step C.1  
**Program Name** Survey-Inventory  
**Subject** FWS AML Inventory

**Origination Doclink** ■

### Purpose:

To obtain inventories and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.

### Scope:

FWS AML Inventory

### Source:

Jacob Lee  
Management Analyst  
Division of Policy and Directives Management  
Fish and Wildlife Service  
Phone 703-358-2233  
Fax 703-358-2269

### Conclusion:

#### FWS Issues identified:

1. FWS has no specific safety and health policy related to AML sites.
2. FWS does not maintain a specific AML inventory for newly acquired property.
3. FWS does not have a definition of AML in its Service Manual chapters.
4. The 1995 inventory was not for AML sites but sites that had a mining history. There was no definition of AML used in gathering any of the information.
5. FWS may clean up sites that present a risk to human health or the environment with funds from the Refuge Cleanup Fund or the Central Hazardous Materials Fund (CHF) - these are not specific to AML sites.
6. FWS does not maintain a list of prioritized AML sites.
7. No lists are kept in the Washington Headquarters Safety Office of AML injuries and fatalities.
8. FWS does not have any policies or procedures specific to the clean-up of AML sites.

### Details:

#### Summary

#### FWS Issues identified:

1. FWS has no specific safety and health policy related to AML sites.
2. FWS does not maintain a specific AML inventory for newly acquired property.
3. FWS does not have a definition of AML in its Service Manual chapters.
4. The 1995 inventory was not for AML sites but sites that had a mining history. There was no definition of AML used in gathering any of the information.
5. FWS may clean up sites that present a risk to human health or the environment with funds from the Refuge Cleanup Fund or the Central Hazardous Materials Fund (CHF) - these are not specific to AML sites.
6. FWS does not maintain a list of prioritized AML sites.
7. No lists are kept in the Washington Headquarters Safety Office of AML injuries and fatalities.
8. FWS does not have any policies or procedures specific to the clean-up of AML sites.

E-mail of FWS documentation provided by Jacob Lee on 4/19/07. Answers to follow-up questions was highlighted in blue by FWS.

Jacob Lee/ARL/R9/FWS/DOI@FWS

04/19/2007 06:22 AM

To Stephanie Christian/DEN/OIG/DOI@OIG

cc John Illson/DEN/OIG/DOI@OIG, William McMullen/DEN/OIG/DOI@OIG, Sean Furniss/NWRS/R9/FWS/DOI@FWS, Craig R Moore/ARL/R9/FWS/DOI@FWS, Mary Parkinson/ARL/R9/FWS/DOI@FWS, Andrea McLaughlin/ARL/R9/FWS/DOI@FWS

Subject Re: OIG Follow-up Questions for FWS

Good Morning Stephanie,

I received your voice mail this morning. I'm sorry for the delay but I just got the last response after 7 pm last night. Here are the responses, consolidated from a variety of offices here in the service. I'm pasting the responses below the questions in blue.

Let me know if there is anything else you need from us. Once again, sorry for the delay.

Best Regards,  
Jake

Jacob Lee  
Management Analyst  
Division of Policy and Directives Management  
Fish and Wildlife Service  
Phone 703-358-2233  
Fax 703-358-2269  
Stephanie Christian/DEN/OIG/DOI@OIG

1) What polices and procedures do FWS personnel follow to address AML sites?

FWS manual chapters in the 240, 241, 242, and 243 series pertain to the safety and health polices. All FWS personnel are required to comply with these. There is no single specific safety or health policy regarding AMLs.

FWS does not have any policies or procedures specific to the clean-up of AML sites. Sites that present a risk to human health or the environment are cleaned up in compliance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and its implementing regulations, the National Contingency Plan (NCP). The NCP defines spills as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, so in general, releases of hazardous substances at an AML site (usually leaching) would be addressed in compliance with CERCLA and the NCP. Service Manual Chapter 561 FW 10 addresses site cleanups under CERCLA, and specifies the Service responsibilities for these clean-ups.

In addition, the Service has a process, referred to as "Facility Inventories," that are designed to identify and evaluate any sites that released or could release hazardous substances to the environment. The inventory process consists of up to three phases of assessment, and the end result is a determination of whether a site warrants further investigation or if the site poses no threat to human health or the environment. Again, this process is not specific to AML sites, but addresses all FWS sites.

2) Does FWS do an AML inventory for newly acquired property (i.e. any land that was acquired after the 1995 inventory)?

The Service does not maintain a specific AML inventory for newly acquired property. The Service maintains its Environmental and Disposal Liability (EDL) information in the Department's EDL database, which includes sites where it has been determined that the FWS may have potential liability for some aspect of environmental contamination. However, as per FWS Manual, Part 341 FW 3, dated 6/28/96 (DOI Departmental Chapter DM 602 2, dated 9/29/95) which specify and govern FWS and DOI Agency land acquisition procedures, respectively, the FWS does Environmental site assessments (ESAs) on all parcels of land prior to acquisition, as required. All ESAs, as specified, include (among other things) a records search, interviews with current, past, and adjacent land owners (where possible), and a site inspection by a qualified individual prior to acquisition. Any abandoned mines located on the parcels being considered for acquisition should be discovered and identified in the ESA during completion of these steps in the ESA.

3) How does FWS define an AML site?

We do not have a definition of AML in the Service Manual chapters referred to above. The definition used to conduct research in this instance was supplied by William McMullen in your office (inserted below). The Service ALO used that definition in supplying information to your office.

### 3720 – Abandoned Mine Land Program Policy (Public)

#### Glossary of Terms

-A-

**Abandoned Mine:** An abandoned hard rock mine on or affecting public lands administered by BLM, at which exploration, development, mining, reclamation, maintenance, and inspection of facilities and equipment, and other operations ceased as of January 1, 1981 (the effective date of BLM’s Surface Management regulations codified at 43 CFR 3809) with no evidence demonstrating that the miner intends to resume mining. For many abandoned mines, no current claimant of record or viable potentially responsible party exists. Abandoned mines generally include a range of mining impacts, or features that may pose a threat to water quality, public safety, and/or the environment.

4) What definition of AML was used to prepare the 1995 inventory?

The 1995 inventory was not for AML sites but sites that had a mining history. There was no definition of AML used in gathering any of the information.

5) I can't tell from your response which of the sites in the 1995 inventory were remediated. You have list of projects completed, but how many sites were remediated out of the 1995 inventory?

The 1995 inventory did not indicate that any sites needed to be remediated.

6) Since there are no sites currently being remediated, what plan does FWS have in place to address the remaining AML sites?

In 1995 there were no sites that needed to be remediated. There were no contaminate problems known or likely to occur based upon the information available at that time.

7) What basis is used to prioritize AML sites?

FWS may clean up sites that present a risk to human health or the environment with funds from the Refuge Cleanup Fund or the Central Hazardous Materials Fund (CHF) - these are not specific to AML sites. The CHF is maintained and managed by the Department, and is used to address large-scale, long-term CERCLA cleanups. CHF sites are ranked based on criteria developed by the Department. Sites addressed by the Refuge Cleanup Fund are ranked on the basis of the immediacy of the need for cleanup; whether they are legally mandated for clean-up; and whether actual or potential hazards exist to living trust resources due to toxicity AND exposure. In the Refuge Cleanup fund, in addition to CERCLA, we also take into consideration other legal mandates such as the Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), and the Safe Drinking Water Act (SDWA).

8) Please provide a current list of prioritized AML sites?

The Service does not maintain a list of prioritized AML sites. As discussed above, the Service does maintain its EDL Database.

9) We have found that the SMIS many not include injuries and fatalities for visitors. Is there any other database or list kept at the field or regional offices that may show injuries/fatalities to visitors at AML sites?

No, there are no other databases maintained by the service. No lists are kept in the Washington Headquarters Safety Office of AML incidents. As part of this Audit effort we queried all the Regional safety offices. A records review, going back to 1990 as requested, turned up no injuries or fatalities related to AML sites.

10) Can you please provide the contact information for the individual that worked on preparing the GAO inventory list?

Sean Furniss, here in the Washington Office, is the person that did most of the work on the GAO inventory. His phone number is 703-358-2376. his email address is: sean\_furniss@fws.gov He is CC'd on his message.

**Methodology:**

N/A

Submission:	Submitted	Stephanie Christian	04/24/2007 07:44:46 PM
Level 1 Approval:	Approved	William McMullen	05/07/2007 11:53 57 AM
Level 2 Approval:	Approved	John Illson	06/04/2007 10:25 02 AM

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**Record of Discussion**

Prepared by: Stephanie Christian 04/25/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C FWS.04 **Subsection** Survey C.1  
**Program Name** Survey-Inventory  
**Subject** FWS GAO Inventory

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd. Suite 510, Lakewood, CO	303-236-9112	Stephanie_Christian@doioig.gov
Sean Furnis	FWS AML Contact for GAO Report	Washington, DC	703-358-2376	

**Location** Telephone

**Date/Time**

04/19/2007 08:15 AM

**Purpose:**

To obtain inventories and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.

**Scope:**

FWS Inventory

**Conclusion:**

GAO conducted an audit in 1996 on the AML inventory problems for hardrock mining. FWS was identified in this report as having hundreds of AML sites. In order to follow-up on this report, I contacted Sean to discuss the FWS AML inventory outlined in GAO's report. Sean Furnnis was the FWS contact that worked with GAO to complete the inventory number used in the GAO report. In order to complete the inventory, Sean indicated that FWS conducted a review of mining data and claims to determine AML sites on FWS refuges. FWS counted every mining claim (both past and current) and listed it as an AML site for the purpose of counting sites and creating an inventory number. FWS did not conduct any field verification to determine the actual number of AML sites including; shafts/pits/adits on their property. The inventory is simply a listing of the total number of mining claims on FWS property. According to Sean, FWS provided the total number of claims to GAO as the number of AML sites.

**Summary:**

GAO conducted an audit in 1996 on the AML inventory problems for hardrock mining. FWS was identified in this report as having hundreds of AML sites. In order to follow-up on this report, I contacted Sean to discuss the FWS AML inventory outlined in GAO's report. Sean Furnnis was the FWS contact that worked with GAO to complete the inventory number used in the GAO report. In order to complete the inventory, Sean indicated that FWS conducted a review of mining data and claims to determine AML sites on FWS refuges. FWS counted every mining claim (both past and current) and listed it as an AML site for the purpose of counting sites and creating an inventory number. FWS did not conduct any field verification to determine the actual number of AML sites including; shafts/pits/adits on their property. The inventory is simply a listing of the total number of mining claims on FWS property. According to Sean, FWS provided the total number of claims to GAO as the number of AML sites.

According to Sean, GAO's focus was on AML sites that were affecting water quality. GAO asked FWS to focus on the sites that were posing a danger to the watersheds. Sean stated that all FWS AML sites are in desert/arid regions, so FWS determined that none of their sites met that criteria. This meant that there were no FWS sites affecting watersheds that needed to be remediated according to FWS.

Sean could provide no documentation on the AML inventory number used in the GAO report or the data reviewed to supply the number of AML sites to GAO.

Submission: Submitted Stephanie Christian 05/04/2007 04:42:15 PM  
 Level 1 Approval: Approved William McMullen 05/07/2007 11:55 28 AM  
 Level 2 Approval: Approved John Illson 06/04/2007 10:25 59 AM

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI

**Confidentiality** Standard

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**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: Sean Pettersen 04/10/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C NPS 01 **Subsection** Survey Step C.1  
**Program Name** Survey-Inventory  
**Subject** NPS AML Inventory

**Origination Doctlink** ■

**Purpose:**  
 To identify the number of AML sites NPS has on it's national inventory. To determine how sites get entered into the database and what processes are in place for updating the inventory data.

**Scope:**  
 AML Inventories

**Source:**  
 Inventory was provided by John Burghardt NPS - Geologic Resource Division (GRD) 303.969.2009



NPS-AMLInventory-Old#s-v-Database#s-v-2007update.xls

**Conclusion:**  
 As of 2007, the NPS inventory had 3,351 [total verified by Greta Bloomfield - 5/13/08] AML sites with 9,205 [total verified by Greta Bloomfield - 5/13/08] openings. The vast majority, 82 percent [link to math verification: ■], of abandoned mine sites on NPS lands are located in the Pacific West Region (see table 1 below) Death Valley National Park, Lake Mead National Recreation Area, Mojave National Preserve, and Joshua Tree National Park, have recorded 96 percent [link to math verification ■] of the mine features within the Pacific West Region (see table 2 below) "

The attached inventory is broken down by Region and the by Park. Totals for the Regions are:

Table 1.

Region (# of Parks with AML)	Sites	Openings
Alaska (7)	459	437
Intermountain (40)	501	510
Midwest (22)	126	241
National Capital (3)	9	24
Northeast (14)	199	303
Pacific West (23)	1,599	7,544
South East (13)	458	146
Total	3,351	9,205
	[total verified by Greta Bloomfield - 5/13/08]	[total verified by Greta Bloomfield - 5/13/08]

Note: There are two formulas in the attached spreadsheet that were incorrect. The correction brings the total openings to 9,218 instead of 9,205. The 82% does not change. 7544/9218=81.83 percent. The errors have no effect on information in the report [total verified by Greta Bloomfield - 5/13/08]

The Pacific West has the largest, 82% (7 544 / 9,205 = .82) [percentage verified by Greta Bloomfield - 5/13/08], of the features on the NPS inventory. Within the Pacific West region, the Parks have the following AML inventories:

Table 2.

Park	Sites	Openings	Percent
Channel Isalnds	2	0	
City of Rocks Reserve	5	1	

Crater Lake NP	10	0		
Craters of the Moon Monument	5	3		
Death Valley NP	243	4,800	64%	[percentage verified by Greta Bloomfield - 5/13/08],
Golden Gate Recreation Area	11	14		
Great Basin NP	19	53		
Joshua Tree NP	295	283	4%	[percentage verified by Greta Bloomfield - 5/13/08],
Lake Mead Recreation Area	348	786	10%	[percentage corrected (rounded down from 10.4 to 10%) by Greta Bloomfield - 5/13/08],
Lassen Volcanic NP	9	9		
Lava Beds National Monument	16	16		
Mojave National Preserve	428	1,369	18%	[percentage verified by Greta Bloomfield - 5/13/08],
Mt. Rainier NP	12	2		
North Cascades NP	44	38		
Olympic NP	5	0		
Pinnacles National Monument	3	2		
Point Reyes National Seashore	20	20		
Puukohola Heiau National Historic Site	1	0		
Redwood National Park	25	25		
Ross Lake National Recreation Area	10	9		
Sequoia/Kings Canyon National Park	31	38		
Whiskeytown NP	39	42		
Yosemite	20	34		
		7544	96%	[percentage verified by Greta Bloomfield - 5/13/08],
		Total of 7544 Verified by GLB 05/13/08		

**Details:**

See conclusion

**Methodology:**

Obtained and summarized the NPS AML inventory

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                      John Illson                      06/02/2008 02:41 34 PM

**Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 12/10/2007 04:29:45 PM**

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Purpose:

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.NPS 01 NPS AML Inventory

To identify the number of AML sites NPS has on it's national inventory. To determine how sites get entered into the database and what processes are in place for updating the inventory data.

Scope:  
AML Inventories

Source:  
Inventory was provided by John Burghardt NPS - Geologic Resource Division (GRD) 303.969.2009



NPS-AMLInventory-Old#s-v-Database#s-v-2007update.xls

Conclusion:  
As of 2007, the NPS inventory had 3,351 AML sites with 9,205 openings. The attached inventory is broken down by Region and the by Park. Totals for the Regions are:

Region (# of Parks with AML)	Sites	Openings	Percent
Alaska (7)	459	437	4.8%
Intermountain (40)	501	510	5.6%
Midwest (22)	126	241	2.6%
National Capital (3)	9	24	26%
Northeast (14)	199	303	3.3%
Pacific West (23)	1,599	7,544	81.95%
South East (13)	458	146	1.6%
Total	3,351	9,205	

The Pacific West has the largest, 81.95% (, of the sites on the NPS inventory. Within the Pacific West region, the Parks have the following AML inventories:

Park	Sites	Openings	Percent
Channel Islands	2	0	
City of Rocks Reserve	5	1	
Crater Lake NP	10	0	
Craters of the Moon Monument	5	3	
Death Valley NP	243	4,800	64%
Golden Gate Recreation Area	11	14	
Great Basin NP	19	53	
Joshua Tree NP	295	283	4%
Lake Mead Recreation Area	348	786	11%
Lassen Volcanic NP	9	9	
Lava Beds National Monument	16	16	
Mojave National Preserve	428	1,369	18%
Mt. Rainier NP	12	2	
North Cascades NP	44	38	
Olympic NP	5	0	
Pinnacles National Monument	3	2	
Point Reyes National Seashore	20	20	
Puukohola Heiau National Historic Site	1	0	
Redwood National Park	25	25	
Ross Lake National Recreation Area	10	9	
Sequoia/Kings Canyon National Park	31	38	
Whiskeytown NP	39	42	
Yosemite	20	34	
		7,544	

Details:  
N/A

Methodology:

N/A

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI  
**Confidentiality** Standard

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### Assignment Workpaper

Prepared by: Guest\_Theresa Gumataotao 05/29/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C NPS 02 **Subsection**  
**Program Name** Survey-Inventory  
**Subject** NPS Definition of AML

**Origination Doclink** ■

**Purpose:**  
To provide the NPS definition of "AML".

**Scope:**  
NPS definition of AML

**Source:**  
National Park Service: Nature and Science - *Explore Geology Web Page* found at [www2.nature.nps.gov/geology/aml/index.cfm](http://www2.nature.nps.gov/geology/aml/index.cfm)

**Conclusion:**  
Abandoned mineral lands (also known as AML) are one of many types of disturbed lands in the National Park System. AML sites include 1) underground and surface mines, 2) placer and dredge sites, and 3) oil, gas, and geothermal wells. Each of these lands were disturbed by mineral extraction through surface mining, underground mining, dredging, and/or oil and gas exploration--and then abandoned. AML sites can be underground with numerous mine openings such as adits and shafts or on the surface in the form of strip mines, quarries, open wells, or pits. Further, AML sites are not only the actual mine or well but include 1) access roads and trails, 2) historic buildings such as mills, company towns, and assay shops, 3) piles of waste rock (unprocessed rock) and tailings (processed rock), 4) fuel storage tanks, 5) drainage diversions, 6) deteriorating structures such as headframes and tramways, and 7) abandoned heavy equipment and machinery such as ore carts, steam engines, and pump jacks.

**Details:**  
More than 4,000 abandoned mineral sites can be found in the National Park System, in all 10 regions of the system, and in 45 states. This number translates to more than 11,000 underground openings, 700 oil and gas wells, 1,000 quarries, and 33,000 disturbed acres. Additionally, the National Park Service estimates that 5,000 miles of abandoned access roads exist. Refer to NPS AML (Abandoned Mineral Lands) webpage at [www2.nature.nps.gov/geology/aml/index.cfm](http://www2.nature.nps.gov/geology/aml/index.cfm) for more information.

**C.NPS.01 NPS AML Inventory** ■

**Methodology:**  
N/A

Submission:	Submitted	Sean Pettersen	07/10/2007 03:30 04 PM
Level 1 Approval:	Approved	William McMullen	07/12/2007 08:43 22 AM
Level 2 Approval:	Approved	John Illson	01/09/2008 10:49 31 AM

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**Assignment Workpaper**

Prepared by: Guest\_Theresa Gumataotao 05/29/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C NPS 03 **Subsection**  
**Program Name** Survey-Inventory  
**Subject** NPS Identified AML Dangers: Physical and Environmental

**Origination Doctlink** ■

**Purpose:**  
 To determine what type of physical and environmental hazards NPS AML sites present.

**Scope:**  
 Types of hazards associated with old mines

**Source:**  
 National Park Service: Nature and Science - *Explore Geology Web Page* found at [www2.nature.nps.gov/geology/aml/index.cfm](http://www2.nature.nps.gov/geology/aml/index.cfm)

**Conclusion:**  
 NPS AML sites have a variety of physical and environmental hazards present. These hazards effect human safety, soil, water, plants, and animals. According to NPS, inventories are incomplete and parks are still evaluating sites, but below is a current summary of common physical and environmental hazards found and their associated consequences. These physical and environmental hazards include vertical mine openings, unsafe structures, water hazards, acid mine drainage, and metal contamination.

**Details:**

PHYSICAL HAZARDS:

<b>Shafts</b>	Unprotected shafts can be an extreme safety hazard.
<b>Vertical Mine Openings</b>	When the miners departed in search of more lucrative deposits, they often left vertical openings uncovered. Falling down vertical openings is the most common cause of death and injury in abandoned mines. Darkness, loose debris, and false floors can hide vertical openings. Weathered rock at the edge of an opening can break away and slide into the hole under the weight of a person. Unstable adits and structures are common hazards at abandoned mines, as well.
<b>Deadly Gases and Oxygen Deficiency</b>	Lethal concentrations of methane, carbon monoxide, carbon dioxide, and hydrogen sulfide can accumulate in underground passages. Pockets of still air with little or no oxygen can be encountered. By the time persons feel ill, they are no longer able to react.
<b>Cave-Ins</b>	Mines can cave in at any time! The effects of blasting and weathering destabilize once-competent bedrock through time.
<b>Unsafe Structures</b>	Support timbers, ladders, cabins, pump jacks, tanks, and other related structures may seem safe but can easily crumble under a person's weight.

<b>Unstable Explosives</b>	Sand and gravel pits make up a significant portion of the abandoned mineral lands in the national park system, Cuyahoga Valley National Recreation Area, OHIO. Unused or misfired explosives are deadly. Because old explosives become unstable, minimal vibrations from a touch or footfall can trigger an explosion.
<b>Highwalls</b>	Vertical cliffs--also called <i>highwalls</i> --from which material was extracted, are common features of open pit mines and quarries. These highwalls can be unstable and prone to collapse.
<b>Water Hazards</b>	Many abandoned mines become flooded. Shallow water can conceal sharp objects, drop-offs, and other hazards.
<b>Pits</b>	Mud pits once used for oil and gas operations can contain hazardous materials and may be the consistency of quicksand.
<b>Radioactivity</b>	Some of the materials that were mined, such as uranium and thorium, are radioactive. Because the effects of radiation exposure are cumulative through a lifetime, any can be harmful or fatal to humans, wildlife, and plants.
<b>Support structures etc.</b>	Mines were constructed and maintained to be safe only while they were in operation. When the miners departed in search of more lucrative deposits, support structures, timbers, and ore pillars were removed or left to rot. Although some mine and wells are historically significant, most are eyesores. Piles of trash and debris, open pits, waste rock piles, and access roads blemish the otherwise pristine landscapes of the parks. Surface mines and quarries often have the greatest impacts on scenic vistas. In some cases, hundreds of thousands of cubic yards of material have been removed, compromising public safety and making restoration difficult.

ENVIRONMENTAL HAZARDS:

<b>Water Resources</b>	Water is one of the resources most frequently harmed by abandoned mines and wells. Water is also the main vehicle that carries abandoned mineral land impacts beyond the immediate site. Elevated concentrations of metals and increased amounts of suspended sediment, acidity, petroleum, and brine threaten surface and underground water quality and aquatic habitats.
<b>Acid Mine Drainage</b>	Acid is created as metals oxidize in sulfide ore and waste rock. Acid allows toxic metals to dissolve and wash into streams and lakes. Acid mine drainage occurs at only a few of the abandoned mines in the National Park System. At some of these sites, the water coming out of the mines is so acidic that it can actually burn a person's skin.
	Mining metals requires extracting ore from the ground, crushing the ore to the size of sand grains, and removing the desired mineral. Often the excess material--tailings--is deposited on the surface. During storms and snow melts, water flows over and through the tailings. The tailings still contain relatively large amounts of metals such as lead, zinc, copper, and cadmium. The water interacts with the metals and

<b>Metal Contamination</b>	transports them to nearby streams. Some metals, at concentrations as small as a few parts per million, can damage or kill aquatic plants and animals. During oil and gas drilling, a circulating fluid called mud is used to remove the cuttings from the well bore. This fluid often contains additives that are laden with heavy metals such as chromium and barium. In the past, when a well was completed, these muds were often left at the site, allowing the metals to leach into streams, lakes, and aquifers.
<b>Erosion and Sedimentation</b>	Disturbed lands and unprotected slopes are susceptible to erosion. Uncontrolled surface drainage can remove soils and may make large areas unstable. Every year, sediments from mine sites cause significant damage to downstream resources.
<b>Petroleum and Brine</b>	Unplugged or improperly plugged oil and gas wells pose serious threats to park resources. Leaking well fluids can contaminate surface and subsurface waters that in turn jeopardize the safety of public water supplies. Contamination of this type can continue for years without being discovered. Water supplies for natural springs may also be affected, damaging resources miles away from the contaminated well.
<b>Hazardous Materials</b>	Mining and drilling, like other industrial processes, require a variety of chemicals. Discarded drums and tanks are often found on abandoned mineral lands inside underground passages, buried in waste rock piles, or just haphazardly scattered around the site.
<b>Biomagnification</b>	Soils and water contaminated with heavy metals or chemicals from mineral processing may be harmful to wildlife. This occurs as bare soil continues to erode and is carried away from the mine site to nearby streams and rivers. Here, the sediment clogs stream channels, reducing fish habitat and interfering with natural flow patterns. These contaminants can become increasingly concentrated in animals higher up the food chain in a process called biomagnification. Affected animals could die or become unable to reproduce.

**Methodology:**

N/A

Submission:	Submitted	Sean Pettersen	07/10/2007 03:29:17 PM
Level 1 Approval:	Approved	William McMullen	07/12/2007 08:43 56 AM
Level 2 Approval:	Approved	John Illson	01/09/2008 11:08 59 AM

**Linkage Information**

**History**

Status                      Approved                      Request Review

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.NPS 03 NPS Identified AML Dangers: Physical and Environmental

**In Progress Edit** Guest\_Theresa Gumataotao/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

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## Assignment Workpaper

Prepared by: Guest\_Theresa Gumataotao 05/29/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C NPS 04 **Subsection** Survey Step F

**Program Name** Survey-Inventory

**Subject** NPS- AML Mitigation Methods

**Origination Doctlink** 

### **Purpose:**

To determine what methods and resources are used by NPS for AML site mitigation.

### **Scope:**

Site mitigation.

### **Source:**

National Park Service: Nature and Science - *Explore Geology Web Page* found at [www2.nature.nps.gov/geology/aml/index.cfm](http://www2.nature.nps.gov/geology/aml/index.cfm)

### **Conclusion:**

According to information provided on NPS' website, the mitigation of hazards from abandoned mineral lands are often complicated and expensive procedures. The National Park Service establishes the priority for mitigation by considering the level of danger and potential for resource damage. Each site is unique. The chosen method for mitigating a hazardous site depends on several things: available materials at the site, the type of rock, the difficulty of reaching the site, and money. Parks use a variety of methods to close hazardous mine openings. These techniques include backfilling, blasting, expandable foam, rock and mortar walls, and the construction of bat gates. However because of limited funding, parks can usually afford only to fence the hazard and post warning signs as temporary solutions.

As mitigation projects are labor intensive, NPS also uses the resource of volunteers along with staff. Volunteers actively assist with the construction of mine closures, to revegetate mine sites, and to conduct further inventories and/or research on AML sites for mitigation purposes. Further, reclamation and restoration projects, which involve the cure of physical scars and the removal of contaminants on AML sites is also a process of mitigation. Through reclamation AML landscapes and environments are restored to mirror the undisturbed lands which surround them and not simply "amended or cleaned up" for physical and environmental safety. Further, historic preservation is also a process of mitigation, as a host of mining structures will undergo extensive preservation measures to prevent any collapse or deterioration of AML structures and general mineral / mining areas.

### **Details:**

#### **The National Park Service Abandoned Mineral Lands Program**

The National Park Service closes between 10 and 100 mine openings and plugs 5 abandoned oil and gas wells each year. In 1993, the estimated cost of reclamation of all remaining abandoned mineral land sites in the National Park System was \$200 million.

#### **Volunteer and Cooperative Projects**

Each year, national parks benefit from the hard work of thousands of volunteers. Volunteers assist with the inventory of abandoned mines and wells, construction of mine closures, and revegetation of mine sites. Without volunteers, the National Park Service could not afford the labor-intensive projects. Often, the National Park Service uses outside specialists to conduct scientific research for restoration projects. The service established cooperative agreements with several other federal agencies, state agencies, and universities for the study environmental impairments in abandoned mineral land sites in park units.

#### **Reclamation and Restoration**

Scars on the land may last thousands of years even if mined areas stabilize and the vegetation recovers. Carefully planned reclamation can restore natural processes and greatly speed site recovery. Reclamation in the National Park System focuses on re-establishing landscapes and environments that mimic the surrounding undisturbed lands. Mine structures such as mills, shops, headframes, and others of historic value are stabilized and preserved. Otherwise, the pre-mine condition is restored wherever possible. Reshaping the surface stabilizes slopes and drainage's, waste rock piles, tailings ponds, highwalls, and access roads. This reshaping often requires the use of heavy equipment to contour the land to look and function like the surrounding undisturbed lands. The restoration of stream channels also provides for the reintroduction of plants and animals that were lost because of mining. The same type of earthmovers that created the mineral extraction scars are often the best suited to remove them.

Cleanup or treatment of toxic materials prevents further impairment of the environment. Small quantities of mining related materials, such as chemicals or fuels used in mining and milling are completely removed. Large quantities of naturally occurring materials, such as unweathered waste rock that produces acids, may be treated on-site. Applications of lime may provide a buffer to prevent the generation of acids. In more severe cases, limestone drains or artificial wetlands filter heavy metals and reduce acidity. The goals for revegetation of mine sites in the National Park System are the restoration of native plant populations and patterns. The first consideration is the suitability of the soil for revegetation. In harsh conditions, topsoils, compost, or specific nutrients can be added. Specialized nurseries may be needed to propagate suitable plant materials. Sometimes, revegetation work is focused on establishing pioneering species to allow for natural succession. Time and nature then restore the natural productivity in the site.

### **Methodology:**

Reviewed source material.

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## Assignment Workpaper

Prepared by: Guest\_Theresa Gumataotao 05/29/2007

Assignment Number C- N-MOA-0004-2007

Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C NPS 05 Subsection  
Program Name Survey-Inventory  
Subject NPS Roles and Responsibilities for Disturbed Land Restoration

Origination Doctlink 

### Purpose:

To determine the NPS process, role, and responsibility involved with the "general restoration" of AML sites.

### Scope:

National Park Service Policies and Guidance - Disturbed Land Restoration

### Source:

NPS - Natural Resource Management Reference Manual # 77: Disturbed Land Restoration - <http://www.nature.nps.gov/rm77/restore.cfm>

### Conclusion:

The National Park Service (NPS) Directives System consists of internal instructions and guidance documents to ensure that NPS managers and staff have clear information on NPS policy and on required and/or recommended actions. In specific reference to natural resource management, NPS has issued the Natural Resource Management Reference Manual # 77. In this manual, specific policies on disturbed land restoration have been introduced. By description, AML sites fall into his category as NPS defines **Disturbed Lands** as "areas where the integrity of the natural setting and natural system processes has been directly or indirectly affected by human activities such as resource extraction..."

NPS states that "when park development is damaged or destroyed and replacement is necessary, the development will be replaced or relocated so as to promote the restoration of natural resources and processes." NPS makes it their responsibility to "use the best available technology, within available resources, to restore the biological and physical components of "disturbed land" systems. Outlined below are the most common steps in NPS's restoration projects that include a physical component. Selection of appropriate methods and tools depends on the scale and nature of the disturbance.

*Note: Some sections of the Reference Manual are still being revised while others have undergone a field review awaiting comments from field personnel as applicable. It should be noted that the review of legal authorities has not yet been undertaken, and references to other NPS guidelines may change, as those guidelines may also be undergoing a review.*

### Details:

#### General Restoration Step

Outlined below are the most common steps in NPS's restoration projects that include a physical component. Selection of appropriate methods and tools depends on the scale and nature of the disturbance.

#### Step 1: Inventory Sites and Select Reference Sites or Conditions

A disturbed lands restoration inventory includes the identification of the disturbed sites, assessments of the current condition of the sites, and selection of reference sites or conditions (naturally functioning areas or conditions used as models for restoration design). The purpose of the inventory is to gather enough information to create an understanding of the type, magnitude, and length of disturbances that affected, or continues to affect, the landscape and the degree to which the natural features and processes are affected. Inventory information allows managers to rank disturbed sites for restoration, develop preliminary alternatives for restoration, and estimate the costs to restore sites for budgetary purposes, including competing for project funds. Inventory information also can guide further sampling and monitoring.

#### Inventory and assessment of sites

Some or all of the following details should be included in the inventory:

- a site map, which should include all geomorphic features, hydrologic patterns, facilities, structures, existing uses, access routes, and other important details
- current and historic topographic, geologic, soil, and vegetation maps and aerial photographs to illustrate the degree and scope of the disturbance and the nature of the surrounding undisturbed topography
- descriptions of the historic uses of the site
- natural disturbance history (fires, floods, windstorms, etc)

- the legal history of the site
- species lists and community descriptions
- critical habitat for threatened and endangered species
- an evaluation of the potential recovery of damaged resources with and without restoration work; alternatively, an evaluation of potential recovery once the degrading agent is removed or discontinued
- a description of the existing and potential effects of the site on park resources as evidenced by groundwater or surface-water contamination, erosion, compaction, sedimentation, nonnative plant invasions, and other changes in habitat, such as species composition changes, altered vegetative structure, or decreased primary productivity
- samples of water and soil conditions, if appropriate
- photo points and photographs of the current condition of the site
- a current conceptual ecological model for the site.

The following factors should be considered when designing the inventory:

- The type of decisions that will be made with the collected data.
- Cumulative impacts: The inventory should record and evaluate past, ongoing, and future cumulative impacts on resources and site-specific impacts from disturbed sites
- Future utility: Consider that the inventory may be used with other inventories, that it may be used by others in the future, and that it should be compatible with existing inventory systems for comparison of the inventoried characteristics with numerous other landscape and ecosystem parameters.

### Selection of reference sites and conditions

An identification of reference sites or conditions is important for several reasons. Reference site identification is essential for understanding the disturbances that have occurred to the system, and the reference site or conditions provide a model on which restoration is based. Reference sites and conditions must be carefully selected because they influence many stages of the restoration process.

Temporal aspects of succession and non-determinant trajectories of succession in ecological communities, must be recognized in selection of a reference site and, in fact, suitable reference sites for the physical aspects of a restoration project may be different from the reference sites for the biological aspects of that project. For example, reference sites or conditions for the physical aspects of restoration projects often represent pre-disturbance or undisturbed adjacent conditions (land areas that share similar physical characteristics with the disturbed area but have not been significantly disturbed). The pre-disturbance conditions may be determined from the historic journals and records of pioneers and early land surveyors who described the state of the land soon after European settlement, from historic photographs (from several periods, if available, and including aerial photography), and from visual inspections of the site and undisturbed areas.

Reference sites or conditions for vegetation and other biological aspects of a restoration project, on the other hand, may have been recently disturbed. In other words, these sites are not necessarily areas with climax or mature vegetation. For example, a site that was recently disturbed naturally by flood or fire and is recovering naturally may be an appropriate reference site, since such sites or conditions can serve as models for planting, revegetation, and re-introduction of other essential biota (e.g., arthropods) to restore ecosystem processes and functions. An understanding of native vegetation dynamics incorporated into an ecological model for the site will greatly enhance the decision on a reference site or condition for biological aspects of the project. The project manager may encounter a particular successional stage of plant community, and wish to restore it to a designated "climax" stage. Anthropogenic changes to natural systems may result in undesired vegetative patterns. Reintroduction of natural processes, such as fire or flooding, may not necessarily restore a desired vegetative plant community. In such cases, some other action must first be implemented before natural systems and processes can be restored.

### Step 2. Rank Sites

Criteria for ranking may include historical, current, and potential impacts; the resources at risk and their value; the potential for restorative success; current and future visitor use; the relative effect of restoration on the integrity or recovery of the larger natural system; legal or ownership constraints; safety issues; and cost. NPS laws, management policies, and guidelines, and the park's enabling legislation should also guide the ranking process.

### Step 3. Establish Goal and Objectives

In general, the NPS goal for disturbed lands is to restore natural systems and processes. However, the physical environment has often changed so much that restoration of pre-disturbance conditions is not possible. The NPS goal then becomes the design of new landforms that blend and function with the surrounding landscape and sustain desired habitats. Likewise, a pre-disturbance knowledge of the full suite of species and communities rarely exists. In this case, appropriate habitats should be designed to address species components compatible to surrounding natural areas, important structural characteristics within the habitat, and landscape patterns. This reflects issues of animal movement across habitat boundaries, and seed dispersal. In rare cases, a park may want to transform a disturbed site to something other than wildland, such as a parking lot, cultural resource preservation area, or critical habitat. If so, the park's goal should be to minimize the disturbed area, the disruption of natural processes, and the impacts to on-site or off-site resources. The purpose of setting objectives is to define measures by which the success of the goal, which is the establishment of the planned condition, can be measured (see definition of "restored," above). If the objectives are not met, additional restoration work should be considered. The time frame of desired or acceptable recovery can be a key factor in defining objectives. Examples of objectives are: (1) in 5 years, plant diversity and density will be at 80% of target conditions, (2) in 10 years, the abundance of nonnative species will be less than 5%, and (3) in 10 years, average soil infiltration rates will exceed 10"/hour. **Step 4. Develop Preliminary Restoration Alternatives**

Preliminary restoration alternatives should be developed at this stage. Each alternative should comply with NPS policies and support the restoration goal and objectives. Each alternative would expedite recovery of the site, but would achieve the goal and objectives in different time frames and by different types of active management/purposeful manipulation. Examples of various alternatives are:

- restoration of stable geomorphic configurations, improvement of soil characteristics, and revegetation with native species
- restoration of stable geomorphic configurations, improvement of soil characteristics, and natural recolonization of plants
- revegetation with native species without restoration of physical characteristics of landscape
- restoration of the site by completing work in smaller sub-areas as funding and staff become available
- natural recovery
- coordination with adjacent agencies, landowners, and other partners to resolve off-site problems that impair resources in a park

Often, an understanding of the degree of degradation drives these options. A subset of alternatives will include use of machinery v. hand-tools, source of plant materials (seeds v. seedlings), and mulching v. temporary cover crops.

#### **Step 5. Undertake Compliance and Select an Alternative**

The approval and conduct of restoration projects must be in compliance with statutes, regulations, executive orders, NPS *Management Policies*, and management documents. The number of compliance requirements that a given restoration project may trigger can be extensive. To help determine which requirements have been triggered and how to most efficiently and effectively comply with them, project managers are encouraged to contact NPS specialists in the park, regional offices, system support offices, and the Natural Resource Program Center. Below is a brief summary of the three key compliance requirements. Foremost, proponents of restoration projects must comply with the requirements of the National Environmental Policy Act (NEPA) to evaluate whether the project is a major federal action, and, if so, whether it has significant effects on the human environment. For most NPS restoration projects, an environmental assessment (EA) fulfills this responsibility; thus, most parks do not have to prepare an environmental impact statement (EIS). The use of a categorical exclusion to comply with NEPA will be the exception not the rule for restoration work. Parks with numerous disturbed sites should consider writing a parkwide EA or EIS. DO 12, Handbook 12, and the section entitled Environmental Compliance in this Reference Manual should be consulted for guidance on writing NEPA documents. As part of the NEPA analysis, a park will need to make a written finding as to whether a restoration project might inadvertently result in impairment to park resources and values. If impairment may result, the project may not go forward. For further guidance on the need to make a finding regarding impairment, see Chapter 1 of NPS *Management Policies* and DO 12. e. Also, contact the NPS Office of Policy in Washington, D.C., and the Environmental Quality Division within the Natural Resource Program Center. In addition to NEPA compliance, most restoration projects also will need to comply with the National Historic Preservation Act (NHPA) § 106 consultation process. Section 106 and its implementing regulations at 36 CFR Part 800 do not apply to all cultural and historic resources at or near a potential restoration site. Only the presence of historic properties *on or eligible for* the National Register of Historic Places triggers the 106 process. Furthermore, compliance with Section 106 and Part 800 does not require agencies to save historic properties. Instead, these provisions require parks to undergo the consultation process in order to evaluate fully the effects of proposed actions, such as proposed restoration work, on historic properties. Once a park consults fully with the appropriate parties, including NPS cultural resource staff, state historic preservation officers, tribal historic preservation officers, other interested groups, and the public, the Section 106 process is completed and the park should proceed with the restoration project. As a result of information obtained during consultation, however, the park may decide to mitigate the damage to historic properties that will be caused by the restoration project. Mitigation to historic properties may include protection of certain historic features, documentation, curation, research, interpretation, education, recordation, or other courses of action. Restoration projects may also be affected by other laws and guidance. For a list of these other laws and guidance, see Appendix A of this Reference Manual. In addition, for assistance in determining which requirements are applicable to a given project, contact your compliance specialists in the park, regional offices, system support offices, and the Natural Resource Program Center. After complying with all the laws and policies triggered by the project, the park should select the alternative that best balances the competing considerations including effectiveness, the desired time of recovery, the environmental impacts, the available and potential staff, the available and potential funding, and relevant compliance efforts. The potential for restorative success, immediacy, and the degree of disturbance may also dictate the decision to restore, or only reclaim, revegetate, or stabilize a site. The park may adopt a combination of alternatives for experimental management, for adaptive management, or for restoration conducted in phases over a long period. For example, a park could restore three comparable sites in different ways such as by natural recolonization, by treatment to accelerate natural recolonization (such as burning in a fire-adapted ecosystem), and by revegetation.

#### **Step 6. Develop the Project Plan**

The project plan is based on the selected alternative(s) and details the discrete tasks to achieve the restoration goal and objectives. The project plan ("work plan") is used to develop technical specifications, plan sheets, and material specifications for contracts; to otherwise provide clear direction for implementation of the restoration (in a non-contract situation); and to procure project funding. (See Steps 7 and 8 below concerning finalizing and implementing the plan).

First, the project plan should clearly articulate the goals of the project and how these goals will be assessed. Then, discrete project tasks must be identified. Usually, tasks are defined by type of activity and in chronological sequence. After the tasks are identified, planners should:

- define the materials, equipment, and personnel that are required to complete the task;
- describe each task in detail sufficient for the method of implementation (e.g., contract, park staff, or volunteers), including specifications such as grade, volume, area, density, material, depth, etc.;
- determine the time required to complete the task; and
- identify the point in the project sequence when work on a specific task can begin and when work must be completed to avoid delay in initiating subsequent tasks.

In addition to written task descriptions, the plan should contain well-designed maps and technical drawings that show site-specific requirements and details that are difficult to describe. Mapping is commonly done planimetrically using standard survey techniques, enlarged aerial photographs, and topographic maps. GIS methods often augment modern mapping techniques. If needed, technical drawings (e.g., cross-sections) should be prepared to detail design specifications for work localities, including grades, depths, material handling, amendments, and other site-specific tasks or treatments.

#### **Step 7. Finalize the Project Plan and Funding Requests**

Based on the specific restoration tasks developed in Step 6, the project plan is finalized and project costs developed. A complete project plan consists of the statement of the problem; descriptions of the technical approach, methods, and tasks; identification of key park personnel and qualifications; a list of equipment and personnel needs, costs, and schedule; and expected results or outcomes. When details are finalized, additional compliance or consultations may be necessary (e.g., Clean Water Act § 404 review, and National Historic Preservation Act § 106 and Endangered Species Act § 7 consultations).

**Cost development.** Cost estimates for each task are needed for soliciting project funding and contracting. Cost estimates are based on the list of discrete tasks developed in Step 6, above. As necessary for each task, material purchase costs, transportation costs, and the time required/cost per hour for labor and equipment should be accounted for. For bookkeeping purposes, it may be useful to tally all tasks and estimated costs using a spreadsheet. The maintenance divisions of some parks are able to estimate costs for heavy-equipment work. Otherwise, a restoration specialist, geologist, hydrologist, revegetation specialist, or the Geologic and Water Resources divisions may be consulted. In addition, certain funding sources may require specific cost-estimating protocols and formats. For example, NPS line-item construction funds (>\$500,000 projects) require a standard A, B, or C level cost-estimate format.

If possible, the cost structures of recently-issued heavy equipment contracts or restoration contracts in or around the park should be analyzed to determine the average local cost for different types of tasks (e.g., cost of excavation and fill per cubic yard, revegetation per acre, and road removal per acre). This information can be used to roughly estimate the cost of a restoration project. **Funding application.** Sources of funding in and outside NPS are numerous. The Associate Directorate for Natural Resource Stewardship and Science coordinates funding calls for certain fund sources and can refer parks to outside sources of funding. Projects costing more than \$500,000 are eligible for construction funding. Such projects must be submitted in response to calls for construction projects and are selected through the Choosing by Advantages process, using regional and national panels. For all fund sources, restoration projects should be reflected in the Project Management Information System. In most cases, the project-funding proposal should include a summary of the restoration tasks described in Step 6. As appropriate, specific plans for research, data management, analysis, quality control or assurance, and interpretation to the public may be included in the funding proposal.

#### **Step 8. Implement and Oversee the Project**

Although the park is responsible for a restoration project, the restoration may be overseen by contractors; central office staff, such as those at the Natural Resources Program Center, the region, or the Denver Service Center; restoration nonprofit organizations; or a combination of the above.

**Project supervisor.** The work plan for any restoration project should identify a project supervisor, who is the primary person responsible for planning, designing, and implementing the work. The project supervisor ensures that materials are available, outside experts are consulted as necessary, and appropriate equipment is used; schedules crews; leases equipment; coordinates fueling, servicing, and mobilization; coordinates equipment operations; and ensures the availability of administrative support. Regardless of how the project is implemented (e.g., contract, volunteers, etc.), the project supervisor should constantly monitor the on-the-ground restoration, particularly all earthmoving. The information gained by observing the excavations is also invaluable in later stages of the project, including reporting and monitoring. **Contracting.** Contracting should allow for flexibility during the project. In most projects, the restoration plan will change as original surfaces or stream channel components are uncovered or other conditions change. Contracts should include:

- a clear and concise description of the site and the intent for the project; a description of each task (typically, the bid item), including quantities and technical specifications; and
- technical drawings of the site and specific bid items such as plan maps and cross-sectional views of existing and proposed grades.

Method of payment for each bid item can vary. Payments based on excavated and placed volumes provide incentive to the contractor to do the work efficiently. Payments based on actual hours worked are most appropriate if the quantification of volumes is difficult or extremely time consuming or design work must be done as the restoration progresses. Such payment is particularly appropriate if the contractor and operators can be trusted not to take advantage of hourly pay. Lump sum payments are discouraged because they may result in short-changing the specifications or restoration needs and in problems when changes in design require additional work.

**Selecting contractors.** Contracts may base selection criteria on bid price, demonstrable experience in restoration, unique capabilities by a few contractors, or a combination of all three. Experienced restoration contractors and equipment operators can provide invaluable feedback on approaches to earthwork.

### Step 9. Reporting Activities and Results

Details about the restoration and recovery should be recorded and archived to provide information about the techniques, costs, successes, and failures, and to assist in designing future restoration projects. The details to be reported are the reason, time, and location of tasks; materials and equipment and the associated costs; the labor and equipment time for each task; conditions during completion of each task; monitoring results; additional maintenance (if needed); and the rate of recovery.

### Special restoration situations

In addition to following the general steps described above, restoration activities in the special situations described below often require additional expertise and considerations. 1. Restoration in wilderness Disturbed lands in NPS wilderness areas detract from the wilderness experience and can cause severe impairment of resources. Abandoned or rarely used roads in wilderness seldom receive adequate maintenance, due in part to a general reluctance to use motorized equipment in wilderness. The lack of appropriate maintenance or restoration often leads to severe erosion and overall degradation of natural systems. Before planning and implementing restoration in an NPS wilderness, the park's wilderness management plan should be reviewed. The minimum requirement decision tree, described in DO 41 Wilderness Preservation and Management, should be used to decide whether a proposed wilderness restoration is necessary. If it is, the restoration must be done with the appropriate methods. Areas that were originally disturbed by pick and shovel may be restored with a pick and shovel. Likewise, areas that were originally disturbed by heavy equipment may need to be restored with heavy equipment to achieve natural system forms and functions. An inadequate procedure or tool often causes incomplete or delayed restoration and continued damage to the resources.

### Section 1133(c) of the Wilderness Act provides as follows:

*[E]xcept as necessary to meet minimum requirements for the administration of the area for the purpose of this chapter (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area. (Italics added for emphasis.)*

This means that the Wilderness Act expressly allows the NPS to use motorized equipment when necessary, including for restoration of disturbed lands in a wilderness area.

### 3. Reducing Abandoned Mine Hazards

The National Park Service Abandoned Mine Land (AML) Program has identified more than 3,000 mine sites in the National Park System, which include 11,000 underground openings or hazardous features and which cover approximately 30,000 acres in 140 parks. Planning and implementing mine closures generally follow the steps outlined in the General Restoration Steps described above. However, the consultation process required by Section 106 of the National Historic Preservation Act and its regulations at 36 CFR Part 800 is particularly important for abandoned mine closures, because certain abandoned mines may be "historic properties." The Section 106 consultation process is discussed above in Step 5 of General Restoration. After completing the consultation, parks should generally proceed with the mine closure in order to reduce safety hazards or with completely restoring a mine area to a pristine condition. Where appropriate and consistent with natural resource protection and safety concerns, the park should also mitigate the damages to historic properties caused by the mine closure or restoration. Mitigation may include protection of certain historic features, documentation, curation, research, interpretation, education, recordation, or other courses of action.

**Shafts and inclines :** Shafts and inclines can be closed in several different ways. In the absence of significant historic properties or critical habitat, permanent closures that return the land to a relatively pristine condition are preferred. If access for heavy equipment is good and adequate mine waste is available onsite, shafts should be backfilled to the approximate original contour or slightly above to allow future settling.

In sensitive or wilderness areas where heavy equipment may not be acceptable (see wilderness subsection above for discussion of appropriate restoration tools in wilderness), a variety of methods can be used for closing shafts. Prison laborers have been used to backfill shallow shafts by hand. For deeper shafts where hand-backfill would be impractical, polyurethane foam (PUF) plugs are formed near the collar of the shaft and the remainder of the shaft is backfilled with waste rock from the site. PUF plugs are formed from two liquid components that react when they are combined, expanding to 30 times their original volume and turning into a rigid plug within minutes. The materials can be packed into a site or dropped by helicopter without adverse effects on the site or its access. When properly designed and installed, PUF closures can support great loads such as vehicles and heavy equipment driving over the reclaimed surfaces. Steel grates and nets of braided steel cable have also been made onsite. Such closures are susceptible to vandalism but may be appropriate in some sites. Where shafts provide significant habitat for bats, steel grates are designed to keep people out but allow bats access and egress. With careful planning, most of these closures are compatible with cultural values in historic mine sites. **Adits and tunnels :** Adits and tunnels are closed by a variety of techniques depending on site conditions and available material. Backfills, bulkheads, steel gates, cable nets, and bat gates are used to close adits. As much of the portal as

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

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possible should be backfilled when equipment access, material availability, and habitat are not constraints. Bulkheads can be constructed of PUF, native stone, and mortar or of dry-stacked native stone, preferably in conjunction with backfilling to the portal.

Steel gates and cable nets are less resistant to vandalism than bulkheads. Bat gates, although not impervious to vandalism, are designed of very heavy or vandal-resistant steel and effectively deter access while protecting critical habitat for bats and other species such as desert tortoises.

Stopes: Where large stopes have been mined near the surface or where they have breached the surface to form a glory hole, some type of support should be provided. Good options are PUF and various types of grout.

See site for more details.

Methodology:

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## Assignment Workpaper

Prepared by: Sean Pettersen 04/05/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** C NPS DEVA 01 **Subsection** Survey C.1 & C.2  
**Program Name** Survey-Inventory  
**Subject** Death Valley National Park Site Visit

**Origination Doclink** ■

### Purpose:

To determine how Death Valley National Park inventory's, funds, prioritizes, and mitigates dangerous mine opens located in the Park. To determine what mitigation measures have been taken at a mine where a visitor died.

### Scope:

NPS site visit

### Source:

Site visit was performed by Sean Pettersen DOI-OIG in March 2007

### Conclusion:

There are many hazardous mine features at the Keane Wonder Mine that are easily accessible to visitors. Although the hike to the open mine features was difficult, it still receives heavy visitation. For example, during our site visit there was a family exploring to old dangerous mine shafts. The most accessible mine features located near the parking lot have been covered with steel cable netting, but there are no signs warning visitors to stay off the old mine structures.

The mine opening where a visitor died had been mitigated with cable netting. However, the netting had been vandalized and visitors can still enter the opening. There was evidence that visitors were still going in to the mine...their footprints could be seen.

See below for details on inventory, funding, priorities, mitigation, accidents/fatalities and details on the site conditions.

### Details:

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According to David, the Park was created, in part because of the mining history that occurred within the Park boundaries. Visitors are drawn to the Park and several sites, especially the Keane Wonder Mine because of the historical mines. He stated that there has been so much mining in the some areas that the terrain resembles Swiss cheese.

### Inventory

There are 926 features listed on the inventory, however, David stated that he knows this inventory is incomplete and is not representative of the need for mitigation. He estimates there are about 2,000 features in the Park that need to be mitigated. David stated that the 926 sites are the highest priorities in the Park...of the sites he knows about. However, he believes that the inventory is incomplete so he is not sure if the Park's highest priority sites are even on the list.

There are 3,434 known mine sites features in Death Valley National Park and there is potentially up to 6,000 to 10,000 features. The total number is unknown (C.NPS.DEVA.03 Death Valley Estimated AML Sites ■).

### Funding

David stated that there has been no funding available from NPS-GRD and Fee Demo funds where available beginning two years ago. [Get funding documents from David](#)

### Priorities

Each of the known AML sites for Death Valley have been assigned ranking scores. The overall hazard score is a combination of two:

- The Hazard Ranking
- The Access Ranking

The higher the score, the higher the hazard to visitors.

## Mitigation

There has been only one closure at the park in the past five years. The AML program at the Park has been neglected over the years. According to David, at the current rate it will take 10,000 years to mitigate all the safety hazards at the Park. He stated that shifting priorities within the park has had an adverse effect of long-term programs such as AML.

Death Valley is not working with other agencies to inventory or mitigate AML sites. David stated that he has had preliminary discussion with the Nevada Division of Minerals (part of the Park known as the Nevada Triangle is in Nevada).

## Accidents/Fatalities

The Keane Wonder Mine was a site where there was a visitor fatality. [REDACTED] (C.NPS.DEVA.05 Fatality Accident Report [REDACTED]). According to David, there were no signs at the site prior to the accident, but the shaft where the accident occurred were sealed with metal mesh netting after the accident.

The trail leading to the Keane Wonder Mine is one of the 4 maintained trails within the Park and is a heavily visited area. There is a sign on the main road directing visitors to the site and there is a well maintained dirt road that leads to a parking lot directly beneath the Mill site. The site is also located on the Park Map. There was a small sign on the dirt road that stated "hazardous mine area." This was the only warning sign that is somewhat visible to visitors.

The Mill site had several mine shafts that have been closed by securing wire netting over the openings. These shafts are close to the parking lot and are the most accessible by visitors. It was clearly evident by the sagging that visitors were climbing out on the netting. The structure at the mill site was decaying timbers and didn't appear to be too stable. There were no warning signs in this area.

The trail leading to the actual mine site was arduous...1,500 vertical feet in a mile. According to David Ek most visitors wouldn't make it to the mine site because of how difficult it was to climb the trail. The first adit was



about 1/2 way up the trail and was just feet away from the main trail and was easily accessible to anyone who hiked up the trail (see picture IMG\_1812 small.JPG). There was nothing preventing visitors from entering the adit and it was clear that the door had been open for a long period of time because there was so much dirt build up around the door that it was unable to close. There were no signs posted. The next opening was another adit



that was also next to the trail and nothing warning of hazards or preventing a visitor from staying out. At the entrance to this opening there was what appeared to be a picnic basket (see picture IMG\_1814 small.JPG). After a



short period, two men came out of the adit. In the same general area there were several adits, shafts, and a large structure deteriorating mine structure (see pictures IMG\_1815 small.JPG). There were no sign warning visitors to stay off this structure and it would be easy for anyone to walk out on the structure.

Further up the trail we was the opening where the visitor fell down the mine shaft and died. [REDACTED]. There was a wire mesh netting several feet inside the adit with a large "mine hazard area" sign attached. This was the only warning sign in the area. (see C.NPS.DEVA.06 Background on the Fatality [REDACTED] for a discussion on this type of sign) The sign does not warn visitor of the dangerous vertical mine shaft inside the adit. The netting had been vandalized and it was clear that visitor were still entering the dangerous area (there were footprints past the point where the netting had been vandalized - the pictures do not show the footprints) (see picture [REDACTED]). The shaft the visitor fell down was only a short distance inside the opening. Directly in front of the adit there was a shaft that had been covered by netting. I asked David if he knew that the netting had been vandalized and he stated no. I also asked if there were any inspections performed in the area and he stated that he did not know of any employee going to the Keane Wonder Mine to inspect the cable netting.

Above the mine, and only a short distance away, where the visitor died there was another set of dangerous adits and shafts (mine openings) that were all wide open. There was no fencing or signs warning visitor of the dangers. There was a small sign that David said NPS erected to deter people from entering the area, but it was clear that it was ignored and said nothing of the dangers posed by abandoned mines, therefore inadequate.



The sign was a "no hiking" sign and another illegible sign (see picture IMG\_1825 small.JPG).



[REDACTED] (IMG\_1829\_2 small.JPG) The opening the people were in is an extreme hazard because the roof is collapsing. The ceiling inside the mine, only a few feet from the entrance, was collapsing (see



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The last opening we visited was a near vertical shaft that was at least 75 feet deep (David's estimate). It was clear that visitors were using a steel cable to get in and out of the shaft (see picture IMG\_1846 small.JPG).

All of the approximately 10 mine features we encountered that were easily accessible to any one on the trail at the Keane Wonder Mine above the mill site, only one was closed to the public.

In another incident, a park employee suffered the effects of "bad air" at a mine shaft and nearly died (I.NPS.DEVA.14 DEVA - Mike Ward incident [REDACTED]).

**Methodology:**

Interviewed NPS personnel at Death Valley, visited AML sites in Death Valley and reviewed and summarized supporting documentation provided by NPS-Death Valley National Park.

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                      John Illson                      07/18/2008 08:56 06 AM

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NPS site visit

**Source:**

Site visit was performed by Sean Pettersen DOI-OIG in March 2007

**Conclusion:**

There are many hazardous mine features at the Keane Wonder Mine that are easily accessible to visitors. Although the hike to the open mine features was difficult it still receives heavy visitation. For example, during our site visit [REDACTED] The most accessible mine features located near the parking lot have been covered with steel cable netting but there are no signs warning visitors to stay off the old mine structures.

The mine opening where a visitor died had been mitigated with cable netting. However, the netting had been vandalized and visitors can still enter the opening. There was evidence that visitors were still going in to the mine...their footprints could be seen.

See below for details on inventory, funding, priorities, mitigation, accidents/fatalities and details on the site conditions.

**Details:**

**General Information**

According to David, the Park was created, in part, because of the mining history that occurred within the Park boundaries. Visitors are drawn to the Park and several sites, especially the Keane Wonder Mine, because of the historical mines. He stated that there has been so much mining in the some areas that the terrain resembles Swiss cheese.

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There are 3,434 known mine sites features in Death Valley National Park and there is potentially up to 6,000 to 10,000 features. The total number is unknown (C.NPS.DEVA.03 Death Valley Estimated AML Sites [REDACTED]).

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**Priorities**

Each of the known AML sites for Death Valley have been assigned ranking scores. The overall hazard score is a combination of two:

- The Hazard Ranking
- The Access Ranking

The higher the score, the higher the hazard to visitors.

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There has been only one closure at the park in the past five years. The AML program at the Park has been neglected over the years. According to David, at the current rate it will take 10,000 years to mitigate all the safety hazards at the Park. He stated that shifting priorities within the park has had an adverse effect of long-term programs such as AML.

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The Keane Wonder Mine was a site where there was a visitor fatality. [REDACTED] [C.NPS.DEVA.05 Fatality Accident Report](#) [REDACTED]). According to David, there were no signs at the site prior to the accident, but the shaft where the accident occurred were sealed with metal mesh netting after the accident.

The trail leading to the Keane Wonder Mine is one of the 4 maintained trails within the Park, and is a heavily visited area. There is a sign on the main road directing visitors to the site and there is a well maintained dirt road that leads to a parking lot directly beneath the Mill site. The site is also located on the Park Map. There was a small sign on the dirt road that stated "hazardous mine area." This was the only warning sign that is somewhat visible to visitors.

The Mill site had several mine shafts that have been closed by securing wire netting over the openings. These shafts are close to the parking lot and are the most accessible by visitors. It was clearly evident by the sagging that visitors were climbing out on the netting. The structure at the mill site was decaying timbers and didn't appear to be too stable. There were no warning signs in this area.

The trail leading to the actual mine site was arduous...1,500 vertical feet in a mile. According to David Ek most visitors wouldn't make it to the mine site because of how difficult it was to climb the trail. The first adit was

about 1/2 way up the trail and was just feet away from the main trail and was easily accessible to anyone who hiked up the trail (see picture ). There was nothing preventing visitors from entering the adit and it was clear that the door had been open for a long period of time because there was so much dirt build up around the door that it was unable to close. There were no signs posted. The next opening was another adit

that was also next to the trail and nothing warning of hazards or preventing a visitor from staying out. At the entrance to this opening there was what appeared to a picnic basket (see picture ). After a

short period, [REDACTED] In the same general area there were several adits, shafts, and a large structure deteriorating mine structure (see pictures ). There were no sign warning visitors to stay off this structure and it would be easy for anyone to walk out on the structure.

Further up the trail we was the opening where the [REDACTED] There was a wire mesh netting several feet inside the adit with a large "mine hazard area" sign attached. This was the only warning sign in the area. (see [C.NPS.DEVA.06 Background on the Fatality](#) [REDACTED] for a discussion on this type of sign) The sign does not warn visitor of the dangerous vertical mine shaft inside the adit. The netting had been vandalized and it was clear that visitor were still entering the dangerous area (there were footprints past the point where the netting had been vandalized - the pictures do not

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The sign was a "no hiking" sign and another illegible sign (see picture ).

It was at these set of mine openings where I saw [REDACTED] When we got to the [REDACTED] picture  and [REDACTED] The opening the people were in is an extreme hazard because the roof is collapsing. The ceiling inside the mine, only a few feet from the entrance, was collapsing ( see

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Methodology:  
N/A

**History**

**Status** Approved **Request Review**

**In Progress Edit** Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

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Prepared by: Sean Pettersen 04/05/2007

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**Section** C NPS DEVA 01 **Subsection** Survey C.1 & C.2  
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Submission:	Submitted	Sean Pettersen	06/20/2007 03:10 51 PM
Level 1 Approval:	Approved	William McMullen	06/20/2007 04:00 04 PM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:46 39 PM

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David stated that there has been no funding available from NPS-GRD and Fee Demo funds where available beginning two years ago.

**Priorities**

Each of the known AML sites for Death Valley have been assigned ranking scores. The overall hazard score is a combination of two:

- The Hazard Ranking
- The Access Ranking

The higher the score, the higher the hazard to visitors.

**Mitigation**

There has been only one closure at the park in the past five years. The AML program at the Park has been neglected over the years. According to David, at the current rate it will take 10,000 years to mitigate all the

safety hazards at the Park. He stated that shifting priorities within the park has had an adverse effect of long-term programs such as AML.

Death Valley is not working with other agencies to inventory or mitigate AML sites. David stated that he has had preliminary discussion with the Nevada Division of Minerals (part of the Park known as the Nevada Triangle in Nevada).

## Accidents/Fatalities

The Keane Wonder Mine was a site where there was a visitor fatality. [REDACTED] [C.NPS.DEVA.05 Fatality Accident Report](#) [REDACTED]. According to David, there were no signs at the site prior to the accident, but the shaft were the accident occurred were sealed with metal mess netting after the accident.

The trail leading to the Keane Wonder Mine is one of the 4 maintained trails within the Park and is a heavily visited area. There is a sign on the main road directing visitors to the site and there is a well maintained dirt road that leads to a parking lot directly beneath the Mill site. The site is also located on the Park Map. (note: because these sites are located on maps and signs direct visitors to the site, we consider this an invitation to the public SRP) There was a small sign on the dirt road that stated "hazardous mine area." This was the only warning sign that is somewhat visible to visitors.

The Mill site had several mine shafts that have been closed by securing wire netting over the openings. These shafts are close to the parking lot and are the most accessible by visitors. It was clearly evident by the sagging hat visitors where climbing out on the netting. The structure at the mill site was decaying timers and didn't appear to be too stable. There were no warning signs in this area.

The trail leading to the actual mine site was arduous...1,500 vertical feet in a mile. According to David Ek most visitors wouldn't make it to the mine site because of how difficult it was to climb the trail. The first adit was

about 1/2 way up the trail and was just feet away from the main trail and was easily accessible to anyone who hiked up the trail (see picture ). There was nothing preventing visitors from entering the adit and it was clear that the door had been open for a long period of time because there was so much dirt build up around the door that it was unable to close. There were no signs posted. The next opening was another adit

hat was also next to the trail and nothing warning of hazards or preventing a visitor from staying out. At the entrance to this opening there was what appeared to a picnic basket (see picture ). After a

short period, two men came out of the adit. In the same general area there were several open adits, shafts, and a large structure deteriorating mine structure (see pictures ). There were no sign warning visitors to stay off this structure and it would be easy for anyone to walk out on the structure.

Further up the trail we was the opening where the visitor fell down he mine shaft and died [REDACTED]. There was a wire mess netting several feet inside the adit with a large "mine hazard area" sign attached. This was the only warning sign in the area. (see [C.NPS.DEVA.06 Background on the Fatality](#) [REDACTED] for a discussion on this type of sign).



This is the mine entrance where the visitor went in and died. Note the cloure has been breached.

The sign does not warn visitor of he dangerous vertical mine shaft inside the adit. The netting had been vandalized and it was clear that visitor were still entering the dangerous area (there were footprints past the point where the netting had been vandalized - the pictures do not show the footprints) (see picture ). The shaft the visitor fell down was only a short distance inside the opening. Directly in front of the adit there was a shaft that had been covered by netting. I asked David if he knew that the netting had been vandalized and he stated no. I also asked if there were any inspections performed in he area and he stated that he did not know of any employee going to the Keane Wonder Mine to inspect the cable netting.

Above the mine, and only a short distance away where the visitor died there was another set of dangerous adits and shafts (mine openings) that were all wide open. There was no fencing or signs warning visitor of the dangers. There was a small sign that David said NPS erected to deter people from entering the area but it was clear that it was ignored and said nothing of the dangers posed by abandoned mines therefore inadequate.

The sign was a "no hiking" sign and another illegible sign (see picture ).

It was at these set of mine openings where I saw [REDACTED] [picture](#) . The opening the people were in is an extreme hazard because the roof is collapsing. The ceiling inside the mine, only a few feet from the entrance, was collapsing

( see picture  )



Young boy exiting the dangerous mine opening



Inside the opening..note the collapsing roof.

In a recent document, Park personnel described this particular opening as, "extremely unstable and are largely supported by old friable mining timbers.." ( C.NPS.DEVA.04 Death Valley Priorities [REDACTED], [REDACTED]). After seeing the family freely exploring the dangerous mine openings I asked David if he had any responsibility to tell the people about the dangers in the old mines. He stated that thought about saying something but he didn't think they would listen to him anyway so he didn't say anything.



The last opening we visited was a near vertical shaft that was at least 75 feet deep (David's estimate). It was clear that visitors were using a steel cable to get in and out of the shaft ( see picture IMG\_1846 small.JPG see picture below).



Cable going into shaft can be seen in this image.

All of the approximately 10 mine features we encountered that were easily accessible to any one on the trail at the Keane Wonder Mine above the mill site only one was closed to the public. The signs in area were inadequate to warn visitors of the dangers at this site.

In another incident, a park employee suffered the effects of "bad air" at a mine shaft and nearly died ( I.NPS.DEVA.14 DEVA - Mike Ward incident [REDACTED] )

Methodology:  
N/A

**History**

Status Approved Request Review

In Progress Edit Sean Pettersen/DEN/OIG/DOI

Confidentiality Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

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### Assignment Workpaper

Prepared by: Sean Pettersen 04/09/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C NPS DEVA 04 Subsection Survey Step E-2  
Program Name Survey-Inventory  
Subject Death Valley Priorities

Origination Doctlink 

**Purpose:**  
To identify the top priority sites for mitigation at Death Valley National Park. To determine how the priorities were determined.

**Scope:**  
Mitigation Priorities

**Source:**  
  
Priority list was provided by David Ek, Death Valley National Park 760.786.3258. DEVA AML Priorities v.2.doc

**Conclusion:**  
The top 5 priorities identified by park personnel and estimated cost to mitigate are:

1. An unnamed copper mine - Vertical shaft at least several hundred feet deep in a frequently visited area. Campfire rings have been seen within 15 feet of the opening.
2. The Widow Mine - A complex system of shafts and adits. An extremely dangerous mine due to the presence of hidden near-surface mine workings. There is a cooperative partnership between the Park and Rio Tinto (mine owners) to mitigate the safety hazards at the old workings.
3. The Keane Wonder Mine - Several deep, hidden or unstable adits and shafts. Signs were placed around an entrance where a visitor was killed but people still enter the mine. This is the area where OIG staff observed a family exploring the mine openings. Park Service described the opening that we have a picture of a young boy coming out of as "Entire sections of the roof are extremely unstable and are largely supported by old friable mining timbers. These unstable supporting timbers are totally accessible to visitors, adding even more to the safety concern."
4. Unnamed adit - Visibility to public is moderate, but the hazard rating is high due to an old stick of dynamite stuck in a bore hole in the ceiling of the mine.
5. The Corkscrew Mine - This mine has a history of mineral collectors breaking in and collecting rare minerals.

**Details:**  
According to David Ek, these are what he considers the Park's top priorities. Although all the sites are on the Park's inventory, they have all scored high on the hazard ranking. Therefore, he used his judgement to select the highest priorities.

The list of the top five sites was compiled as a result of a request from Senator Diane Feinstein, CA.

**Methodology:**  
Obtained, reviewed and summarized the Death Valley AML priority list.

Submission:	Submitted	Sean Pettersen	02/15/2008 04:07:55 PM
Level 1 Approval:	Approved	William McMullen	06/01/2007 08:35:17 AM
Level 2 Approval:	Approved	Jack Rouch	03/10/2008 12:47:43 PM

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**Purpose:**  
To identify the top priority sites for mitigation at Death Valley National Park. To determine how the priorities were determined.

**Scope:**  
Mitigation Priorities

Source:



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Conclusion:

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5. The Corkscrew Mine - This mine has a history of mineral collectors breaking in and collecting rare minerals.

Details:

According to David Ek, these are what he considers the Park's top priorities. Although all the sites are on the Parks inventory, they have all scored high on the hazard ranking. Therefore, he used his judgement to select the highest priorities.

The list of the top five sites was compiled as a result of a request from Senator Diane Fienstien, CA.

In addition to these top priorities the attached document states, "Although there are well over 100 extremely high priority mine safety hazards within the park."

Methodology:

N/A

**History**

Status Approved Request Review

In Progress Edit Sean Pettersen/DEN/OIG/DOI

Confidentiality Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

C.NPS DEVA.05 Fatality Accident Report

Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

### Assignment Workpaper

Prepared by: Sean Pettersen 04/12/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C NPS DEVA 06 Subsection Survey Step D 2  
Program Name Survey-Inventory  
Subject Background on the Fatality

Origination Doctlink 

**Purpose:**  
To provide details about the Keene Wonder Mine, an abandoned mine where a death occurred (and mines in general) at Death Valley National Park. To identify NPS responsibility with old mines.

**Scope:**  
AML fatalities and bureau responsibility.

**Source:**  
Relevant page of the NPS Handbook for Remediation of Abandoned Mine Lands provided by John Burghardt, Geologist, Certified Mineral Examiner AML Program, 303.969.2099



Scan001.PDF

**Conclusion:**  
The Keene Wonder Mine and several other mines are important historic resources in Death Valley and attract many visitors. They are located on park maps, mentioned in brochures and have road signs directing visitors to sites. The Park had known that some of the mines were hazardous and had posted signs stating "MINE HAZARD AREA" at many of the sites. The Keene Wonder Mine had been inventoried for hazards but that specific adit was "not explored for deep hazards." the adit was scheduled for closure, but funds that were planned for the closure were used for part of a large project to stabilize the spectacular historic tramway that carried ore from the mine to the mill on the valley floor.

**Details:**  
The case was settled out of court. The Justice Department was willing to settle in part because NPS was vulnerable on several points. The warnings were inadequate. The visitor may have heeded the warning that the area was hazardous. He entered the adit carefully, and only went as far as he could see. Since old mines are an attraction to the area and recognized as valuable resources by the park, the park has a responsibility to provide adequate warnings. These warnings must be sufficiently detailed so that a reasonable person can make an informed decision to avoid the hazard.

The adit should have been explored to see if it contained hidden hazards. If it was considered too hazardous to explore, then it would have been rated a severe hazard and made the top priority for closure. Even if it had not been closed by 1984, the park would have been in a better position to defend its actions. Mine hazards should be evaluated with the curious and uninformed visitor in mind.

The decision to complete more stabilization rather than close those adits may have been an appropriate use of management discretion. The tram system was near intact, it represented a spectacular feat of engineering, and it was in eminent danger of collapse. Failure of any component of the system would have sent shock waves through the cables damaging other structures. In hindsight, mine closures should have been included as part of the project. The cost increase would have been less than 10%.

**Methodology:**  
Obtained and reviewed pertinent section from the NPS AML handbook related to warning signs

Submission:	Submitted	Sean Pettersen	06/01/2007 01:19:42 PM
Level 1 Approval:	Approved	William McMullen	06/12/2007 10:47:42 AM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:47 59 PM

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**Purpose:**  
To provide details about the Keene Wonder Mine, an abandoned mine where a death occurred (and mines in general) at Death Valley National Park. To identify NPS responsibility with old mines.

Scope:  
AML fatalities and bureau responsibility.

Source:  
Relevant page of the NPS Handbook for Remediation of Abandoned Mine Lands provided by John Burghardt, Geologist, Certified Mineral Examiner AML Program, 303 969.2099



Scan001.PDF

Conclusion:  
The Keene Wonder Mine and several other mines are important historic resources in Death Valley and attract many visitors. They are located on park maps, mentioned in brochures and have road signs directing visitors to sites. The Park had known that some of the mines were hazardous and had posted signs stating "MINE HAZARD AREA" at many of the sites. The Keene Wonder Mine had been inventoried for hazards but that specific adit was "not explored for deep hazards." the adit was scheduled for closure, but funds that were planned for the closure were used for part of a large project to stabilize the spectacular historic tramway that carried ore from the mine to the mill on the valley floor.

The case was settled out of court. The Justice Department was willing to settle in part because NPS was vulnerable on several points. The warnings were inadequate. The visitor may have heeded the warning that the area was hazardous. He entered the adit carefully, and only went as far as he could see. Since old mines are an attraction to the area and recognized as valuable resources by the park, the park has a responsibility to provide adequate warnings. These warnings must be sufficiently detailed so that a reasonable person can make an informed decision to avoid the hazard. **Note: we're interpreting this to mean that the warning sign should have warned of the dangerous vertical shaft inside the adit (horizontal mine opening).**

The adit should have been explored to see if it contained hidden hazards. If it was considered too hazardous to explore, then it would have been rated a severe hazard and made the top priority for closure. Even if it had not been closed by 1984, the park would have been in a better position to defend its actions. Mine hazards should be evaluated with the curious and uninformed visitor in mind.

The decision to complete more stabilization rather than close those adits may have been an appropriate use of management discretion. The tram system was near intact, it represented a spectacular feat of engineering, and it was in eminent danger of collapse. Failure of any component of the system would have sent shock waves through the cables damaging other structures. In hindsight, mine closures should have been included as part of the project. The cost increase would have been less than 10%.

Details:  
N/A

Methodology:  
N/A

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## History

Status	Approved	Request Review
<b>In Progress Edit</b>	Sean Pettersen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		
<b>Read Authorization</b>	[Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI	
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## Assignment Workpaper

Prepared by: Sean Pettersen 04/02/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section C NPS LAME 01 Subsection Survey 1 & 2  
Program Name Survey-Inventory  
Subject Lake Mead Recreation Area Site Visit

Origination Doctlink 

### Purpose:

To determine what mitigation measures were taken at an abandoned mine site where a visitor died after falling down a mine shaft.

To determine the completeness of Lake Mead's abandoned mine inventory and to determine how sites are prioritized.

### Scope:

Site visit to a Park where there was a fatality to determine what mitigation measures were taken.

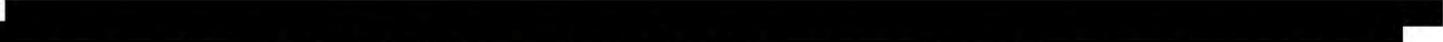
### Source:

Access database provided by Bryan Moore. I have exported relevant spreadsheets in Xcel format and attached them where necessary in the workpaper.



mines.mdb

### Conclusion:

The fatality occurred at the Treasure Vault Mine. 

 NPS spent about a year filling in these holes in about 1977-1978. I was unable to verify that the holes were actually mitigated because no one at the park knew exactly where they were.

The most recent inventory for Lake Mead is 348 sites with 786 openings. The latest inventory consists of a lot of prospect holes but there are about 100 shafts that are considered to be dangerous. He stated that the inventory is about 60% complete.

### Details:

### General Information:

Bryan Moore, Biologist-Natural Resources, is the AML contact at Lake Mead Recreation Area. He has received numerous training classes on AML sites including the Forest Services' AML training and training offered by NPS. AML duties are collateral and the amount of time spent on AML projects is directly related to the amount of funding that is available.

The major roadblocks to mitigating hazardous are the assessment that must be performed prior to a closure. These assessments can be complex and lengthy.

### Inventory

The most recent inventory for Lake Mead is 348 sites with 786 openings. The latest inventory consists of a lot of prospect holes but there are about 100 shafts that are considered to be dangerous. He stated that the inventory is about 60% complete. NPS needs to GPS or reGPS most of the sites and have a team fly over the park to identify openings that are more remote that have not been inventoried. The team needs to then hike to identified sites and collect more complete data.

The inventory is being compiled by a  who are hiking around the park identifying and recording sites. This effort began in 2000. The inventory contains all the sites Bryan is aware of as well as some sites the volunteers have found that he was not aware of.

The site information is entered into the database by Bryan's assistant. New sites, when found, and site updates are put into the system. The assistant performs this work even though it isn't part of her work duties. Bryan stated that it is his responsibility to manage and update the AML database, but with the lack of employees, large increases in his work load and no increases in base budgets, he uses all the help he can get.

Bryan stated that he has never been contacted with information that a visitor reported a site. To his knowledge, this has never happened.

## Accidents/Fatalities

NPS spent about a year filling in these holes in about 1977-1978.

In addition, employees at Lake Mead have found dead bighorn sheep, Gila monsters, snakes, desert tortoise and other wildlife at the bottom of mine shafts.

## Funding

Lake Mead has received minimal NPS funding for AML mitigation. The budget for AML has been approximately \$2,000. The \$2,000 is not available when there are outside funds available for site mitigation. There were some additional money provided to erect a fence around the Katherine Mine site (approximately \$100,000).

The funds that are being used at the moment for site mitigation come from sales of BLM land in Clark County, Nevada under the Southern Nevada Public Lands Management Act (SNPLMA). Under the SNPLMA, the Conservation Initiative funds:

- Cultural Surveys
- Biological Surveys (Bats and tortoise)
- Rare Plant Surveys

(the Army Corp of Engineers perform the studies).

Under the SNPLMA Capital Improvements initiative the actual closures (bat gates, cupolas, backfilling, etc) are funded. Lake Mead submitted a proposal in 2005 for \$303,228  Capital Improvement Proposal.pdf .

## Priorities

In 2005, Lake Mead submitted a Capital Improvements proposal to close several mine openings. Lake Mead "prioritized the mine openings by which species of bats are occupying the roosts, high use areas, their accessibility by visitors and the presence of desert tortoise".

The ranking criteria for SNPLMA Capital Improvements are:

1. Does this project provide opportunities to inform and educate the public about the environment and the responsible use of federal lands?
2. Will this project result in improved quality and/or management of federal lands?
3. Does this project enhance interagency and other partnerships in the promotion of conservation initiatives?
4. Will project evaluation process be built-in?

I asked Bryan what criteria he used to prioritize sites and he stated that GRD had provided him with information on ranking sites. However, he has not ranked the sites in the Park's database. He stated that he has not had the time to rank out each site. He stated that over the past 15 years he has closed/mitigated the sites that can be driven up to and are the most hazardous. He acknowledged that ranking the sites is something that he needs to do and get into the database.

Bryan believes that, overall, mitigating physical safety hazards posed by abandoned mines are not a high priority within the National Park system. However, he stated that it is a high priority within the Lake Mead National Recreation Area and that he, his manager (Kent Turner, Chief of Resource Management 702.293.8941), and the Park Superintendent are all serious about mitigating the safety hazards.

## Site Mitigation

Bryan provided Access Database that shows 31 openings as having been closed from 1992 through 2007  Tbl\_closure.xls . Bryan also provided a list of all the hazardous openings that have been mitigated and being planned for mitigation since 2005. The following was on the list:

### Completed (7 total):

Adit Gates	4
Backfill Shafts	2
Bat Gates	1

### In Progress (3 total):

Cupolas	3
---------	---

Planned (8 total):

Adit Gate	3
PUF	2
Cupolas	0
Bat Gates	3

Bryan has been working closely with Bill Durban of the Nevada Division of Minerals, Bat Conservation International (BCI), and the Army Corps of Engineers (COE) in order to mitigate sites. As stated earlier, the COE has been doing the necessary assessment and there has been discussion that the COE personnel could be training in building bat gates and cupolas to assist with the closures.

**Mine Sites Visited**

During the visit to Lake Mead in March 2007, Park personnel from Joshua Tree National Park were installing cupolas at one of the abandoned mine sites (see picture [redacted]). There are two open shafts in this heavily visited area and a trail led directly to the shafts (see picture [redacted]). At one point, the trail comes within inches of a dangerous shaft opening (see picture [redacted]). The road leading to the site has been closed but it is a short and easy hike to the mine site from where the road is closed. There were two very old, weathered and dilapidated fences and signs around the shafts. Neither the signs nor the fences would have kept people out of the shafts (see picture [redacted]). The supplies and equipment used in the closure had to be flown in by helicopter since it would have been difficult to hike all the steel into the site.

I also visited the Katherine Gold Mine located within less than 1/4 mile of a small group of residences (see picture [redacted]). The hazards at this site were open mine shafts, collapsing workings, and massive a tailings pile. There were several openings (see picture [redacted]) into the complex underground workings. Not long ago, Bryan was standing near the opening of one of the shafts when the ground underneath him gave way. He was able to grab onto the fence to prevent him from going into the mine. He does not know how deep he would have fallen had he gone completely through. Over the years crevasses have formed because of erosion in the tailings pile. Some of these crevasses were more than 20 feet deep (see pictures [redacted]). NPS erected a fence around the entire site, including the tailings pile, at a cost of approximately \$100,000.

**Methodology:**

Obtained, reviewed, and summarized AML documents at LMNRA. Visited AML sites within the LMNRA

Submission:	Submitted	Sean Pettersen	02/15/2008 04:13 28 PM
Level 1 Approval:	Approved	William McMullen	06/01/2007 08:43 27 AM
Level 2 Approval:	Approved	John Illson	07/18/2008 08:58:19 AM

**Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 08/02/2007 04:32:43 PM**

The following information was copied from the rich text field(s) above into this field by Sean Pettersen/DEN/OIG/DOI on Thu 08/02/2007 04:32 PM. For original text, refer to the field(s) above. Additional detail in Linkage was reviewed to address reference note. J Illson 7/18/08

**Purpose:**

To determine what mitigation measures were taken at an abandoned mine site where a visitor died after falling down a mine shaft.

To determine the completeness of Lake Mead's abandoned mine inventory and to determine how sites are prioritized.

**Scope:**

Site visit to a Park where there was a fatality to determine what mitigation measures were taken.

**Source:**

Access database provided by Bryan Moore. I have exported relevant spreadsheets in Xcel format and attached them where necessary in the workpaper.



**Conclusion:**

The fatality occurred at the Treasure Vault Mine. [redacted]

[redacted] NPS spent about a year filling in these holes in about 1977-1978. I was unable to verify that the holes were actually mi iagted because no one at the park knew exactly where they were. This is a picutre of the general area where the accident occurred

The most recent inventory for Lake Mead is 348 sites with 786 openings. The latest inventory consists of a lot of prospect holes but there are about 100 shafts that are considered to be dangerous. He stated that the inventory is about 60% complete.

Details:

### **General Information:**

Bryan Moore, Biologist-Natural Resources, is the AML contact at Lake Mead Recreation Area. He has received numerous training classes on AML sites including the Forest Services' AML training and training offered by NPS. AML duties are collateral and the amount of time spent on AML projects is directly related to the amount of funding that is available.

The major roadblocks to mitigating hazardous are the assessment that must be performed prior to a closure. These assessments can be complex and lengthy.

### **Inventory**

The most recent inventory for Lake Mead is 348 sites with 786 openings. The latest inventory consists of a lot of prospect holes but there are about 100 shafts that are considered to be dangerous. He stated that the inventory is about 60% complete. NPS needs to GPS or reGPS most of the sites and have a team fly over the park to identify openings that are more remote that have not been inventoried. The team needs to then hike to identified sites and collect more complete data.

The inventory is being compiled by a [REDACTED] who are hiking around the park identifying and recording sites. This effort began in 2000. The inventory contains all the sites Bryan is aware of as well as some sites the volunteers have found that he was not aware of.

The site information is entered into the database by Bryon's assistant. New sites, when found, and site updates are put into the system. The assistant is perform this work even though it isn't part of her work duties. Bryon stated that it is his responsibility to manage and update the AML database, but with the lack of employees, large increases in his work load and no increases in base budgets, he uses all the help he can get.

Bryan stated that he has never been contacted with information that a visitor reported a site. To his knowledge, this has never happened.

### **Accidents/Fatalities**

The fatality occurred at the Treasure Vault Mine. [REDACTED]

NPS spent about a year filling in these holes in about 1977-1978. [REDACTED]

In addition, employees at Lake Mead have found dead bighorn sheep, Gila monsters, snakes, desert tortoise and other wildlife at the bottom of mine shafts.

### **Funding**

Lake Mead has received minimal NPS funding for AML mitigation. The budget for AML has been approximately \$2,000. The \$2,000 is not available when there are outside funds available for site mitigation. There were some additional money provided to erect a fence around the Katherine Mine site (approximately \$100,000).

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(the Army Corp of Engineers perform the studies).

Under the SNPLMA Capital Improvements initiative the actual closures (bat gates, cupolas, backfilling, etc) are funded. Lake Mead submitted a proposal in 2005 for \$303,228  Capital Improvement Proposal.pdf.

### **Priorities**

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## Site Mitigation



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Cupolas	0
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Bryan has been working closely with Bill Durban of the Nevada Division of Minerals, Bat Conservation International (BCI), and the Army Corps of Engineers (COE) in order to mitigate sites. As stated earlier, the COE has been doing the necessary assessment and there has been discussion that the COE personnel could be training in building bat gates and cupolas to assist with the closures.

## Mine Sites Visited

During the visit to Lake Mead in March 2007, Park personnel from Joshua Tree National Park were installing cupolas at one of the abandoned mine sites (see picture ). There are two open shafts in this heavily visited area and a trail led directly to the shafts (see picture ). At one point, the trail comes within inches of a dangerous shaft opening (see picture ). The road leading to the site has been closed but it is a short and easy hike to the mine site from where the road is closed. There were two very old, weathered and dilapidated fences and signs around the shafts. Neither the signs nor the fences would have kept people out of the shafts (see picture ). The supplies and equipment used in the closure had to be flown in by helicopter since it would have been difficult to hike all the steel into the site.

I also visited the Katherine Gold Mine located within less than 1/4 mile of a small group of residences (see picture ). The hazards at this site were open mine shafts, collapsing workings, and massive tailings pile. There were several openings (see picture ) into the complex underground workings. Not long ago, Bryan was standing near the opening of one of the shafts when the ground underneath him gave way. He was able to grab onto the fence to prevent him from going into the mine. He does not know how deep he would have fallen had he gone completely through. Over the years crevasses have formed because of erosion in the tailings pile. Some of these crevasses were more than 20 feet deep (see pictures ). NPS erected a fence around the entire site, including the tailings pile, at a cost of approximately \$100,000.



The fatality that occurred within the park happened very close to the Katherine Mine. This image [IMG\\_1595.JPG](#) was taken from the Katherine Mine and it shows the general area where the accident occurred. Since the mine shafts in the area had been backfilled and the accident occurred so long ago NPS did not know the exact location of the shaft. Added by Sean Pettersen 02/13/08

### Methodology:

Obtained, reviewed, and summarized AML documents at LMNRA. Visited AML sites within the LMNRA

## History

Status	Approved	Request Review
In Progress Edit	Sean Pettersen/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	

**Confidentiality** Standard

**Add Document Readers** William McMullen/DEN/OIG/DOI;

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



C.NPS LAME 02 Pictures from Site Visit

because of erosion in the tailings pile.



Some of these crevasses were more than 20 feet deep (see pictures [IMG\\_1592 Cravasses.JPG](#) ). NPS erected a fence around the entire site, including the tailings pile, at a cost of approximately \$100,000.

**Methodology:**

During site visit obtained pictures of AML sites at the LMNRA and described what I saw.

Submission:	Submitted	Sean Pettersen	06/01/2007 01:29 08 PM
Level 1 Approval:	Approved	William McMullen	06/12/2007 01:12:47 PM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:48 28 PM

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The following information was copied from the rich text field(s) above into this field by Sean Pettersen/DEN/OIG/DOI on Tue 01/15/2008 09:43 AM. For original text, refer to the field(s) above.

**Purpose:**

To provide a copy of pictures of sites mentioned in [C.NPS.LAME.01 Lake Mead Recreation Area Site Visit](#) ■

**Scope:**

Site Visit

**Source:**

Pictures were taken by Sean Pettersen, DOI-OIG, 303.236.9133

**Conclusion:**

See pictures below. Pictures were put into this work-paper for ease of opening the site visit work-paper.

**Details:**

During the visit to Lake Mead in March 2007, Park personnel from Joshua Tree National Park were installing cupolas at one of the abandoned mine sites



(see picture [IMG\\_1572 small.JPG](#) ).

There are two open shafts in this heavily visited area and a trail led directly to the shafts. At one point, the trail comes within inches of a dangerous shaft opening



(see picture [IMG\\_1572 small.JPG](#) ).



(see picture [IMG\\_1577 small.JPG](#) ). Note: I was standing on the trail when I took this picture. The opening is right on the trail.

The road leading to the site has been closed but it is a short and easy hike to the mine site from where the road is closed. There were two very old, weathered and dilapidated fences and signs around the shafts. Neither the



signs nor the fences would have kept people out of the shafts (see picture [IMG\\_1573 small.JPG](#) ).

The supplies and equipment used in the closure had to be flown in by helicopter since it would have been difficult to hike all the steel into the site.



I also visited the Katherine Gold Mine located within less than 1/4 mile of a small group of residences (see picture [IMG\\_1580 small.JPG](#) ).

The hazards at this site were open mine shafts, collapsing workings, and massive a tailings pile.

C.NPS LAME 02 Pictures from Site Visit



There were several openings (see picture [IMG\\_1584 One of several mine openings.JPG](#) ) into the complex underground workings. Not long ago, Bryan was standing near the opening of one of the shafts when the ground underneath him gave way. He was able to grab onto the fence to prevent him from going into the mine. He does not know how deep he would have fallen had he gone completely through. Over the years crevasses have formed because of erosion in the tailings pile.



Some of these crevasses were more than 20 feet deep (see pictures [IMG\\_1592 Crevasses.JPG](#) ). NPS erected a fence around the entire site, including the tailings pile, at a cost of approximately \$100,000.

Methodology:  
N/A

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### History

**Status** Approved **Request Review**

**In Progress Edit** Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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C.NPS LAME 04 Letter from Park Visitor to Park Ranger

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 03/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Assignment Program Section** D.  
**Assignment Program Name** Survey-Injuries/Fatalities at AML Sites  
**Finding Outline DocLink:**

**Objective:**

Document information on injuries and fatalities at AML sites on DOI lands.

**Background:**

**Assignment Steps:**

Survey Step	Staff	Work Paper Reference
<b>D. What processes do DOI and its Bureaus have for Identifying and tracking fatalities and injuries resulting from AML sites.</b>		
1 Obtain data for fatalities and injuries on DOI land from sources including the following: DOI and its Bureaus, including the Safety Management Information System (SMIS) and the Abandoned Mine Module (AMM) Mine Safety Health Administration (MSHA) States Internet Searches and prior audits	Stephanie	C.BLM.HQ.01 BLM HQ Meeting with George Stone █ SGC D.BLM.CASTOffice.01 BLM Injuries/Fatlities █ SGC D.MSHA.01 MSHA AML Injury Database █ SGC D.BLM.02 Utah Injuries and Fatalities █ SGC  C.NPS.DEVA.06 Background on the Fatality █ C.NPS.DEVA.05 Fatality Accident Report █ D.BLM.03 Fatalities and Injuries in the Safety Management Information System (SMIS) █ SGC
2 Summarize fatality and injury data to identify overall statistics and compare the lists to identify inconsistencies	Stephanie	G.07 MSHA Incident Data █ D.NPS.01 NPS- Injuries and Fatalities █ D.BLM.04 Fataility near Beatty, NV █ K.BLM.American Flat.01 Safety Issues █ K.BLM.04 Fatality at the Goat Basin Mine █ K.BLM.Arizona.08 ATV Death and Mitigation █ K.BLM.Virginia City.03 AML deaths █ C.NPS.DEVA.06 Background on the Fatality █ C.NPS.LAME.01 Lake Mead Recreation Area Site Visit █
3 Contact selected field offices and parks where fatalities and injuries have occurred to identify potential site visits	Stephanie & Sean	See Section I "NPS Site Visits" and K "BLM Site Visits"

**Conclusion:**

█ The extent of public injuries and fatalities at AML sites on DOI lands is largely unknown. No records are collected or maintained of AML injuries or fatalities by DOI or its bureaus. Data collected by OIG found he following fatalities (see workpapers in Step 2 above):

- Lake Mead NPS: 1 fatality
- Beatty BLM: 1 fatality
- Ameri Flat BLM: 1 fatality
- Goat Basin BLM and JOTR NPS: 3 fatalities (JOTR fatality was actually on BLM land just outside he park boundary
- Death Valley NPS: 1 fatality

D.NPS.01 NPS- Injuries and Fatalities █ (see attachment JOTR- injuries and fatalities.doc)

Assignment Program/Summary Workpaper D.

Virginia City BLM: 2 fatalities  
Kingman BLM: 1 fatality  
Other NPS: 12 fatalities (MISS, NERI, BICY,CANY)

■ These fatalities present clear evidence that significant hazards exist at AML sites and that the potential for more deaths (or injuries) is ominous. **[Auditor Opinion]**  
DOI and the bureaus do not collect or maintain information on accidents at AML sites resulting in injuries or fatalities.

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/03/2008 08:17 25 AM

**Linkage Information**

**History**

**Status** Approved **Request Review**

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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D.BLM 01 DOI and BLM Incident Reporting

Submission: Submitted William McMullen 04/10/2007 10:24 55 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/09/2008 11:10 08 AM

[Linkage Information](#)

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**Status** Approved **Request Review**

**In Progress Edit** John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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2. [REDACTED]  
Unnamed mine (Site 2060507VO002), Promontory Mountains  
Box Elder County (noncoal)

[REDACTED]

The shaft was backfilled in early 1986 as part of the UAMRP's Promontory Project, which closed 107 mine openings on Promontory Point.

3. [REDACTED]  
Elberta Shaft (Site 3110104VO001), near E berta  
Utah County (noncoal)

[REDACTED]

The shaft was backfilled in January, 1986 as part of the UAMRP's Bullion Beck Project.

4. [REDACTED]  
Honorine mine (Site 3040413VO001), Oquirrh Mountains near Stockton  
Tooele County (noncoal)

[REDACTED]

Mine was closed by Tooele County sheriff.

5. [REDACTED]  
Unnamed mine (Site 3070322VO001), Thorpe Hills near Sevenmile Pass  
Tooele County (noncoal)

[REDACTED]

The shaft was backfilled on February 16, 1999 as part of the UAMRP's Fivemile Pass/West Dip Project.

## NONFATAL INCIDENTS

1. [REDACTED] (Wednesday)  
Unnamed mine, above Evans shaft, southwest of Eureka  
Juab County (noncoal)  
[REDACTED] and their dog decided to explore the mine. The dog ran ahead and fell down a winze, landing on a ledge of rotting timbers 35 feet down, with a shaft of unknown depth below. The boys left and returned with a rope. They lowered [REDACTED] down to the ledge to retrieve the dog, but he got stranded there instead. The others summoned help. [REDACTED] and the dog were rescued by the Juab County sheriff. [REDACTED] suffered scratches and bruises, shock, and a possible concussion from a rock that fell on his head. [reported in the Eureka Reporter, vol. 74 no. 30, July 27, 1979]
2. [REDACTED]  
Unnamed mine, Fivemile Pass  
Utah County (noncoal)  
[REDACTED], [REDACTED] of [REDACTED] fell 25 feet into a shaft [REDACTED]. He sustained a broken leg and other fractures and required rescue.
3. [REDACTED]  
C.C. Rich mine, Coal Mine Basin  
Uintah County (coal)  
[REDACTED] of [REDACTED]  
[REDACTED]  
The fire was put out at the request of the state by a federal emergency program project.
4. [REDACTED]  
Maxfield mine (Site 4020214HO013), Big Cottonwood Canyon  
Salt Lake County (noncoal)  
[REDACTED], [REDACTED] and [REDACTED], [REDACTED] of [REDACTED] became lost while exploring the mine. They were rescued after 2-1/2 days underground. Black damp was known to occur in the area.  
The mine was posted with "Danger" signs and put under UAMRP investigation for reclamation. The mine was sealed after a second incident in 1988.
5. [REDACTED]  
Jim Fisk prospect, Ophir Canyon  
Tooele County (noncoal)  
[REDACTED], [REDACTED] a [REDACTED] from [REDACTED] was exploring the [REDACTED]. He fell 60 feet down a winze and over a 12-foot cliff, suffering a broken wrist and sprains.  
The mine was posted with "Danger" signs in January, 1986, and put under UAMRP investigation for reclamation.
6. [REDACTED]  
Lucky Bill mine (Site 4020433VO008), Bonanza Flat  
Summit County (noncoal)  
The [REDACTED] reported that snowmobilers were using a cornice formed by a shaft opening as a jump. The mine had sloughed open recently. In the 1960's a shaft 100 yards away claimed the life of a [REDACTED].  
The area was immediately flagged by the UAMRP. The shaft was backfilled in September, 1986 as part of the UAMRP's Alta Project.
7. [REDACTED]  
Price River Coal Pile, two miles north of Helper  
Carbon County (coal)  
UAMRP staff member [REDACTED], [REDACTED] of [REDACTED] managing a reclamation project to extinguish a fire in an abandoned coal refuse pile. He suffered second degree burns on his arms and legs when he broke through a crust covering burning coal.

The coal refuse fire was extinguished as part of UAMRP reclamation construction underway at the time and completed in 1991.

8. [REDACTED]  
Unnamed mine, Mouth of Rock Canyon  
Utah County (noncoal)  
[REDACTED], [REDACTED] of [REDACTED] suffered severe rope burns, minor cuts, and bruises when he fell approximately 30 feet down a shaft while trying to climb out.

The shaft was backfilled in the summer of 1988 as part of the UAMRP's Wasatch Project.

9. [REDACTED]  
Unnamed mine, Fivemile Pass  
Utah County (noncoal)  
[REDACTED], [REDACTED] lowering himself into the mine when the rope broke. He fell approximately 50 feet and sustained minor injuries. He required rescue by the county search-and-rescue team.

The shaft was backfilled on June 1, 1988 under the direction of the UAMRP in a cooperative effort with the Bureau of Land Management and the claimholder.

10. [REDACTED]  
Monarch mine, North Willow  
Tooele County (noncoal)  
[REDACTED], [REDACTED] entered the mine portal without a flashlight or safety gear and slipped down a shaft. [REDACTED] [REDACTED] went after him and could not climb out.

The mine was flagged with "Danger Do Not Enter" warning tape. See October 22, 1988 report below.

11. [REDACTED]  
Maxfield mine (Site 4020214HO013), Big Cottonwood Canyon  
Salt Lake County (noncoal)  
[REDACTED], [REDACTED], reported incidents of two separate groups of people inside the mine unable to climb out. Four people were 1/3 mile inside the mine. Mine contains vertical dropoffs and 18% grades. The last incident occurred on July 11, 1988.

The mine was sealed in the summer of 1988 as part of the UAMRP's Wasatch Project.

12. **October 22, 1988** (Thursday)  
Monarch mine, North Willow  
Tooele County (noncoal)  
Jim Cook, U.S. Forest Service Wasatch District, reported that two deer hunters had reported encountering a hazardous situation at the mine to him.

The mine was sealed in April, 1989 as part of the UAMRP's Wasatch Project.

13. [REDACTED]  
Hidden Treasure mine, Dry Canyon, near Stockton  
Tooele County (noncoal)  
[REDACTED], [REDACTED] of [REDACTED] was exploring the mine with his scout troop. He became separated from the group and was lost for five days underground. He was rescued uninjured, but required hospitalization.

The mine was sealed under the direction of the UAMRP by the landowner, Sharon Steel, on October 5, 1989.

14. **May 28, 1990** (Monday)  
Mutual Metals Tunnel, Little Cottonwood Canyon  
Salt Lake County (noncoal)

Several reports of parties of explorers entering the mine over the previous weekend. All groups reported encountering bad air and nearly passing out.

The mine was closed in June, 1990 as part of the UAMRP's Wasatch Project.

15. [REDACTED]  
Unnamed mine, Muddy Creek area near Goblin Valley  
Emery County (noncoal)  
[REDACTED] of [REDACTED] reported finding an open box of dynamite just inside the mine portal while visiting the area on the previous weekend.  
  
The situation was reported to the Emery County sheriff for proper disposal of the dynamite. [REDACTED], [REDACTED], and [REDACTED], [REDACTED] destroyed the dynamite on April 12, 1991.
16. [REDACTED]  
Hattie Green mine, Cockscomb Mountains, Location: SW3 NW3 of Section 18 in Township 42 South, Range 1 West SLBM.  
Kane County (noncoal)  
Frank Olson, Kanab Resource Area Bureau of Land Management, told [REDACTED] that there was dynamite reported in the area.  
  
[REDACTED], [REDACTED] BLM Kanab Office, [REDACTED] and [REDACTED], [REDACTED] and [REDACTED] inspected the Hattie Green mine and found eleven sticks of dynamite. [REDACTED] demolition expert with the Kane County Sheriff's office, brought the dynamite out of the mine and destroyed it by soaking it in diesel fuel and then burning it.
17. [REDACTED]  
Unnamed mine, near west rim of the Kennecott pit in Oquirrh Mountains  
Tooele County (noncoal)  
[REDACTED], [REDACTED] of South Jordan was hiking with two friends after dark to camp near the rim of the Kennecott pit. Around 10:30 or midnight Blackburn stumbled 20-30 feet into a 4-foot-wide ventilation shaft. His friends summoned help, but were unable to relocate the shaft for some time. Blackburn was not rescued until 5:25 a.m. He suffered a broken leg, four broken teeth, and cuts and bruises.
18. [REDACTED]  
Unnamed mine, near Alta Guard Station, Little Cottonwood Canyon  
Salt Lake County (noncoal)  
[REDACTED], [REDACTED] of [REDACTED] fell down a 50-foot shaft near Alta while snowboarding. He suffered a concussion and was hospitalized for several days.
19. [REDACTED]  
Rocky Mouth Canyon mine, near Sandy (11000 South 3000 East)  
Salt Lake County (noncoal)  
[REDACTED], [REDACTED] of [REDACTED] crawled through a steel barrier installed by the UAMRP to enter the mine around 8:30 a.m. and fell into a 25-foot-deep winze located about 20 feet inside the mine. Passers-by discovered him around 1:15 p.m. and summoned his parents, who unsuccessfully tried to rescue him. [REDACTED] was finally rescued by Sandy Fire Department and Salt Lake County Search and Rescue crews about 3:00 p.m. [REDACTED] was hospitalized with a shoulder injury. [REDACTED], [REDACTED], [REDACTED] suffered a broken nose during the rescue when a steel bar being removed from the entry hit him in the face.
20. [REDACTED]  
Blackhawk (Summit #1) mine, 12 miles east of Coalville  
Summit County (coal)  
[REDACTED], [REDACTED] reported finding three cartons of blasting caps in a storeroom while dismantling a shop building at the mine.  
  
The UAMRP notified the Summit County Sheriff's office, which destroyed the caps safely on June 7, 1994.
21. [REDACTED]  
Unnamed mine (Site 3060321V0002), Sunshine Canyon, Oquirrh Mountains  
Tooele County (noncoal)  
[REDACTED], [REDACTED], [REDACTED] and [REDACTED], [REDACTED], [REDACTED] both of [REDACTED] crashed their Jeep through a fence and plunged 50 feet down a mine shaft around 3:00 p.m. They survived the fall and

were able to get out of the vehicle, but not climb out of the shaft. The two were rescued around 7:30 by another party of off-roaders who heard their calls for help. [REDACTED] was hospitalized in serious but stable condition with internal injuries; [REDACTED] was treated for minor injuries and released.

The UAMRP capped the shaft with a rebar grate on August 23, 1999 as part of the Fivemile Pass/West Dip Project.

22. [REDACTED]  
Blackhawk (Summit #1) mine, 12 miles east of Coalville  
Summit County (coal)  
[REDACTED] Project Manager, while supervising the reclamation of the abandoned Blackhawk mine, opened the mine's powder magazine and discovered approximately 600 pounds of old, unstable, and deteriorating dynamite. (This amount has one third the explosive force used to blow up the Oklahoma City Federal Building.) The dynamite was located within 200 feet of three 18-inch pipelines that supply Salt Lake City with 85% of its natural gas. This dynamite was successfully burned in place on November 25 in a cooperative effort with the 62nd EOD (Explosive Ordnance Disposal) Team from Tooele Army Depot, the Utah Highway Patrol Hazardous Materials Team, and Summit County.
23. [REDACTED]  
Silver Reef Project Site PH3 (Site 3411306HO001), 14 miles north of St. George  
Washington County (noncoal)  
[REDACTED] Project Manager, while performing the Silver Reef Project, encountered 10 to 12 bags of ANFO (ammonium nitrate and fuel oil) and 15 sticks of NIPAK explosive inside an abandoned explosives magazine.
- The 62nd EOD (Explosive Ordnance Disposal) Team from Tooele Army Depot and the Leeds Volunteer Department successfully disposed of these explosives.
24. [REDACTED]  
Unnamed mine  
Cache County (noncoal)  
Paul Baker, UDOGM Coal Regulatory Program, reported his son=s scouting trip to an abandoned mine: "[REDACTED]". They skied and snowmobiled to a cabin then to the ghost town of La Plata in Cache County. There=s an open shaft and, according to the map (*USGS 7.5' Sharp Mountain Quadrangle, T8N R2E Sec. 11*), there are a few adits in the area. Someone knew almost exactly where the shaft was and took the group there. According to my son=s description, the shaft is about six feet across and was almost bridged over with snow. They got the snow to collapse, then, by holding on to an aspen tree, they were able to lean over and look down the shaft. I understand the shaft is about 500-1000 feet deep."
25. [REDACTED]  
Unnamed mine, Grizzly Gulch, Little Cottonwood Canyon  
Salt Lake County (noncoal)  
[REDACTED] ran into a wire cable from an abandoned mine operation while snowboarding. Ure suffered internal injuries requiring professional emergency medical treatment and hospitalization.
26. [REDACTED]  
Stateline mine, Hamblin Valley  
Iron County (noncoal)  
[REDACTED] of Ivins, slipped and fell about 100 feet down a mine while prospecting. He suffered a broken arm, broken leg, and other injuries and was not discovered and rescued until the day after the accident. He was hospitalized in critical condition.  
\*\*\*see note at end of this document\*\*\*
27. [REDACTED]  
Unnamed mine, 3.5 miles south of Eagle Mountain Development, Lake Mountains  
Utah County (noncoal)  
[REDACTED] was riding a motorcycle when he fell approximately 30 feet down a mine shaft. He suffered a sprained ankle, scrapes and bruises. He was in the mine for three hours.
28. [REDACTED]  
Unnamed mine, near Motoqua Ranch in Santa Clara

Washington County (noncoal)

poured gasoline down an old mine shaft just for kicks. One of the boys threw a burning stick into the mine shaft. The gasoline blew up and burned all three boys. They returned home and their took them to the hospital for treatment.

29.

Unnamed mine, Mineral Basin, American Fork Canyon

Utah County (noncoal)

, \*\*\*\*, ##, and \*\*\*\* of found a cache of old explosives about 50 feet inside a remote mine in Mineral Basin. They brought seven sticks of booster explosive home. 's grandmother reported the find to the Alpine Police Department, which notified the Utah County Sheriff's office.

The Utah County Sheriff's Bomb Squad located the mine and detonated the explosives on September 8.

30.

**April 2, 2002** (Wednesday)

Camp Bird 7 mine (Site 4241127PR002), Temple Mountain

Emery County (noncoal)

A construction crew backfilling this mine for the UAMRP unearthed a carton of blasting caps buried in some rock rubble near the mine. The carton contained about 50 caps.

The 62nd EOD (Explosive Ordnance Disposal) Team from Tooele Army Depot and the BLM HazMat officer successfully disposed of the caps on April \*\*\*\*\*, 2002.

31.

**April 18, 2002** (Thursday)

North Mesa mine (Site 4241135HO007), Temple Mountain

Emery County (noncoal)

A construction crew installing a steel gate in this mine for the UAMRP unearthed a stick of dynamite and a length of fuse buried under a small amount of soil near the mine entrance. The crew stopped work, evacuated, flagged the site with "Danger" tape, and barricaded the roadway with a backhoe to prevent vehicle access. BLM and county law enforcement were notified. In the 24 hours before authorities could respond, someone vandalized the backhoe and stole the dynamite. Subsequent investigation revealed several blasting caps buried with the fuse.

The 62nd EOD (Explosive Ordnance Disposal) Team from Tooele Army Depot and the BLM HazMat officer successfully disposed of the caps and fuse on April 23, 2002.

32.

Unnamed mine, Fivemile Pass area

Utah County (noncoal)

A was hospitalized after falling about 60 feet into a gravel pit on his all-terrain vehicle. Utah County Sheriff's deputies say he was riding with a group of friends around 3:30 p.m. in the Fivemile Pass area when the accident happened. Officers say he drove his four-wheeler through a break in the wall and fell. The man suffered neck and back injuries and several broken bones. He was flown to the University of Utah Hospital. (See: <http://www.msha.gov/SOSA/NearMisses/2004/20040620.asp>)

## INCIDENTS INVOLVING PETS, LIVESTOCK, OR WILDLIFE

1. [REDACTED]  
Unnamed mine, Mineral Basin, American Fork Canyon  
Utah County (noncoal)  
[REDACTED] of [REDACTED] was leading his horse along a trail. The horse fell 40 feet into a shaft that had been obscured by vegetation and was killed.  
  
The shaft was capped in 1983 as part of the UAMRP's Alta-Brighton Project.
2. [REDACTED]  
Unnamed mine, Hidden Valley area above Ogden  
Weber County (noncoal)  
Rowdy, a black Labrador retriever belonging to [REDACTED] of [REDACTED] was found in a shallow shaft by [REDACTED] [REDACTED] [REDACTED] and his [REDACTED] [REDACTED]. Rowdy had run off and not returned to [REDACTED] while hiking in the mountains a month earlier. The dog's weight had dropped from 80 to 37 pounds and it was dehydrated, but otherwise it was uninjured.
3. **February, 1993**  
Unnamed mine, west side of Oquirrh Mountains  
Tooele County (noncoal)  
The Tooele County Search and Rescue team and the Utah Division of Wildlife Resources rescued two female cougars from an 80-foot vertical mine shaft. Houndsmen had chased one cougar into the mine, but the mine was too dark to attempt a rescue. The second cougar was discovered when a climber descended into the mine the following day. It had apparently been there some time. Both cats were tranquilized, removed from the mine, and released.
4. **October, 1996**  
Unnamed mine, northwest of Marysvale  
Piute County (noncoal)  
A dog fell into a shaft. Search and Rescue successfully pulled the dog out of the shaft unharmed.
5. **April 14, 2000 (Friday)**  
East Reef Project (Site 3411320VO001), Duffin mine area, Requa claim  
Washington County (noncoal)  
University of Nevada researchers tracking radio-tagged desert tortoises located one in Site 3411320VO001, a 28-foot-deep vertical shaft. A local climber summoned to rappel into the shaft found that a second tortoise had also fallen into it. It had apparently been in the shaft for about six months. Both tortoises were retrieved alive, although one was injured from the fall. The injured tortoise was provided veterinary care while the healthy one was released on April 17 after observation. Desert tortoises are federally listed as a threatened species and are protected under the Endangered Species Act. The shaft was filled on May 18, 2000, as part of the UAMRP's East Reef Project.

***Many more hazardous mines have been reported to the UAMRP, but without incident. The program receives calls from the public about once a week.***

Additional incidents to research and write up (mostly anecdotal, unsubstantiated, or wildlife/livestock):

The Utah AMR Plan reports on several pre-1983 incidents on pages 28-29, including several nonfatal incidents and four fatalities in the following three incidents:

Flagstaff mine, Wasatch County, 1963 (noncoal)

Two teenage boys entered the mine and descended the shaft on a ladder. The ladder failed and one boy fell to his death.

Unnamed mine, Deep Creek Mountains, Tooele County, 1965 (noncoal)

Rockhounds were investigating a mine when a cave-in occurred, killing one.

**Ricci mine, 1950's** Emery County (coal)

This mine had been sealed after a fire broke out. Two men were killed by gases when they broke the seal and entered the mine to recover equipment.

kids lost in mine in Eureka

Gemini shaft Eureka Juab County (noncoal)

A [REDACTED] to UAMRP staff on [\*\*\*night of Bullion Beck public meeting\*\*\*] that he had once found a group of teenagers sniffing intoxicating fumes from a plastic bag while sitting on the wooden collar of the 1,050-foot deep shaft. The shaft was covered with a steel grate in 1985 as part of the UAMRP's Bullion Beck Project.

incident date unknown (probably late '60's), reported 6/5/86  
unknown mine Uintah County

A [REDACTED] told [REDACTED] that when he was in high school he and a friend took some dynamite the friend had found at an old mine, drove down miles of bouncy dirt road with the dynamite in the trunk to a remote site, and shot at it with rifles to detonate it. His father blanched when he was told, realizing how unstable the dynamite had to have been to be detonated by gunshots.

c. 1983

Allen Hollow mine, Coalville, Summit County (coal)

UAMRP staff found a dead mule deer carcass in a subsidence crevice that was venting fumes from underground coal fire. The deer presumably was seeking the fire's warmth in the winter and was overcome by the fumes. The fire was excavated and extinguished and subsidence holes filled in 1984 as part of the UAMRP's Allen Hollow Project.

Allen Hollow mine, Coalville, Summit County (coal)

[REDACTED] [REDACTED] [REDACTED] reported that a cow belonging to him had once fallen into a subsidence hole at the site and had to be dug out. Subsidence holes at the site were filled in 1987 and 1988 as part of the UAMRP's Coalville 2 and Coalville 3 Projects.

Weber mine, Coalville, Summit County, c. 1985 (coal)

[REDACTED] [REDACTED] [REDACTED] reported to UAMRP staff on [\*\*\*Coalville Project public meeting\*\*\*] that a cow belonging to him had once fallen into a burning coal refuse pile and been killed. The burning coal refuse pile was extinguished and buried in 1986 as part of the UAMRP's Coalville Project.

Castle Gate mine portal on Willow Creek, Carbon County, c. 1986 (coal)

[REDACTED] [REDACTED] a contractor employed by the Price River Coal Co. (AEP?) to seal the portal, reported finding a dead fox carcass in the mine. Black damp was encountered less than 25 feet into the mine.

April 11, 1991

Silver Reef mining district, near Leeds, Washington County (noncoal)

UAMRP staff found a dead mule deer carcass in a 20-foot deep shaft on the north end of Tecumseh Hill.

Union Fuel or Church mine, Grass Creek Canyon near Coalville, Summit County (coal)

moose trapped in portal; story related to [REDACTED] (?); moose bones found in subsidence hole at Union Fuel mine by JCR; same incident?

Nonfatal incident #26:

KTVX and KSL TV reported on 1/9/03 that [REDACTED] [REDACTED] was regaining memory lost in the incident and was claiming that the accident might have been an attempted homicide. Also SL Tribune item (from Cedar City Spectrum) on 1/19/03 reporting the same story. We need to check this out.

**Methodology:**

N/A

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**Add Document Readers**

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D.BLM 04 Fatality near Beaty, NV

## Assignment Workpaper

Prepared by: Sean Pettersen 01/16/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section D BLM 04 Subsection  
Program Name Survey-Injuries/Fatalities at AML Sites  
Subject Fatality near Beaty, NV

Origination Doctlink ■

### Purpose:

To determine what mitigation measures were performed after the fatality at a AML site near Beaty, NV on BLM. To determine the events that led up to the accident.

### Scope:

Fatalities at AML sites

### Source:

BLM-AML staff Tonapah Field Office

### Conclusion:

■ The hole was filled by local residents after the accident. BLM claimed that they had no responsibility for the accident or for AML sites in the area.

### Details:

The mine site was located a short distance from the town of Beaty, NV. The mine shaft was a short distance from a well maintained road. The accident occurred during a cross-country race. The ■ part of the race staff and as far as I could determine they were race marshals. The ■ wandered away from her ■ and fell into the open mine shaft.

According to the BLM staff from the Tonapah Field Office, the accident was not the responsibility of BLM, it was the responsibility of race organizer. In addition, the BLM staff stated that AML sites are not BLM's responsibility, that AML is the responsibility of the state mine inspector.

The mine shaft was back-filled by local residents after the accident. According to BLM the residents took it upon themselves to fill the shaft because BLM was taking too long.

Below are pictures taken at the site where the ■ died. A memorial has been erected.

D.BLM 04 Fatality near Beaty, NV



**Methodology:**

Summarized site visit.

Submission: Submitted Sean Pettersen 02/15/2008 04:15 23 PM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 04/28/2008 12:48 53 PM

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**Record of Discussion**

Prepared by: Stephanie Christian 04/04/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** D BLM.CASTOffice.01 **Subsection** Survey D.1  
**Program Name** Survey-Injuries/Fatalities at AML Sites  
**Subject** BLM CA State Office Injuries/Fatalities

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Team Leader	134 Union Blvd	303-236-9119	John_Illson@doioig.gov
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Richard Garbowski	Asst. State Director	2800 Cottage Way - Suite W-1834	916-978-4361	Richard_Garbowski@blm.gov
Dave Lawler	Coordinator - AML program	2800 Cottage Way - Suite W-1834	916-978-4364	dlawler@ca.blm.gov

**Location** BLM CA State Office

**Date/Time**

03/27/2007 08 00 AM

**Purpose:**

To identify what processes BLM has for identifying and tracking fatalities and injuries resulting from AML sites.

**Scope:**

Injuries and fatalities on BLM AML sites.

**Conclusion:**

It has been a number of years since a fatality has occurred at an AML site in CA; however, the field offices are supposed to enter information into the SMIS. Each field office is required to complete an injury log, but this information is not provided to the AML office to determine accidents and injuries that occur on AML sites. However, if there is an AML site at which the AML program knows of an injury or fatality, these sites are prioritized for mitigation.

**Summary:**

The audit team developed a list of questions for the different audit areas covered under AML. The injury and fatality questions are outlined below and were reviewed for the BLM CA State Office during our survey site visit.

**Questionnaire for BLM State Offices**

**Obtain appropriate documentation to support procedures in place for all Questions**

**Injuries and Fatalities**

*1. Have there been any injuries or fatalities in abandoned mines on bureau land? Do you have any documentation on these?*

It has been a number of years since a fatality has occurred at an AML site in CA; however, the field offices are supposed to enter information into the SMIS. There was a death back in 1990s which occurred in Barstow field office. There was no write-up done on this incident. John has a file on the injuries and deaths he has heard about, but not all of the field offices do this. There is a manual hard file.

2. Do you record injuries and fatalities and how?

It was kind of haphazard. There is no real system to record these injuries.

3. Each field office is required to keep an incident log of injuries, are these provided to the state office?

Each field office is required to complete an injury log, but this information is not provided to the AML office to determine accidents and injuries that occur on AML sites. These reports should go to the safety office. No information is being sent from the safety office to the AML program. There is no assurance that if there is an injury or fatality at an AML site that it is reported to the AML people so it can get fixed. Safety needs to report the incidents to programs in which the accident occurred.

4. Do you submit information on injuries and fatalities to anyone?

This information should be entered into the SMIS.

5. What have you done to mitigate hazards at mines where injuries and fatalities have occurred? If nothing has been done, why not?

Yes, this is a priority. There are not a lot of sites, but these are addressed. John keeps a file on this site. John will provide a list of what he has on these sites.

6. How many other sites have you mitigated over the last 5 years to eliminate physical safety hazards? Were these sites identified on the AMM, other inventory, or on the priority list?

This information is available out of the MIS. There are summary statistics entered out of the field. This data is not supported. This MIS only counts numbers, it does not count specific sites of what gets fixed.

Submission:	Submitted	Stephanie Christian	04/10/2007 04:29:43 PM
Level 1 Approval:	Approved	William McMullen	04/11/2007 02:03 23 PM
Level 2 Approval:	Approved	John Ilson	01/09/2008 11:13:18 AM

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**History**

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**Record of Discussion**

Prepared by: William McMullen 03/22/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** D DOI.01 **Subsection** Survey D.1  
**Program Name** Survey-Injuries/Fatalities at AML Sites  
**Subject** SMIS Reporting Requirements

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
W. McMullen	Evaluator	Lakewood OIG	303 236 9123	william_mcmullen@doioig.gov
Jim Meredith	SMIS Manager	DOI Office of Occupational Health and Safety, Denver	303 236.7128 x232	jm_meredith@ios.doi.gov

**Location** Telephone conversation

**Date/Time**

03/21/2007 10:00 AM

**Purpose:**

Determine requirements for reporting safety-related incidents in the DOI Safety Management Information System (SMIS).

**Scope:**

DOI-wide safety reporting requirements.

**Conclusion:**

- DOI Manual 485 DM 7 provides the only guidance for reporting of safety-related incidents to DOI employees.
- 485 DM 7 is somewhat unclear regarding reporting requirements.
- Other incident reporting systems exist or are being developed within DOI or the bureaus and how the different systems will communicate is unclear.

**Summary:**

According to Jim, DOI Manual 485 DM 7 provides the only requirements for reporting safety-related incidents using SMIS. He, and according to Jim, his boss Diane Schmitz (Director of OHS), both agree that the guidance is unclear with regard to injuries or fatalities suffered by members of the public on DOI lands. Jim stated that injuries or fatalities experienced by the public are not routinely reported in SMIS although the system could accommodate such reporting. Jim stated that DOI "needs a more consistent policy in the Department particularly with regard to fatalities." He cautioned that identifying incidents to report may be difficult unless reporting is confined to fatalities or serious injuries as DOI employees may not ever become aware of less serious incidents. Jim noted that DOI IT was working with several databases including SMIS to try to increase the ease with which data can be shared but that this effort was just beginning. He was not aware of LawNet, apparently the system used by BLM Law Enforcement to report incidents. He did note that NPS was leading a DOI-wide initiative to implement the Incident Management Reporting System (IMARS) but was not sure of the status of implementation of this system.

Submission: Submitted William McMullen 04/10/2007 10:25:53 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/09/2008 11:13:42 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/09/2008 04:04:20 PM**

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**Purpose:**

Determine requirements for reporting safety-related incidents in the ■ **DOI Safety Management Information System (SMIS).**

**Scope:**

DOI-wide safety reporting requirements.

**Conclusion:**

DOI Manual 485 DM 7 provides the only guidance for reporting of safety-related incidents to DOI employees.

- 485 DM 7 is somewhat unclear regarding reporting requirements.
- Other incident reporting systems exist or are being developed within DOI or the bureaus and how the different systems will communicate is unclear.

Summary:

According to Jim, DOI Manual 485 DM 7 provides the only requirements for reporting safety-related incidents using SMIS. He, and according to Jim, his boss Diane Schmitz (Director of OHS), both agree that the guidance is unclear with regard to injuries or fatalities suffered by members of the public on DOI lands. Jim stated that injuries or fatalities experienced by the public are not routinely reported in SMIS although the system could accommodate such reporting. Jim stated that DOI "needs a more consistent policy in the Department particularly with regard to fatalities." He cautioned that identifying incidents to report may be difficult unless reporting is confined to fatalities or serious injuries as DOI employees may not ever become aware of less serious incidents. Jim noted that DOI IT was working with several databases including SMIS to try to increase the ease with which data can be shared but that this effort was just beginning. He was not aware of LawNet, apparently the system used by BLM Law Enforcement to report incidents. He did note that NPS was leading a DOI-wide initiative to implement the Incident Management Reporting System (IMARS) but was not sure of the status of implementation of this system.

**History**

<b>Status</b>	Approved	<b>Request Review</b>
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**Record of Discussion**

Prepared by: Stephanie Christian 04/05/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** D MSHA 01 **Subsection** Step 1  
**Program Name** Survey-Injuries/Fatalities at AML Sites  
**Subject** MSHA AML Injury Database

**Origination Doctlink** 

**Participants**

Name	Title	Office Location	Phone No.	Email Address
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Sean Pettersen	Auditor	134 Union Blvd	303-236-9133	Sean_Pettersen@doioig.gov
Amy Louviere	MSHA - Stay Out Stay Alive Program	1100 Wilson Blvd. Arlington, VA	202-693-9423	
Frank Meilinger	MSHA - Stay Out Stay Alive Program	1100 Wilson Blvd. Arlington, VA	202-693-9435	

**Location** 1100 Wilson Blvd. Arlington, VA

**Date/Time**

03/15/2007 09 00 AM

**Purpose:**

Obtain data for fatalities and injuries on DOI land from sources including the following:  
 Mine Safety Health Administration (MSHA)

**Scope:**

Mine Safety Health Administration (MSHA) Injury/Fatality Database

**Conclusion:**

According to MSHA representatives, MSHA has no jurisdiction over abandoned mine lands. MSHA only oversees the safety and health of workers on active mining sites. MSHA has created an informal database of injuries and fatalities at abandoned mine sites as part of a public safety program. However, this database is informal and only information collected from newspaper articles is included in the database.

**Summary:**

According to Amy Louviere and Frank Meilinger, MSHA does not have jurisdiction over abandoned mine lands. MSHA overlooks the safety and health of workers at active mining sites. MSHA has no regulations on mines after the mine has closed and no active mining is occurring at the site. MSHA keeps information regarding injuries and fatalities at active mining sites. However, MSHA is not required to keep information on injuries and fatalities at abandoned mine sites. MSHA decided as part of a public safety program called "Stay Out Stay Alive", to create a database of newspaper articles on injuries and fatalities that occur at abandoned mine sites. However, this is an informal process of collecting newspaper articles of injuries and fatalities at AML sites. MSHA started this informal database in 1999 as part of MSHA's public safety program. The only information collected is from newspaper articles and field personnel that report incidents that occur on AML sites. The general news article is attached to the database and that is the only information collected. There is no additional support or background for the entries into the AML injury/fatality database.

Submission: Submitted Stephanie Christian 04/10/2007 10:46 08 AM  
 Level 1 Approval: Approved William McMullen 04/10/2007 11:04:19 AM  
 Level 2 Approval: Approved John Illson 01/09/2008 11:14:10 AM

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**Assignment Workpaper**

Prepared by: Guest\_Theresa Gumataotao 05/25/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** D NPS 01 **Subsection** Survey D.1  
**Program Name** Survey-Injuries/Fatalities at AML Sites  
**Subject** NPS- Injuries and Fatalities

**Origination Doctlink** ■

**Purpose:**  
To obtain data of all recorded AML injuries and fatalities on NPS land.

**Scope:**  
All NPS records of injuries and fatalities.

**Source:**  
John Burghardt, NPS-GRD

**Conclusion:**  
John Burghardt, NPS-GRD Official prepared a table of all "known" AML fatalities and injuries in Park System Units. The table identified eight parks where injuries and fatalities have occurred:

- |  |   |
|--|---|
| (1) Mississippi National River and Recreation Area (MISS) - <i>Minnesota</i> | (5) Death Valley National Park (DEVA) - <i>California / Nevada</i>      |
| (2) New River Gorge National River (NERI) - <i>West Virginia</i>             | (6) Canyon Lands National Park (CANY) - <i>Utah</i>                     |
| (3) Big Cypress National Preserve (BICY) - <i>Florida</i>                    | (7) Lake Mead National Recreation Area (LAME) - <i>Nevada / Arizona</i> |
| (4) Joshua Tree National Park (JOTR) - <i>California</i>                     | (8) Valley Forge National Historic Park (VAFO) - <i>Pennsylvania</i>    |

Combined, 15 fatalities and 5 injuries were reported in these parks, or immediately adjacent to NPS lands, from May 1970 through February 2007. Brief details of the 15 fatal accidents and 5 injuries are provided in the attachment below .

In preparing the table, NPS recognized that they do "not have good statistics on nonfatal accidents." As a result, it is highly probable that other incidents may have occurred but have not been reported nor included in the attached table.

**Details:**  
In the attached table, the information on fatalities and injuries will be divided. For each incident the table will disclose:  
(1) date the incident occurred (3) Victim(s) Name and Age  
(2) Park Name where the incident occurred (4) Brief Description of the Incident and possibly Recovery Efforts or Mitigation Steps



JOTR - Injuries and Fatalities.doc

Here is a quick summary of the total count of injuries and fatalities per park.

<u>Park</u>	<u>Count of Fatalities</u>
(1) MISS	8
(2) NERI	1
(3) BICY	2
(4) JOTR	1
(5) DEVA	1
(6) CANY	1
(7) LAME	1
<b>TOTAL =</b>	<b>15</b>

Park Count of People Injured

D.NPS 01 NPS- Injuries and Fatalities

(1)	VAFO	2
(2)	JOTR	1
(3)	DEVA	1
(4)	NERI	1
<b>TOTAL =</b>		<b>5</b>

**Methodology:**

N/A

Submission:	Submitted	Sean Pettersen	06/01/2007 01:28 36 PM
Level 1 Approval:	Approved	William McMullen	06/12/2007 10:59 58 AM
Level 2 Approval:	Approved	John Illson	01/09/2008 11:14 54 AM

**Linkage Information**

**History**

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 03/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Assignment Program Section** E.  
**Assignment Program Name** Survey-Prioritization

**Objective:**

Determine if bureaus are prioritizing AML hazards.

**Background:**

NPS and BLM have numerous AML sites on their lands and mitigation actions need to be prioritized given the limited program funding available.

**Assignment Steps:**

Survey Step	Staff	Work Paper Reference
<b>E. What processes do DOI and its bureaus have for Prioritizing AML sites based on safety risks?</b>		
Obtain criteria for prioritizing AML sites	Team	C.BLM.HQ.01 BLM HQ Meeting with George Stone ■ SGC C.BLM.CAStoffice.01 BLM CA State Office - Inventory Discussion ■ SGC J.BLM.20 AML Strategic Plan ■
Obtain the prioritized list of AML sites from each bureau and relevant field offices and parks	Team	C.BLM.RidgecrestFO.02 AML Activities in Ridgecrest FO and California Desert District ■  C.NPS.DEVA.04 Death Valley Priorities ■ C.NPS.DEVA.02 Death Valley AML Inventory ■ I.NPS.GRCA.01 Priority List for Grand Canyon ■

**Conclusion:**

BLM prioritizes sites initially on whether an accident has occurred that has resulted in an injury or fatality. Specific NPS units prioritize their sites on a site-specific basis.

Submission: Submitted William McMullen 06/02/2008 03:19 51 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/03/2008 08:18 03 AM

**Linkage Information**

**History**

Status Approved Request Review

Assignment Program/Summary Workpaper E.

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 03/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Assignment Program Section** F.  
**Assignment Program Name** Survey-Mitigation

**Objective:**

Document mitigations actions taken by bureaus at AML sites, particularly those where injuries or fatalities have occurred.

**Background:**

Determine what actions the bureaus have taken to mitigate AML hazards particularly at those sites where injuries and fatalities have occurred.

**Assignment Steps:**

Survey Step	Staff	Work Paper Reference
<b>F. What processes do DOI and its bureaus have for mitigating known AML safety hazards on DOI lands.</b>		
1 Obtain a list of all known abandoned mines that have been mitigated over the past 10 years	Team	F.BLM.01 AML sites "Historical Value" ■ SGC F.BLM.02 AML sites "Monetary and Historical Value" ■ SGC F.BLM.03 BLM AMM Data - Mitigated Sites ■ SGC F.BLM.04 BLM AMM Data - Remediated Sites ■ SGC
2 For known injuries and fatalities, what have the bureaus done to mitigate safety risks at the site?	Team	F.BLM.01 AML sites "Historical Value" ■ SGC F.BLM.02 AML sites "Monetary and Historical Value" ■ SGC SGC See also Section I "NPS Site Visits" and K "BLM Site Visits" for workpapers describing conditions at sites visited and actions taken to mitigate hazards.

**Conclusion:**

While many sites have been mitigated over the last ten years, many hazards remain that are not being addressed for a variety of reasons. Serious AML safety and environmental hazards remain at sites on lands managed by BLM and NPS.

Submission: Submitted William McMullen 06/02/2008 03:11 09 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/03/2008 08:18 31 AM

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**Add Document Readers**

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Assignment Program/Summary Workpaper F.

Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

F BLM.01 AML sites "Historical Value"

**Record of Discussion**

Prepared by: Stephanie Christian 05/04/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** F.BLM.01 **Subsection** Survey F.1 & F 2  
**Program Name** Survey-Mitigation  
**Subject** AML sites "Historical Value"

**Origination Doclink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd. Lakewood, CO	303-236-9112	stephanie_christian@doioig.gov
Ed Ginouves	BLM Mining Claim Geologist	Cedar City Utah Field Office	435-865-3040	

**Location** Telephone Conversation

**Date/Time**

05/01/2007 09:45 AM

**Purpose:**

To determine the process used by BLM for mitigating known AML safety hazards on DOI lands.

**Scope:**

BLM AML Program

**Conclusion:**

I called Ed Ginouves, a Mining Claim Geologist in the Cedar City Field Office regarding the article published in The Spectrum on public backlash against filling AML mine shafts. According to Ed, the project is being done by the Utah state AML group and that they are using SMACRA money to fix the sites. The project in the Milford area was selected because of the close proximity of the mines to the Milford community of approximately 1500 people. This close proximity to residents made these shafts a high priority for the state to take action to close the holes. According to Ed, these sites have been reviewed by the BLM Cedar City Field Office Archaeologist for historical and cultural resources and the sites have no cultural or historical value to these AML sites.

The BLM AML program at the Cedar City Field Office has no AML program. The office will do emergency AML closures if there is an injury or fatality at a sight, but there is no formal program with annual funding for site identification and mitigation. Ed indicated that there is no AML inventory for the BLM land covered by the Cedar City Field Office, and no one in the office identifies or has a listing of AML sites. Ed indicated that BLM's policy is to allow the state of Utah to close any AML site on BLM property and BLM will do the necessary NEPA and cultural evaluations to determine the type of closure for the site.

**Summary:**

I called Ed Ginouves, a Mining Claim Geologist in the Cedar City Field Office regarding the article published in The Spectrum on public backlash against filling AML mine shafts. According to Ed, the project is being done by the Utah state AML group and that they are using SMACRA money to fix the sites. The project in the Milford area was selected because of the close proximity of the mines to the Milford community of approximately 1500 people. This close proximity to residents made these shafts a high priority for the state to take action to close the holes. There have been no injuries and fatalities at these sites according to Ed. He said the effort is focused on the physical safety risk of people being injured or killed at these sites. According to Ed, these sites have been reviewed by the BLM Cedar City Field Office Archaeologist for historical and cultural resources. The archeologist reported in the cultural resources report on these sites that there is no cultural or historical value to these AML sites. This information was sent to SHIPO which is the State Historic Preservation Officer and he agreed with the conclusion of the BLM archaeologist and found that mitigation at the sites was acceptable according to Ed.

Ed indicated that the individuals making statements in The Spectrum article are not archeologists or historical preservation people. These are recreation people that want to recreate in the mines and don't want the mines to be closed. He also indicated that people bring tours and recreate at AML sites, which is another reason they don't want the sites closed. Ed stated that there is no basis for the "historical value" at any of these sites, according to the review conducted by BLM.

This is the article Referenced above:

According to any article published in The Spectrum on May 1, 2007, BLM is having difficulty closing AML mine shafts due to the concern that the sites have "historical value" and may have monetary value. The article is attached below.

Article published May 1, 2007

**Milford wants to keep three mines open**

By STEVE KIGGINS  
[skiggins@thespectrum.com](mailto:skiggins@thespectrum.com)

CEDAR CITY - Citing safety concerns, the Bureau of Land Management wants to close off three mines near Milford.

Mayor Eugene Mayer doesn't like that idea.

"There's real valuable ore there and to push it back in the hole doesn't make sense," Mayer said. "We value the tourism aspect of it and we also think of the monetary value of the ore."

With a chuckle, Mayer added, "What we're really trying to do is have our cake and eat it, too."

The Milford City Council is expected to side with Mayer at tonight's meeting and sign a resolution in opposition to the BLM's mine reclamation program. The council's resolution, however, won't likely stop the BLM.

"Ultimately, this is a decision that comes out of the governor's office," said Ed Ginouves, a mineral specialist who works in the BLM's Cedar City office. "Without support from the governor's office, there's very little they can do locally."

But Mayer hopes his city's resolution might sway private mine owners, who must give their consent to the BLM before their mine openings can be closed.

The BLM owns about half of the mine openings at the Star Valley site, the BLM's first targeted site, located about five miles west-southwest of Milford, and about a third of the openings at the Frisco and Newhouse sites, located about 20 miles west of town, Ginouves said.

The BLM will encourage all mine owners to close their mine openings because "we feel it's in the best interest of the public," Ginouves said.

But, he added, "If the private mine owner says, 'Sorry, I don't want to close my mine,' the state will not do its project there."

Gold Rush Expeditions, a non-profit organization dedicated to the preservation of Utah ghost towns and hard rock mines, lauded Milford's anti-reclamation resolution and criticized the state for attempting to ruin a part of Beaver County's history.

<http://www.thespectrum.com/apps/pbcs.dll/article?AID=/20070501/NEWS01/705010307&template=printart> (1 of 2)/5/1/2007 5:06:15 AM  
thespectrum.com - www.thespectrum.com

"They're destroying the historical value that's out there," said Corey Shuman, president of Gold Rush Expeditions.

Shuman said his organization plans to file paperwork in federal court to stop the BLM's reclamation projects near Milford. While he understands that the mines have historical value, Ginouves said mine openings, especially ones that are not being maintained, represent "fatal hazards to the public."

"If we wait until there's a fatality, that's a pretty hard way to go about it," he said.

Still, Mayer believes the historical value of the mines is too important. "We want to preserve those mines," the mayor said. "I hope the council approves the resolution."

I then reviewed the BLM AML program at the Cedar City Field Office with Ed. According to Ed, the BLM Cedar City Field Office has no AML program. The office will do emergency AML closures if there is an injury or fatality at a sight, but there is no formal program with annual funding for site identification and mitigation. Ed indicated that there is no AML inventory for the BLM land covered by the Cedar City Field Office, and no one in the office identifies or has a listing of AML sites. Ed indicated that BLM's policy is to allow the state of Utah to close any AML site on BLM property and BLM will do the necessary NEPA and cultural evaluations to determine the type of closure for the site. BLM has allowed the state of Utah to take the lead in determining sites requiring mitigation and BLM only assists them in completing the paperwork to close the site. However, BLM has no active role in identifying, prioritizing or mitigating any AML site on BLM property according to Ed, this is all done by the state of Utah AML program.

Submission:	Submitted	Stephanie Christian	05/04/2007 05:26 01 PM
Level 1 Approval:	Approved	William McMullen	05/07/2007 12:01 09 PM
Level 2 Approval:	Approved	John Illson	06/04/2007 11:00 51 AM

## Linkage Information

## History

Status	Approved	Request Review
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F BLM.01 AML sites "Historical Value"

**Confidentiality** Standard

**Add Document Readers**

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F BLM.02 AML sites "Monetary and Historical Value"

**Record of Discussion**

Prepared by: Stephanie Christian 05/15/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** F.BLM.02 **Subsection** Survey F.1 & F 2  
**Program Name** Survey-Mitigation  
**Subject** AML sites "Monetary and Historical Value"

**Origination Doclink** ■

**Participants**

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Ed Ginouves	BLM Mining Claim Geologist	Cedar City Utah Field Office	435-865-3040	

**Location** Telephone Conversation

**Date/Time**

05/15/2007 09 30 AM

**Purpose:**

To determine the process used by BLM for mitigating known AML safety hazards on DOI lands.

**Scope:**

BLM AML Program

**Conclusion:**

There were two primary reason outlined by protestors backlashing against the filling of AML mine shafts. The first issue outlined by protestors was economic value. There was an argument made that there is potential at these sites for future mining operations and that closing them would negatively impact the economy. The second argument was the limiting of recreational visits by tours and recreationalists that visit old mining sites.

**Summary:**

I called Ed Ginouves, a Mining Claim Geologist in the Cedar City Field Office to followup on a previous discussion **F.BLM.01 AML sites "Historical Value"** ■ regarding the article published in The Spectrum on public backlash against filling AML mine shafts.

I needed to follow-up on the reasons local officials in his area were protesting the closing of mine shafts. According to Ed, there were two primary issues outlined by protestors. The first is the issue of economic value. There was an argument made that there is potential at these sites for future mining operations and that closing them would negatively impact the economy. Ed stated that this argument has no validity and that the published information from the Utah Geological Survey found that there was little potential for any mineral resource extraction in this areas. In addition, Ed stated that closing the shafts did not preclude future development, as current mining technology can dig extraction holes at a very low cost. Therefore, if there were economic benefit found later in the area for mining to resume, the closing of the holes would not deter or preclude future mining. The second argument was limiting of recreational visits by tours and recreationalists that visit old mining sites. Ed indicated that there are tours and recreationalists that visit old mining sites and they did not want the sites closed so they could continue to visit these sites. He did tell me that if people are taking tours to sites, they are suppose to be getting permits to bring the public to these sites. However, Ed indicated that BLM would not grant permits for groups to take people underground into a mine shaft, but there are not BLM personnel at each location checking to make sure no one goes underground. He said that BLM would grant permits for surface visits to old mining areas, but he does not think any have been issued.

Ed indicated that the shafts would be closed later this summer. There was a comment period that closed yesterday for protests and no official protests were filed with BLM to prevent the shaft closures.

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 Level 2 Approval: Approved John Illson 01/09/2008 11:15 28 AM

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F BLM.03 BLM AMM Data - Mitigated Sites

Admin State	Admin Office Txt	Site Id	Site Name	Mitig Status Txt
AZ	LAKE HAVASU FIELD OFFICE	11083	CALIFORNIAN GOLD MINE	Sign
AZ	LAKE HAVASU FIELD OFFICE	11083	CALIFORNIAN GOLD MINE	Sign
AZ	LAKE HAVASU FIELD OFFICE	11087	ISLANDER MINE	Sign
AZ	LAKE HAVASU FIELD OFFICE	11087	ISLANDER MINE	Sign and Fence
AZ	LAKE HAVASU FIELD OFFICE	11087	ISLANDER MINE	Sign
AZ	LAKE HAVASU FIELD OFFICE	11087	ISLANDER MINE	Sign
AZ	TUCSON FIELD OFFICE	11557	BRUNCKOW 10	Fence
AZ	TUCSON FIELD OFFICE	11558	BRUNCKOW 11	Fence
AZ	TUCSON FIELD OFFICE	11562	BRUNCKOW 15	Fence
AZ	TUCSON FIELD OFFICE	11568	BRUNCKOW 19	Fence
AZ	TUCSON FIELD OFFICE	11548	BRUNCKOW 2	Fence
AZ	TUCSON FIELD OFFICE	11570	BRUNCKOW 21	Fence
AZ	TUCSON FIELD OFFICE	11572	BRUNCKOW 23	Fence
AZ	TUCSON FIELD OFFICE	11573	BRUNCKOW 24	Fence
AZ	TUCSON FIELD OFFICE	11575	BRUNCKOW 26	Fence
AZ	TUCSON FIELD OFFICE	11576	BRUNCKOW 27	Fence
AZ	TUCSON FIELD OFFICE	11579	BRUNCKOW 29	Fence
AZ	TUCSON FIELD OFFICE	11550	BRUNCKOW 3	Fence
AZ	TUCSON FIELD OFFICE	11645	BRUNCKOW 34	Fence
AZ	TUCSON FIELD OFFICE	11647	BRUNCKOW 36	Fence
AZ	TUCSON FIELD OFFICE	11648	BRUNCKOW 37	Fence
AZ	TUCSON FIELD OFFICE	11649	BRUNCKOW 38	Fence
AZ	TUCSON FIELD OFFICE	11650	BRUNCKOW 39	Fence
AZ	TUCSON FIELD OFFICE	11551	BRUNCKOW 4	Fence
AZ	TUCSON FIELD OFFICE	11553	BRUNCKOW 6	Fence
AZ	TUCSON FIELD OFFICE	11556	BRUNCKOW 9	Fence
AZ	TUCSON FIELD OFFICE	11240	CHARLESTON LEAD MINE	Fence
AZ	TUCSON FIELD OFFICE	11240	CHARLESTON LEAD MINE	Fence
AZ	TUCSON FIELD OFFICE	11629	DOGTOWN	Fence
AZ	TUCSON FIELD OFFICE	12240	RICH HILL 1	Fence
AZ	TUCSON FIELD OFFICE	12271	RICH HILL 17	Fence
AZ	TUCSON FIELD OFFICE	12272	RICH HILL 18	Fence
AZ	TUCSON FIELD OFFICE	12273	RICH HILL 19	Fence
AZ	TUCSON FIELD OFFICE	12274	RICH HILL 20	Fence
AZ	TUCSON FIELD OFFICE	12275	RICH HILL 21	Fence
AZ	TUCSON FIELD OFFICE	12277	RICH HILL 23	Fence
AZ	TUCSON FIELD OFFICE	12278	RICH HILL 24	Fence
AZ	TUCSON FIELD OFFICE	12281	RICH HILL 27	Fence
AZ	TUCSON FIELD OFFICE	10968	SAGINAW HILL	Sign and Fence
AZ	TUCSON FIELD OFFICE	10968	SAGINAW HILL	Sign and Fence
AZ	TUCSON FIELD OFFICE	11567	TOMBSTONE	Fence
AZ	YUMA FIELD OFFICE	12337	GRANITE MOUNTAIN MINE	Sign and Fence
CO	ROYAL GORGE FO	4453	BADGER CREEK #1	Sign and Fence
CO	ROYAL GORGE FO	12477	BASSIC	Fence
CO	ROYAL GORGE FO	5134	DF 111	Fence
CO	ROYAL GORGE FO	11101	DINERO TUNNEL	Sign and Fence
CO	UNCOMPAHGRE FO	2966	CO034801770	Fence
CO	UNCOMPAHGRE FO	12614	CO034801776	Fence
ID	CHALLIS FO	11686	BIG LOST FISHING ACCESS	Sign
ID	CHALLIS FO	5372	WAYNE CLUTES URANIUM ADIT	Sign
ID	COEUR D' ALENE FO	5620	BOBBY ANDERSON MINE	Sign
ID	COEUR D' ALENE FO	5620	BOBBY ANDERSON MINE	Sign
ID	COEUR D' ALENE FO	5620	BOBBY ANDERSON MINE	Sign
ID	COEUR D' ALENE FO	5645	CONSTITUTION MILLSITE	Sign
ID	COEUR D' ALENE FO	5641	INTERNATIONAL	Sign
ID	COEUR D' ALENE FO	5641	INTERNATIONAL	Sign
ID	COEUR D' ALENE FO	5631	LOOKOUT MOUNTAIN MINE	Sign
ID	COEUR D' ALENE FO	5606	MINERAL RIDGE PROSPECTS	Sign
ID	COEUR D' ALENE FO	5650	SHOUP ADIT	Sign
ID	COEUR D' ALENE FO	5635	SIDNEY RED CLOUD MILLSITE	Sign
ID	COEUR D' ALENE FO	5699	WE LIKE MINE	Fence
ID	COTTONWOOD FO	11226	SULTAN SHAFT	Sign
ID	OWYHEE FO	12408	HOME CLAIM MINE	Sign

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

ID	COEUR D' ALENE FO	5620	BOBBY ANDERSON MINE	Sign
ID	COEUR D' ALENE FO	5620	BOBBY ANDERSON MINE	Sign
ID	COEUR D' ALENE FO	5645	CONSTITUTION MILLSITE	Sign
ID	COEUR D' ALENE FO	5641	INTERNATIONAL	Sign
ID	COEUR D' ALENE FO	5641	INTERNATIONAL	Sign
ID	COEUR D' ALENE FO	5631	LOOKOUT MOUNTAIN MINE	Sign
ID	COEUR D' ALENE FO	5606	MINERAL RIDGE PROSPECTS	Sign
ID	COEUR D' ALENE FO	5650	SHOUP ADIT	Sign
ID	COEUR D' ALENE FO	5635	SIDNEY RED CLOUD MILLSITE	Sign
ID	COEUR D' ALENE FO	5699	WE LIKE MINE	Fence
ID	COTTONWOOD FO	11226	SULTAN SHAFT	Sign
ID	OWYHEE FO	12408	HOME CLAIM MINE	Sign
ID	OWYHEE FO	12413	IDLEWILD SHAFT NO 2	Sign
ID	OWYHEE FO	5793	SAN JUAN SHAFT	Sign and Fence
MT	SOUTH DAKOTA FO	9540	BELLE ELDRIDGE	Sign
NM	LAS CRUCES FO	7056	BOSTON HILL 2	Sign
NM	LAS CRUCES FO	7056	BOSTON HILL 2	Sign
NM	LAS CRUCES FO	7580	LAKE VALLEY 1	Fence
NM	LAS CRUCES FO	7581	LAKE VALLEY 2	Fence
NM	LAS CRUCES FO	7581	LAKE VALLEY 2	Fence
NM	LAS CRUCES FO	7581	LAKE VALLEY 2	Fence

**Methodology:**

N/A

Submission:	Submitted	Stephanie Christian	05/25/2007 04:46 35 PM
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**Methodology:**

Reviewed the Source documents to identify programmatic NEPA approaches relevant to AML site mitigation.

Submission: Submitted William McMullen 04/10/2007 11:54 22 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/09/2008 11:17 39 AM

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Confidentiality Standard

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## Assignment Workpaper

Prepared by: William McMullen 04/13/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** F.BLM.RidgecrestFO\_KellyMine 02      **Subsection** Survey F.1  
**Program Name** Survey-Mitigation  
**Subject** Mitigation and remediation costs at Kelly Mine and surrounding areas.

**Origination Doctlink** ■

### Purpose:

Document BLM California's request for additional funding to address safety and environmental issues at Kelly Mine and in California.

### Scope:

BLM California AML resource needs.

### Source:

Funding requests attached to email on 3/21/2007 from George Stone as attached:



\_ Mike Pool's AML funding reque.pdf

The email included the following attachments (the second attachment was converted to a pdf):



Mike Pool memo requesting resources.doc



Pool email attachment 2.pdf

Email ■ from George Stone on 3/21/2007 with powerpoint presentation from Mike Poole, California BLM State Director as attached:



AML Rand Complex PP Status Rpt (3\_20\_07 rev)3.ppt

Telephone conversation between George Stone, BLM AML Program Lead, John Illson, OIG Audit Lead and Bill McMullen, OIG Ass't Team Lead on 6/12/2007.

### Conclusion:

- BLM California has stated that additional funding is needed over the next several years to address AML issues as follows:
  - Kelly Mine remediation: \$120 million (\$20/yr for FY2007 through FY2102)
  - Physical safety mitigation (all of California): \$ 15 million
  - Mercury contamination removal (all of California): \$ 14.1 million
- The situation in the Rand Mining District has been briefed to DOI's Assistant Secretary for Policy, Management and Budget (Weimar since departed) and the Assistant Secretary for Land and Minerals Management (Allred).
- DOI and BLM officials, while aware of AML issues and the Rand Mining District concerns, foresee no way that additional funding will be provided particularly for the remediation of the tailings piles in the District.
- DOI and BLM management expressed puzzlement as to why OIG was concerned with such as "petty" issues as AML.

### Details:

For remediation of the Kelly Mine, the memo requesting funds states "It is our conservative estimate that the total remediation effort will cost around \$120 million and will take between five and eight years to complete." (page 2 of memo) Pages relating to the Kelly Mine from Poole's email attachments 1 and 2 are shown below:

#### Kelly Mine

The memo addresses the need for additional funding to address physical safety issues and states "additional financial resources are needed to address AML-related physical safety hazards in other California BLM administered lands... I'm requesting an additional \$3 million per year over the next five fiscal years to reduce these hazards." (page 3 of memo) Page relating to physical safety hazards at Kelly Mine from attachment 2 is shown below:

#### Safety Hazards

F BLM.RidgecrestFO\_KellyMine.02 Mitigation and remediation costs at Kelly Mine and surrounding areas.

The memo also addresses the problem of mercury contamination in California and states "I am requesting \$4.7 million each year over the next three fiscal years to address the initial 14 priority AML mercury sites." (page 3 of memo) Page relating to mercury contamination in California from attachment 2 is shown below:

**Mercury Contamination**

Thus, BLM California has stated that additional funding is needed over the next several years to address AML issues as follows:

- Kelly Mine remediation: \$120 million
- Physical safety mitigation (all of California): \$ 15 million
- Mercury contamination removal (all of California): \$ 14.1 million

According to George Stone, Mike Poole, using the source powerpoint, briefed the DOI Assistant Secretary of PMB some time ago and Ass't Secretary Steve Allred in March 2007. In a briefing to Secty Allred last week, George also discussed some of the issues and needs associated with the Rand Mining District. During the briefing with Secty Allred, Mr. Stone noted that Bob Anderson BLM Deputy Associate Director Minerals, Realty & Resource Protection was also present. Mr. Stone noted that the briefing was cordially received but there were questions as to why the OIG was focusing on such a "petty" issue and that if OIG recommended any increases in funding to address AML issues, BLM's response would be lukewarm as no funding increases are likely. He also noted that he was rebuffed regarding the need for additional inventory work with the comment that "George, you already have 11,000 records in your inventory; you don't need any more." Finally, Mr. Stone noted that unless OIG had compelling findings regarding the Rand Mining District it was unlikely that BLM would fund the project at the level needed to remediate the arsenic-contaminated tailings piles.

**Methodology:**

Reviewed Source documents and attachments.

Submission:	Submitted	William McMullen	07/18/2007 09:39 08 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/09/2008 11:22:11 AM

**Linkage Information**

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**Confidentiality** Standard

**Add Document Readers**

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**Record of Discussion**

Prepared by: William McMullen 04/04/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** F.BLM.RidgecrestFO\_Randsburg.01      **Subsection** Survey F.1  
**Program Name** Survey-Mitigation  
**Subject** Randsburg Mining District Sampling and Mitigation Efforts

**Origination Doctlink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
W. McMullen	Evaluator	Lakewood OIG	303 236 9123	william_mcmullen@doioig.gov
Richard Forester	AML Project Manager	BLM Sacramento	916 978.4376	richard_forester@ca.blm.gov

**Location** Telephone call

**Date/Time**

04/04/2007 09 00 AM

**Purpose:**

Followup from site visit.

**Scope:**

Randsburg Mining District sampling, costs, mitigations, and plans.

**Conclusion:**

- BLM did not analyze soil from BLM Rd 110 despite being aware that surface materials likely came from tailings piles.
- BLM did not close Rd 110 because of concerns about jeopardizing funding from the State of CA for trails maintenance.
- BLM is still trying to determine potential responsible parties that might help in the remediation of the Kelly Mine site in Red Mountain.

**Summary:**

Followed up with Richard on auditor visit to Randsburg on March 26, 2007. Specific issues discussed:

- Have any soil samples been taken from BLM Rd 110 especially on the "hillclimb" portion of the road (see left photo below- photo taken by auditor during field visit on March 26, 2007)



- Richard said no samples have been taken from the road as the materials on the road appeared to be the same as those from the descarga. Richard stated that samples would be taken in April 2007 of this road.
- Richard said the proposed new trail area (to the left of the road in the above picture- photo taken by auditor during field visit on March 26, 2007) does not traverse tailings but samples will taken to determine the extent of windborne contamination.
- I asked Richard whether BLM had considered closing the road due to possible contamination. **B.BLM.04 Federal Authority to Close Roads**
- He stated that it was discussed but that much of the funds for overall maintenance of BLM trails in California comes from the state from "green sticker" fees assessed on off-highway vehicles (OHV). Richard stated that the program was administered by an "ex-champion dirt biker" who had relatively little awareness of the importance of environmental issues. BLM, according to Richard, was concerned that closing the road (a popular OHV trail) before an alternative route is provided would antagonize the state official to the extent that the state might withhold some "green sticker" funds for BLM trail maintenance. According to Richard, since BLM CA does not receive adequate funds from HQ to maintain trails, the loss of state funds would have a significant impact; as a result, according to Richard, BLM management made the decision not to close the road. Richard also noted that the BLM HQ solicitor was pressuring the state BLM office to close the road because of potential liability issues, but acquiesced to the "politics" of the situation with the "green sticker" funds.
- I asked Richard about the costs of various mitigation actions taken or proposed around Randsburg.
- Richard stated that fencing the entire Kelly Mine site (at Red Mountain CA) would cost about \$39/foot for 6' chainlink fence on 10' posts; the fence would be about 5,600' in length.
- Richard stated that the cupola installed over the 1600' shaft in Red Mountain (see photo below) cost a total of \$18,725 of which BLM contributed \$10,000 in in-kind staff time for NEPA reviews; the State's AML Program paid for the materials and labor to construct and install the cupola. Richard stated that typically, BLM pays about 55% of the cost of this type of project.



All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

F BLM.RidgecrestFO\_Randsburg.01 Randsburg Mining District Sampling and Mitigation Efforts

- Richard noted that he met with the cupola constructor on a site near Red Mountain (see right photo above) and he cost estimate was about \$40,000; as a result, these openings will be fenced and maintained.
- I asked Richard about BLM's responsibility for the Kelly Mine headframe and mill structure.
  - Richard stated that Minerals Exploration Inc still owned those properties but had filed for dissolution of the corporation about a year ago. BLM is in the process of conducting a PRP search for the Kelly Mine and Red Mountain area to determine if any other liable parties exist. Richard also expects BLM to make a claim on Minerals Exploration as part of the dissolution process.
- I asked Richard about the various documents related to the Randsburg Mining District CERCLA action.
  - Richard described the documents as follows:
    1. CERCLA Action Memorandum - completed
    2. Removal Site Inspection - completed
    3. Removal Preliminary Assessment - in draft
    4. Remedial Investigation/Feasibility Study (RI/FS) - Statement of work to be issued in FY2007 for a contractor to perform these. The first two tasks of the RI/FS process will be to 1) prepare a site Risk Assessment and 2) prepare a Community Relations Plan

Submission: Submitted William McMullen 07/18/2007 09:37 53 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 08/21/2007 08:15 29 AM

[Linkage Information](#)

**History**

**Status** Approved **Request Review**  
**In Progress Edit** John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

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## Assignment Workpaper

Prepared by: William McMullen 04/09/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section F.BLM.RidgecrestFO\_Randsburg.02 Subsection Survey F.1  
Program Name Survey-Mitigation  
Subject The Randsburg Solution

Origination Doctlink [REDACTED]

### Purpose:

Document the "Randsburg Solution" implemented by BLM to resolve trespass issues in Randsburg CA.

### Scope:

Randsburg AML environmental contamination issues.

### Source:

- History of Randsburg Solution: paper by Linn Gum provided to auditor by Linn Gum during field visit on March 27, 2007 and attached at tab "History of Randsburg Solution" below.
- Pages extracted from "Initial Environmental Site Assessment Report" provided to auditor by Linn Gum during field visit on March 27, 2007 and attached at tab "ESA" below.
- Randsburg Solution NEPA Compliance Review Sheet provided to auditor by Linn Gum during field visit on March 27, 2007 and attached at tab "NEPA Compliance" below.
- Pages extracted from "Appraisal Report: The Randsburg Solution" provided to auditor by Linn Gum during field visit on March 27, 2007 and attached at tab "Appraisal" below.
- "Notice of Realty Action" provided in a Mineral Report to auditor by Linn Gum during field visit on March 27, 2007 and attached at tab "Notice" below.
- Summary of ESA Standards found at [http://www.dot.state.tx.us/publications/environmental\\_affairs/astm.pdf](http://www.dot.state.tx.us/publications/environmental_affairs/astm.pdf) and attached at tab "ESA Standards" below.

### Conclusion:

- Gold mining began in Randsburg in 1895 and continued until 1939.
- The Randsburg Solution was developed and implemented as a way to resolve longstanding trespass issues in Randsburg CA (pages 2 and 3 of attachment in tab "History...").
- The process was supported by local and state BLM officials (page 3 of attachment in tab "History...").
- Environmental reviews of lands to be sold were conducted but no notice was taken of the mine tailings prevalent in the area (attachments at tabs "ESA", "NEPA Compliance", and "Appraisal").
- The appraiser noted that hazardous wastes were "very likely" present in the area due to, in part, the presence of many old mines.
- We found no evidence that BLM took action to validate the appraiser's concern with regard to the presence of hazardous wastes and we conclude that BLM should have taken steps to validate this concern. (auditor opinion)
- BLM required that purchasers of lots indemnify the US from environmental or mine-related liabilities (page 5 of attachment in tab "Notice").

### Details:

The Randsburg Solution was developed by staff in the Ridgecrest Field Office and supported by the BLM State Office as a way to resolve outstanding trespass issues around the Randsburg CA area. The proposed solution was to allow trespass individuals, many of whom had lived on the trespassed property for many years, to patent their lots and become the legal owners of the land. Implementation of the solution required several administrative actions among which were an Environmental Site Assessment, NEPA compliance, property appraisals, and a public notice of BLM's intent to transfer real property.

As the Randsburg Solution developed in late 1996 and 1997, a momentum began to build to schedule a formal land transfer ceremony that would result in the legal creation of the town of Randsburg on July 4, 1997. Such an event would mark the first time in US history that lands were conveyed by patent in a ceremony outside of Washington DC or state capitols. The event was quite successful according to the History and the town was born.

While the documents below indicate some concern for environmental issues at the properties to be conveyed by patent, these issues focused on prior uses of the lots (gas stations, locations of underground tanks, etc). Virtually no notice was taken (except for a comment by the appraiser) of the significant piles of mine tailings south of the town. Apparently, no soil samples were taken from the lots to be patented or in the surrounding area. At the time, while ESA's were a more paperwork exercise using questionnaires and document searches (tab "ESA Standards" below), they did require a site visit and it would seem that an environmental professional would have been curious about the tailings piles during such a visit, but that was not the case. Further, BLM proposed in the Terms and Conditions Applicable to the Sale (in the Notice of Realty Action) that property owners who took title through the patents would agree to indemnify the US from any liabilities resulting from hazardous materials or mine features on their lands.

### History of Randsburg Solution



Randsburg solution paper by Gum.pdf

para from page 1 of Randsburg solution paper by Gum.pdf describing that [REDACTED] mining began in Randsburg in 1895:

### The Discovery of Gold and the Founding of Randsburg

about 10 miles north of the Randsburg site, and decided to explore the "Red Mountains". Within three weeks of their arrival, on April 23, 1895, they discovered visible gold located in schist at the highly fractured intersection of numerous faults. They called the site the Yellow Aster deposit. They knew they had the motherlode, and set about locating, staking, and filing mining claims covering what would ultimately become the Yellow Aster, Rand, Tribby, and Olympus mines. By 1897, Singleton, Mooers, and Burcham were millionaires. Some high grade veins assayed at more than 1,000 ounces gold/ton. By 1901, the Yellow Aster Mining and Milling Company had constructed a 100 stamp mill at the site. It was active in mining and milling gold until 1939, and had produced in excess of 1 million ounces.

pages 2 and 3 describing issues of occupancy trespass in Randsburg:

### The Randsburg Solution Idea

Beginning in 1989 and culminating in 1994, the Office of the Inspector General (IG) conducted a nationwide investigation of occupancy trespass hidden under the General Mining Law. Several BLM and United States Forest Service (USFS) offices in the western United States were visited, Ridgecrest BLM being one. The IG's final report was issued in 1996.

During the IG's 1994 investigation at our office, I was challenged by the inspectors to find a solution to Randsburg. I had taken the inspectors down the path of what it meant if I had to complete Surface Use Determinations for the houses and businesses located on unpatented mining claims underlying nearly half the town of Randsburg. And, that path is twisted, tortured, litigious, onerous, burdensome, time consuming, expensive, and a public relations nightmare. It effectively leads to the BLM giving half of Randsburg 90 days to get out of town; not a good picture.

In October 1995, I was attending the Centennial of the Rand Mining District and the town of Randsburg, and wondered if there was a way to give sovereignty to the residents of Randsburg; or, if I was going to have to go to court 40 or more times to settle the occupancy trespass issues.

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The Environmental Site Assessment conducted pursuant to implementation of the Randsburg Solution used ASTM Standards E 1527 and 1528 which involve a questionnaire filled out by a property owner (occupant seeking a patent in this case), a site visit and a search of records to identify previous owners who may have conducted activities that could have contaminated the site. The ESA stated that "it is reasonable to conclude that there are no significant hazardous substances...or environmental liability associated with this property" [lots proposed for patents]. The ESA is dated March 28, 1997.

### ESA

The NEPA Compliance Review document prepared by BLM as shown below relied on the Environmental Site Assessment (ESA) to conclude there were no hazardous materials or environmental issues pertinent to implementation of the Randsburg Solution. The NEPA Compliance Review document is dated April 30, 1997.

### NEPA Compliance

The appraiser that evaluated properties to be sold in the Randsburg Solution noted that there likely was hazardous materials contamination at the site from old mining activity as noted below. The appraiser also stated that he was not qualified to detect or identify such hazardous materials. The Appraisal Report is dated April 3, 1997 and was addressed to the Director of the BLM California Desert District. We found no evidence that BLM took action to validate the appraiser's concern.

### Appraisal



Randsburg appraisal report.pdf

## HAZARDS.

**Flood:** The surface of the subject properties have been physically changed due to the existing roads and improvements. The project is on a hill side and it will experience some flooding during a heavy rain storm. The long term existence of the improvements prove that any flooding has been contained and should not cause any exceptional risk in the future.

**Seismic:** The entire area is noted for frequent seismic activity and it is sure to continue.

**Hazardous waste:** Due to the proximity of many old mines the age of the residences and existing cess pools it is very likely that there is some hazardous waste in the project area. The effect of any hazardous waste is not included in this appraisal report.

## GENERAL ASSUMPTIONS AND LIMITING CONDITIONS

1. It is assumed that title to the property is marketable, and that there are no extraordinary or hidden conditions or encumbrances that would affect the value of the property.
2. It is assumed that the legal descriptions given and certain drawings or sketches provided are correct.
3. Certain information, data estimates and opinions were supplied by others during the course of this investigation. These sources are considered reliable, but cannot be guaranteed.
4. The conclusions reached in this report are to be used only under the stated "Purpose and Function" and on the date of valuation. Use under conditions other than these may render these conclusions invalid.
5. This report addresses land values only. It does not address the value, suitability for use or occupancy or relative utility of on or off site improvements; public or private.
6. Hazardous materials may or may not be present on the property, but were not observed by the appraiser. While the appraiser has no knowledge of the presence or absence of such substances, he has no special qualifications for detection or identification of such materials. The value estimate is based on the assumption that no such materials are present on or in the property that would cause a loss in value.

---

As shown below, the terms and condition of the sales implemented by the Randsburg Solution required buyers of patents to lots in Randsburg to indemnify the US from any liabilities resulting from hazardous materials or mining related features on the properties. The Notice of Realty Action was, according to the History document, published in the Federal Register on May 1, 1997..

### Notice

ESA Standards referenced by the ESA are American Society for Testing and Materials (ASTM) E 1527-05 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" and E 1528 "Standard Practice for Environmental Site Assessments" as summarized below.

### ESA Standards

#### Methodology:

Reviewed various source documents to determine the extent to which possible contamination from mine tailings was recognized as the Randsburg Solution was implemented by BLM.

F BLM.RidgecrestFO\_Randsburg.02 The Randsburg Solution

Level 1 Approval:

Level 2 Approval:    Approved                    John Illson                    08/21/2007 08:16 00 AM

**Linkage Information**

**History**

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**In Progress Edit**                    William McMullen/DEN/OIG/DOI

**Confidentiality**                    Standard

**Add Document Readers**

**Read Authorization**                    [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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H. Other.

- (1) Maintaining plans in accordance with 43 CFR 1610.5-4.
- (2) Acquisition of existing water developments (e.g., wells and springs) on public land.
- (3) Conducting preliminary hazardous materials assessments and site investigations, site characterization studies and environmental monitoring. Included are siting, construction, installation and/or operation of small monitoring devices such as wells, particulate dust counters and automatic air or water samples.
- (4) Use of small sites for temporary field work camps where the sites will be restored to their natural or original condition within the same work season.
- (5) Issuance of special recreation permits to individuals or organized groups for search and rescue training, orienteering or similar activities and for dog trials, endurance horse races or similar minor events.
- (6) A single trip in a one month period to data collection or observation sites.
- (7) Construction of snow fences for safety purposes or to accumulate snow for small water facilities.
- (8) Installation of minor devices to protect human life (e.g., grates across mines).
- (9) Construction of small protective enclosures including those to protect reservoirs and springs and those to protect small study areas.
- (10) Removal of structures and materials of nonhistorical value, such as abandoned automobiles, fences, and buildings, including those built in trespass and reclamation of the site when little or no surface disturbance is involved.
- (11) Actions where BLM has concurrence or coapproval with another DOI agency and the action is categorically excluded for that DOI agency.

**Methodology:**

Reviewed the Source document.

Submission:	Submitted	William McMullen	04/10/2007 10:26 51 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/09/2008 11:22 55 AM

[Linkage Information](#)

[History](#)

**Status** Approved **Request Review**  
**In Progress Edit** John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality** Standard

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### Assignment Workpaper

Prepared by: William McMullen 04/11/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section F.F.BLM.RidgecrestFO\_KellyMine 01 Subsection Survey F.1  
Program Name Survey-Mitigation  
Subject Kelly Mine Removal Site Inspection (RSI)

Origination Doctlink 

**Purpose:**  
Document RSI and sampling actions taken near Kelly Mine as part of CERCLA process.

**Scope:**  
Kelly Mine soil samples, Red Mountain CA.

**Source:**  
Kelly Mine Removal Site Inspection (RSI) found at [http://www.blm.gov/style/medialib/blm/ca/pdf/pdfs/ridgecrest\\_pdfs.Par.a5bf59c0.File.pdf/062206KellyMine.pdf](http://www.blm.gov/style/medialib/blm/ca/pdf/pdfs/ridgecrest_pdfs.Par.a5bf59c0.File.pdf/062206KellyMine.pdf) and attached below:



Kelly Removal Site Inspection.pdf

- Conclusion:**
- Site was "discovered" in December 2005 (see page 2 of attachment).
  - Soil samples were taken in areas around Red Mountain CA and the Kelly Mine in February 2006.
  - Samples in several areas showed concentrations of arsenic well above background levels.
  - The background level of arsenic in the area is itself well above EPA standards for residential areas.

**Details:**  
As part of the CERCLA process at the Kelly Mine, a Removal Site Inspection was conducted that included analyzing soil samples from the area. Approximately 250 samples were taken (see page 6 of the Source document) from six areas around the mine in February 2006 (see Planning slide below, page 2 of attachment). As shown in the tab below, levels of arsenic contamination were well above background in tailings next to the town of Red Mountain, around the mine itself, in a wash downstream of the tailings and in waste rock dumps near the town. The background level of contamination was estimated at 136 parts per million (ppm = mg/kg) while the EPA standard for arsenic in soils near residential areas is 0.39 ppm.

#### Kelly Mine Arsenic Samples

<p style="text-align: center; font-size: 24px; font-weight: bold;">Planning</p> <ul style="list-style-type: none"> <li>• Discovered December 2005</li> <li>• Notified management of arsenic potential risk</li> <li>• Notified NRC, DTSC, SWQB and EPA On-Scene Coordinator, County HazMat</li> <li>• Engaged NSTC, USGS and contractors to assist with site characterization</li> <li>• NSTC prepared Sampling and Analysis Plan and Health and Safety Plan</li> <li>• Fieldwork conducted February, 2006</li> </ul>	

## Areas Investigated

- Area 1 Tailings next to town
- Area 2 Kelly Mine complex
- Area 3 Deleted due to remoteness
- Area 4 Tailings in Red Mtn Wash
- Area 5 Tailings from Barkley Mill
- Area 6 Barkley Mill area
- Area 7 Waste Rock dumps near town

## Results

- Mean arsenic concentrations:
  - Area 1 – 1490 mg/kg
  - Area 2 – 993 mg/kg in gridded surface
  - Area 2 – 2,035 mg/kg in waste rock
  - Area 4 – 1,960 mg/kg
  - Area 5 – 118 mg/kg
  - Area 6 – 94 mg/kg
  - Area 7 – range from 600-7,718 mg/kg
  - Background – 136 mg/kg
- EPA preliminary remedial goal is 0.39 mg/kg for residential.

### Methodology:

Reviewed Source document.

Submission: Submitted William McMullen 07/18/2007 09:37 22 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 08/21/2007 08:17 02 AM

### Linkage Information

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#### Add Document Readers

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Sean Pettersen 03/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** F.NPS.01 **Subsection** Survey F 02  
**Program Name** Survey-Mitigation  
**Subject** Fatality at Death Valley National Park

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Sean Pettersen	Auditor	Central Region Audits	303 236 9133	sean_pettersen@doioig.gov
David Ek	Asst. Chief Resource Management	Death Valley National Park	760.786 3258	

**Location** Telephone

**Date/Time**

02/28/2007 12 30 PM

**Purpose:**

To determine what steps NPS took to mitigate the hazard posed by an abandoned mine shaft after the death of a visitor at Death Valley National Park.

To determine if the Park has an inventory of abandoned mines or if there is an estimate of the number of abandoned mines.

**Scope:**

Fatalities at National Parks due to physical hazards posed by abandoned mines

**Conclusion:**

The National Park Service (Death Valley National Park) did not secure the abandoned mine where a [REDACTED]. The mine shaft has remained open for approximately 23 years even though its in a popular and highly visible area for the Park.

**Note:** During a site visit it was determined that the adit that the visitor entered had been closed with cable netting and there was a sign posted warning of a "hazardous mine area". However, the netting had been cut and it was evident that visitors were still entering the mine (C.NPS.DEVA.01 [REDACTED]). Signs were put up in the area but according to a Park official the signs are ineffective because they are ignored.

There is no complete inventory of the abandoned mines on the Park. Park officials estimate that there are between 6,000 and 50,000 mine features with 20% (1,200-10,000) posing a safety hazard. Mr. Ek does have a list of 900+ sites that he will provide to the OIG (See C.NPS.DEVA.02 Death Valley AML Inventory [REDACTED]).

**Summary:**

Key points from the discussion:

- I called the Park Superintendent J.T. Reynolds 760 786 3200 ext 243, to let him know that I was contacting personnel at the Park.
- [REDACTED] after entering a horizontal mine opening. Apparently he did not see the opening to a vertical shaft. He died en route to the hospital.
- Funding was requested two days ago (02/26/07) to mitigate this hazard.
- The threat has not changed and there are numerous openings in this popular and highly visible area of the Park. According to Mr. Ek, this is an attractive and intriguing area. The area of the park where this accident occurred has a high density of mine openings, both horizontal and vertical.
- Signs were put up in the area but they are ineffective because they're being ignored. "Positive exclusions" (closing the entrances) are needed.
- There is no complete inventory of the abandoned mines on the Park. Park officials estimate that there are between 6,000 and 50,000 mine features with 20% (1,200-10,000) posing a safety hazard. Mr. Ek does have a list of 911 sites that he will provide to the OIG. These estimates were prepared by reviewing USGS maps and for each mine symbol NPS estimated a density of 10 openings. Ten openings is the average density for the Park at mine site.
- Cable net gates have been put over some of the vertical shafts but this process stopped when it was realized that the personnel installing the gates were not following necessary steps such as performing habitat surveys and contacting the State Historic Preservation Office.
- According to Mr. Ek, considering the number of abandoned mines on the park, it's amazing/surprising that there haven't been more accidents. The probability of an accident at an abandoned mine is high because of the number of visitors and the high visibility of some of the open shafts. "It's just a matter of time to the next accident."
- Mr. Ek stated that even in areas of the Park that are considered remote, abandoned mines are still being visited by the public as there is a lot of back-country use. Some of the abandoned mines in remote areas are safe but most are not.

F NPS.01 Fatality at Death Valley National Park

- NPS is providing a prioritized list of the top 10 abandoned mine sites to Senator Dianne Feinstein (D-CA)
- Visitation for the past 5 years (www2.nature.nps.gov/stats/): [C.NPS.DEVA.07 Death Valley - Annual Recreation Visits](#)
  - 2002 897,596
  - 2003 890,375
  - 2004 764,820
  - 2005 800,113
  - 2006 744,440

Promising Practice:

Mr. Ek believes the best and most efficient way to handle abandoned mines in CA is to form a Regional or Interagency (private organizations, the State Historic Preservation Office, other DOI agencies, other Federal agencies[including the military], and Habitat Consultation International) group that could pool resources and take a collaborative and holistic approach to addressing the safety hazards at the abandoned mines.

Submission:	Submitted	Sean Pettersen	06/01/2007 01:18 23 PM
Level 1 Approval:	Approved	William McMullen	06/12/2007 11:03 00 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:49:45 PM

[Linkage Information](#)

**History**

**Status** Approved **Request Review**

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**Confidentiality** Standard

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**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Sean Pettersen 03/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** F.NPS.02 **Subsection** Survey F 02  
**Program Name** Survey-Mitigation  
**Subject** Fatality at Joshua Tree National Park

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Sean Pettersen	Auditor	Central Region Audits	303 236 9133	sean_pettersen@doioig.gov
Paul DePrey	Asst. Chief resource Mangement	Joshua Tree National Park	760 367 5560	Paul_DePrey@nps.gov
Luke Sabala	Branch Chief Physical Scientist	Joshua Tree National Park	760 367 5563	Luke_Sabala@nps.gov

**Location** Telephone

**Date/Time**

02/28/2007

**Purpose:**

To determine what steps NPS took to mitigate the hazard posed by an abandoned mine shaft after the death of a visitor at Joshua Tree National Park.

To determine if the Park has an inventory of abandoned mines or if there is an estimate of the number of abandoned mines.

**Scope:**

Fatalities at National Parks due to physical hazards posed by abandoned mines

**Conclusion:**

According to Park officials, the fatality occurred on BLM land just outside the boundary of the Park. They did not know if the site had been mitigated.

**Summary:**

There are approximately 300 mines on the Park. The attached list (provided by Luke Sabala) shows 284 mines. However, Luke stated, "It is not up to date, we are in the process of updating, however each site must be visited by a technician and updated for an accurate UTM for each mine feature. The database was compiled a little different in the past, but this is a good starting point."

According to Paul, of the 300 mines, 120 are shafts or adits that pose significant safety risks to visitors. He stated that the adits are as dangerous as vertical shafts because of the risk of collapse and gases trapped inside. He also stated in many cases there are vertical shafts within adits that are difficult to see because of how dark it is inside the adits. In addition to the shafts and adits, pits greater than 10 feet deep also pose a safety risk because if someone falls in they are unable to get out.

Over the past several years the Park has sealed 18 mine openings. The Park was using a "Puff" machine where chemicals were injected into the mine opening to create a foam seal. The foam sealed the opening and at the same time preserved the mine. The Park is now using cable netting and steel bat gates and cupolas

Other details:

Sean,  
These are the only articles I could find in my email. I know there are many more. Cy Oggins (916 323-9226) may be able to help as well. Attached is my exported database from Arcmap. It is not up to date, we are in the process of updating, however each site must be visited by a technician and updated for an accurate UTM for each mine feature. The database was compiled a little different in the past, but this is a good starting point. Also attached is my top 14 list (not necessarily in order of priority) all are a priority to me.

Any questions please do not hesitate to call.

FNPS.02 Fatality at Joshua Tree National Park



JOTR 14 AML Sites.doc JOTR\_Mines.xls

\*\*\*\*\*  
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\*\*\*\*\*

----- Forwarded by Luke Sabala/JOTR/NPS on 03/01/2007 03:02 PM -----

**"Oggins, Cy"**  
**<Cy.Oggins@conservation.ca.gov>**  
04/17/2006 08:13 AM  
MST

To: "Carey, Janet" <Janet.Carey@conservation.ca.gov>, "Hayashi, Sam" <Sam.F.Hayashi@conservation.ca.gov>, "John, Douglas" <Douglas.John@conservation.ca.gov>, "Mistchenko, Jonathan" <Jonathan.Mistchenko@conservation.ca.gov>, "Oggins, Cy" <Cy.Oggins@conservation.ca.gov>, "Reeves, Sarah" <Sarah.Reeves@conservation.ca.gov>, "Waggoner, Judith" <Judith.Waggoner@conservation.ca.gov>  
cc: "Greg Pelka (E-mail)" <pelkag@slc.ca.gov>, "Luke Sabala (E-mail)" <luke\_sabala@nps.gov>  
Subject: FW: Google Alert - "abandoned mine"

FYI

-----Original Message-----

**From:** Google Alerts [mailto:googlealerts-noreply@google.com]  
**Sent:** Sunday, April 16, 2006 10:00 AM  
**To:** Oggins, Cy  
**Subject:** Google Alert - "abandoned mine"

Google Alert for: "**abandoned mine**"

[Man who fell down mine shaft rescued](#)

Victorville Daily Press - Victorville,CA,USA

... Officials did not release the name of the [REDACTED] who dropped to the bottom of the same **abandoned mine** where Kenneth ...

[See all stories on this topic](#)

Google Alert for: "**abandoned mine**"

[Another man falls down abandoned mine shaft](#)

Desert Dispatch - Barstow,CA,USA

CALICO — Rescuers were called to an **abandoned mine** [REDACTED] exactly one week after another man fell down the same shaft, dying from the fall ...

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----- Message from "Craig, Douglas" <Douglas.Craig@conservation.ca.gov> on Sun, 16 Apr 2006 09:07:13 -0700 -----

**To:** "Luther, Bridgett" <Bridgett.Luther@conservation.ca.gov>, "Marshall, Jason" <Jason.Marshall@conservation.ca.gov>  
"Oggins, Cy" <Cy.Oggins@conservation.ca.gov>, "Wilson, Ed" <Ed.Wilson@conservation.ca.gov>, "Drysdale, Donald" <Donald.L.Drysdale@conservation.ca.gov>, "Gibbs, Tom"  
**cc:** <Tom.Gibbs@conservation.ca.gov>, "Baker, Carolyn" <Carolyn.Baker@conservation.ca.gov>, "Jarvis, Eric" <Eric.Jarvis@conservation.ca.gov>, "Tenorio, Gregory"

F NPS.02 Fatality at Joshua Tree National Park

<Gregory.A.Tenorio@conservation.ca.gov>, "Traxler, Cindy" <Cynthia.Traxler@conservation.ca.gov>

**Subject:** Another man falls into mine shaft

<http://www.vvdailypress.com/2006/114511274722131.html>

Saturday, April 15, 2006

Another man falls into mine shaft

Expert warns to be extremely careful if you come upon a min

By KATHERINE ROSENBERG / Staff Writer

CALICO — Rescuers were called to an abandoned mine Friday afternoon, exactly one week after another man fell down the same shaft, dying from the fall

The condition of the man who fell in the area of Ghost Town and Calico roads around 3:45 p m was unavailable late Friday night, but authorities said they were able to talk with him

"He's indicated to us he's injured but to what extent we won't know until we get down into the hole," Sgt Doug Hubbard of the San Bernardino County Sheriff's Barstow station

Hubbard said that the Sheriff's Search and Rescue team as well as mine rescuers from Los Angeles and Kern counties had responded to assist, totaling about 40 individuals on scene

Around 7 p m mine rescuers were rigging up their ropes and repelling equipment and were about to descend into the mine shaft to try to rescue the unnamed man, Hubbard said

He explained that the man was in the area with his family, riding motorcycles At some point the group saw the mine and decided to get off their bikes to look around

"They were exploring the mine shaft in the dark when they unexpectedly came to the vertical portion and he fell," Hubbard said

Many families were camping in the area and someone used a cell phone to call for help, he said

Authorities suggested that the man was an off-duty Los Angeles County sheriff's deputy, and although Hubbard said he too heard that, he was unable to confirm it late Friday

"Our priority is just getting to him and obtaining his medical condition," Hubbard said

There are around 15,000 mines in San Bernardino and Riverside counties and about 47,000 in the state, according to the California Office of Mine Reclamation

Hubbard called the mines extremely dang erous and warned the public to be extremely careful and use good judgment should you come upon one

----- Message from "Craig, Douglas" <Douglas.Craig@conservation.ca.gov> on Sun, 16 Apr 2006 09:14:13 -0700 -----

**To:** "Luther, Bridgett" <Bridgett.Luther@conservation.ca.gov>, "Marshall, Jason" <Jason.Marshall@conservation.ca.gov>

"Oggins, Cy" <Cy.Oggins@conservation.ca.gov>, "Wilson, Ed" <Ed.Wilson@conservation.ca.gov>, "Drysdale, Donald" <Donald.L.Drysdale@conservation.ca.gov>, "Gibbs, Tom"

**cc:** <Tom.Gibbs@conservation.ca.gov>, "Baker, Carolyn" <Carolyn.Baker@conservation.ca.gov>, "Jarvis, Eric" <Eric.Jarvis@conservation.ca.gov>, "Tenorio, Gregory"

<Gregory.A.Tenorio@conservation.ca.gov>, "Traxler, Cindy" <Cynthia.Traxler@conservation.ca.gov>

**Subject:** Man who fell down mine shaft rescued

<http://www.vvdailypress.com/2006/11451990548555.html>

Sunday, April 16, 2006

Man who fell down mine shaft rescued

By KATHERINE ROSENBERG / Staff Writer

CALICO — A man who fell roughly 50 feet down a mine shaft was successfully rescued late Friday night and is in critical condition at an area hospital

Officials did not release the name of the off-duty Riverside County Sheriff’s Deputy who dropped to the bottom of the same abandoned mine where Kenneth “Rusty” Lasley, 41, of Vista died just one week before

Sgt Doug Hubbard said that the man was riding motorcycles with his family when they came upon the mine and the group was exploring it when he plummeted roughly 50 to 60 feet to the bottom Emergency workers were called to the scene around 3:45 p m and at 8:30 p m mine rescue workers began their descent into the mine

They reached the bottom about twenty minutes later and found the man suffering from two fractured ankles, a broken leg and a broken vertebrae By 11:30 the victim was on a helicopter to Loma Linda Medical Center Due to weather conditions in the Cajon Pass however, he was driven by ground ambulance from Oak Hills, Hubbard said

“Coincidentally, many of the rescuers were the same members that had gone to the mine nearly the same time last week which was very helpful to us because they were experienced in that particular mine It drastically expedited the entry because they knew what to prepare for inside the mine shaft,” Hubbard said

Hubbard said that the victim was alert and was communicating with the rescuers — who came from as far as Kern and Los Angeles counties — the entire time He added that the depth of the mine did not require the mine team to wear special breathing equipment and the victim was able to get fresh air from his location

“There was a lot of satisfaction in getting him out alive since our perspective was of the week prior,” Hubbard said He estimated that the injuries sustained by the two men were greatly different, allowing this victim to survive

“It is very difficult to say why one died and one didn’t Last week’s victim sustained a significant head injury which we believe was the cause of the fatality This individual, by luck, didn’t receive a head injury He landed on his feet all the way at the bottom of the mine,” Hubbard said

The 60 or so emergency workers on scene wrapped up around 1:30 a m Saturday and the victim was expected to recover from his injuries, officials said

Submission:	Submitted	Sean Pettersen	05/24/2007 11:53:43 AM
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F NPS.03 Fatality at Lake Mead Recreation Area

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 04/27/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section G.  
 Assignment Program Name Audit Background

**Objective:**

Describe relevant background for the audit.

**Background:**

**Assignment Steps:**

G - Audit Background			
Audit Step	Staff	Justification for Step Addition or Removal	Work Paper Reference
1. Document the justification for performing the AML audit.	Stephanie		G.DOI.01 Fact Sheet - Public Safety Issues on Abandoned Mine Lands ■
2. Determine the background of the AML program in DOI ■■■■■-■■■■■:	Stephanie	Audit Section J is devoted specifically to BLMs AML program.	G.DOI.04 Discussion with CHF and AML staff ■ A.03.01 Initial Discussion with OEPC ■
3. Document relevant information putting the AML program and AML hazards in perspective	Team	Added to include basic information about population, land use, etc that highlights growing hazards of AML sites.	G.01 SMCRA ■ G.02 Legacy of Hardrock Mining ■ G.03 Population Growth ■ G.04 OHV Use ■ G.06 Federal Lands ■ G.07 MSHA Incident Data ■ G.08 EPA AML Reference Notebook ■ G.BLM.01 BLM AML Background ■ G.DOI.02 Seymour Article ■ G.DOI.03 FLPMA ■ G.DOI.04 Discussion with CHF and AML staff ■ G.DOI.06 Relevant GPRA Goals ■ G.DOI.07 2006/2007 PARs ■ G.DOI.08 OGC Response to OIG Questions ■

**Conclusion:**

**[Auditor Conclusion]** ■

■ Growth of population in the west and use of ORV's will likely increase the risk of injuries and fatalities from AML safety hazards or health effects from exposure to environmental contaminants. Audit scope was limited to AML sites in CA, AZ and NV because these states have received no SMCRA funds ■ and they have a significant legacy of AML sites ■.

**G.01 SMCRA** ■

- The Surface Mining Control and Reclamation Act (SMCRA) was passed in 1977 and most recently amended in 2006.
- The Act established an Abandoned Mine Reclamation Fund to "finance the reclamation of abandoned coal mines."
- The Act (Section 409) also allows limited use of funds to address non-coal mine hazards.
- The Act is administered by the Office of Surface Mining (OSM).
- OSM has an online inventory database "Abandoned Mine Land Inventory System (AMLIS)".
- A search of this database showed that no SMCRA funds have been received by AZ, CA ID ND OR, SD WA or NV to reclaim non-coal mine sites.
- AK, CO, MT, NM, UT and WY have received SMCRA funds for reclamation of non-coal mine sites

**G.02 Legacy of Hardrock Mining** ■

- In a 1998 report AZ, CA and NV have a significant legacy of thousands of abandoned mines.
- BLM CA estimates there are 18,000 abandoned or inactive mines in CA and northwest NV on BLM land and that 3,000 of these present safety and/or environmental hazards.

#### G.03 Population Growth

Census 2000 data as reported in the Source document notes that:

- The fastest growing two states from 1990 to 2000 were Nevada (66.3%) and Arizona (40%) as shown in the tables below.
- California had the largest population of any state as of 2000.

#### G.04 OHV Use

- OHV use is "widely recognized now as one of the fastest growing outdoor activities."

#### G.06 Federal Lands

- BLM and NPS manage over 50% of all federally owned land in the US.

#### G.07 MSHA Incident Data

- From 2004 to 2007, MSHA reported:
  - 12 fatalities in abandoned mines in the West
  - 14 injuries in abandoned mines in the West.
- It is not possible, using MSHA data, to determine how many fatalities and injuries occurred on federal land.
- MSHA does not represent a comprehensive source of information of abandoned mine incidents.

#### G.08 EPA AML Reference Notebook

The Notebook notes the following potential environmental problems with abandoned mines:

1. Stream sedimentation and sediment contamination
2. Water pollution including acid mine drainage
3. Air pollution from contaminated dust

Safety problems are:

1. Deep vertical shafts
2. Horizontal openings
3. Cave-ins
4. Deadly gases
5. Unused or misfired explosives
6. Unstable highwalls and cliffs
7. Unstable piles
8. Hidden ledges, mining debris, water-filled pits (or mines)

#### G.BLM.01 BLM AML Background

The AML program supports the overall BLM mission of public land and water conservation. The AML program addresses physical safety and environmental hazards associated with abandoned hardrock mines on public lands administered by BLM. Abandoned mines addressed by the program are those that were abandoned prior to January 1, 1981, the effective date of BLM's Surface Management regulations issued under authority of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 et seq.).

Over the last 150 years, much of the land managed by BLM has experienced some form of mining activity. Typically, there are no financially responsible parties to help pay for the cleanup. As a result, BLM must pay for and address physical safety and environmental threats associated with abandoned mines.

#### G.DOI.02 Seymour Article

- Adequate inventory of abandoned hardrock mining sites on public lands is lacking but estimates suggest hundreds of thousands of sites.
- Various sources quoted by Seymour estimate remediation costs of AML sites to be billions of dollars.
- BLM estimate concurs that billions will be needed to remediate mines on BLM administered land.
- Under FLPMA, DOI (BLM) has authority to prevent unnecessary and undue degradation of lands irrespective of the Mining Law and rights of locators or claimants but BLM has not construed this authority as possible. BLM has defined a "prudent man" standard by which mining can occur even if degradation occurs as long as laws and regulations are being followed and the degradation is incident to proper mining activity.

#### G.DOI.03 FLPMA

- FLPMA Section 302(b) provides an overarching clause requiring the Secretary to prevent unnecessary or undue degradation of lands irrespective of the Mining Law and rights of locators or claimants under that law.
- Withdrawal of lands from mineral entry under the 1872 Mining Law are permitted under FLPMA and applicable regulations (43 CFR 2300).
- Closures are also allowed under regulations and have been used by BLM.

#### G.DOI.04 Discussion with CHF and AML staff

- Better prioritization of sites is needed.
- Better environmental expertise is needed in BLM field organizations.
- BLM programs need to cooperate more to identify and mitigate AML sites.
- Land withdrawals could be a powerful tool to limit claimants' ability to disturb remediated sites.

Assignment Program/Summary Workpaper G.

- BLM needs outside pressure to raise awareness of AML issues, support increased budgets, and proactively deal with mining claimants.

**G.DOI.06 Relevant GPRA Goals**

The most relevant GPRA goals as stated in the FY 2007 -2012 Strategic Plan relate to reporting and preventing injuries and fatalities. However:

- For BLM, injuries and fatalities include only those occurring on recreation fee lands.
- For BLM, injuries and fatalities are to be taken as reported in LAWNET.
- For NPS, injuries and fatalities are to be taken as reported in IMARS.
- BLM has a GPRA goal of mitigating physical safety and chemical hazards so as to prevent injury or death.
- BLM AML Policy Handbook establishes the top priority for mitigation of AML sites with safety hazards as those sites where an injury or death has already occurred.

**G.DOI.07 2006/2007 PARs**

- No material weaknesses related to AML issues were identified on DOI balance sheets by an independent auditor for 2005, 2006, or 2007.
- The 2006 and 2007 PARs have no performance measures related specifically to abandoned hardrock mines. Some measures in the 2007 PAR relate to potential effects from mines such as number of visitor injuries and fatalities, percent of physical and chemical hazards mitigated to protect public health and safety, and percent of contaminated sites remediated to protect watersheds, but these measures were reported as achieved.

**G.DOI.08 OGC Response to OIG Questions**

OGC responded to OIG questions regarding AML issues:

- OGC noted the various applicable laws related to mitigating AML sites.
- OGC preferred the view that bureaus have substantial authority to mitigate hazards regardless of the existence of active claimants.
- OGC noted that past opinions supported the view that BIA does not have environmental cleanup authority on Indian trust lands for hazards that BIA did not create and over which BIA has no direct and active control. BIA continues to hold this position **C.BIA.01 BIA AML program**.

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G.01 SMCRA

## Assignment Workpaper

Prepared by: William McMullen 11/08/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.01 **Subsection**  
**Program Name** Audit Background  
**Subject** SMCRA

**Origination Doctlink** 

**Purpose:**  
Document purpose of SMCRA.

**Scope:**  
Surface Mining Control and Reclamation Act (SMCRA).

**Source:**  
Overview of the SMCRA found at <http://amrclearinghouse.org/Sub/LEGAL/SMCRA.htm> and attached:



SMCRA Story.pdf

Basics of SMCRA found at <http://mine-drainage.usgs.gov/pubs/titleIvbasics.pdf> and attached:



SMCRA Overview.pdf

AMLIS database query run online at <http://ismhdqa02.osmre.gov/scripts/OsmWeb.dll> and results attached:



Funding report 11\_8\_07 western states noncoal.pdf

SMCRA Western Governor's Association Policy Resolution found at <http://www.westgov.org/wga/policy/07/aml.doc> and attached:



WGA Policy Resolution.pdf

Text of SMCRA (especially Section 409) found at <http://www.osmre.gov/smcra.htm#409> and shown in Details section.

### Conclusion:

- The Surface Mining Control and Reclamation Act (SMCRA) was passed in 1977 and most recently amended in 2006.
- SMCRA was passed to regulate the coal mining industry.
- The Act established an Abandoned Mine Reclamation Fund to "finance the reclamation of abandoned coal mines."
- The Act (Section 409) also allows limited use of funds to address non-coal mine hazards.
- The Act is administered by the Office of Surface Mining (OSM).
- OSM has an online inventory database "Abandoned Mine Land Inventory System (AMLIS)".
- A search of this database showed that no SMCRA funds have been received by AZ, CA, ID, ND, OR, SD, WA or NV to reclaim non-coal mine sites.
- AK, CO, MT, NM, UT and WY have received SMCRA funds for reclamation of non-coal mine sites.

### Details:

from page to of SMCRA Story:

## Surface Mining Control and Reclamation Act of 1977

In 1977 the Surface Mining Control and Reclamation Act (SMCRA) was passed by the United States Congress to regulate the mining industry and to address the problem of abandoned mine sites (those sites mined before 1977). SMCRA was amended in 1990 and again in 1992. This law is administered through the Office of Surface Mining (OSM)

SMCRA put an end to the practice of abandoning coal mine sites. Coal companies now reclaim lands after they mine them. SMCRA also requires that all active mining operations pay a tax on each ton of coal they produce; at a rate of 35 cents per ton for surface mined coal and 15 cents per ton of deep mined coal.

The funds collected from this coal production tax goes into the **Abandoned Mine Reclamation Fund** and according to SMCRA as amended are to be used to finance the reclamation of abandoned coal mine sites. The following is a simple breakdown of how the funds are supposed to be allocated.

1. 50% reserved for use by the state where collected
2. 50% placed in the Federal Share
3. Interest earned to be used on other items
4. 20% of item 2 to be allocated for RAMP (Rural Abandoned Mine Program) .... *now inactive*

from page 1 of SMCRA Overview:

The **Surface Mining Control and Reclamation Act (SMCRA)** is sweeping federal legislation regulating coal mining in the U.S. Prior to its original passage in 1977, the coal mining industry was largely unregulated, especially with regard to the environment. Over a century of environmentally insensitive mining practices took a huge toll on the land and water where mining occurred. But SMCRA changed the face of the coal mining industry into one that is vastly safer with a significantly smaller environmental impact. Over the years, SMCRA has been amended several times, most recently in December 2006, where a number of changes will accelerate reclamation of mine-scarred lands and waters in the coal regions of the U.S.

The WGA Policy Resoution notes that SMCRA funds can be used to reclaim non-coal mine hazards:

### A. BACKGROUND

1. The Abandoned Mine Land (AML) Program, authorized under Title IV of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), allows certain states and tribes to establish programs, funded by fees from coal production, that restore lands mined and abandoned or left inadequately restored before August 3, 1977. AML project goals include closing or safeguarding deadly shafts and unstable openings, reclaiming coal gob and other mine wastes, safeguarding abandoned radioactive uranium sites, containing coal mine fires, and removing hazardous mine structures.
2. The long history of hard rock mining in the West has left a legacy of thousands of abandoned mines, which pose a threat to human health and safety and to the environment. As urban growth continues and public recreation expands in the West, greater numbers of people are exposed to the hazards posed by abandoned and unreclaimed hard rock mines. Increasing population growth in undeveloped areas and increasing visitor numbers have made previously remote sites easily accessible, resulting in more accidents and deaths on abandoned mine lands.
- 3 Section 409 of SMCRA authorizes states to use AML grant funds to address high priority non-coal mine hazards. While the state AML programs are limited to using SMCRA funds to only address public health and safety hazards at abandoned non-coal mines, and not purely environmental threats, the state programs have employed this provision to make a dent in the public safety threats posed by abandoned mines.

SEC. 409. (a) The Congress declares that voids and open and abandoned tunnels, shafts, and entryways resulting from any previous mining operation, constitute a hazard to the public health or safety and that surface impacts of any underground or surface mining operation may degrade the environment. The Secretary, at the request of the Governor of any State, or the governing body of an Indian tribe, is authorized to fill such voids

seal such abandoned tunnels, shafts and entryways and reclaim surface impacts of underground or surface mines which the Secretary determines could endanger life and property, constitute a hazard to the public health and safety or degrade the environment. State regulatory authorities are authorized to carry out such work pursuant to an approved abandoned mine reclamation program.

The Office of Surface Mining created an online database "Abandoned Mine Land Inventory System (AMLIS)" that allows one to identify funds spent on reclamation of various mine-related problems in various states. We searched this database using the criteria of States (AK, AZ, CA, CO, ID, MT, ND, NM, OR, SD, UT, WA, WY), non-coal related reclamation for all mine-related problems. NV was not included as a selection in the database. The results (attached as source "Funding report...") show that AZ, CA and NV have gotten no funds from SMCRA for reclamation of non-coal AML sites.

**Methodology:**

Reviewed source documents and queried online AMLIS database as noted in Details section.

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G.02 Legacy of Hardrock Mining

## Assignment Workpaper

Prepared by: William McMullen 11/08/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.02 **Subsection**  
**Program Name** Audit Background  
**Subject** Legacy of Hardrock Mining

**Origination Doclink** ■

### Purpose:

Document legacy of hardrock mining in the West.

### Scope:

Legacy of mining in the West.

### Source:

Report by Western Governor's Association found at <http://www.westgov.org/wga/publicat/miningre.pdf> and attached:



WGA AML Report.pdf

BLM AML Strategic Plan at [J.BLM.20 AML Strategic Plan](#) ■

### Conclusion:

- In a 1998 report, AZ, CA and NV have a significant legacy of thousands of abandoned mines.
- BLM CA estimates there are 18,000 abandoned or inactive mines in CA and northwest NV on BLM land and that 3,000 of these present safety and/or environmental hazards.
- Table 1 below records 263,031 sites statewide of which the majority 170,000 are in California, Nevada and Arizona.

### Details:

Table 1 on page 4 of the report follows:

Table 1

1998 Western Hardrock Abandoned Mines Summary

	State Estimated Number of AML Sites Statewide	Total Number Reclaimed Statewide	BLM Estimated Number of AML Sites on BLM Land	Park Service Estimated Number of AML Sites on NPS Land	Forest Service Estimated Number of AML Sites on Forest Lands
Alaska	432	4	n.a.	459	172
Arizona	100,000	500	n.a.	238	2,400
California	20,000	3	n.a.	238 <sup>1</sup>	6,000
Colorado	22,000	3,618	n.a.	39	2,500
Idaho	9,000	100	n.a.	11	877
Montana	6,000	1,656	n.a.	45	1,300
Nevada	50,000	4,616 <sup>2</sup>	n.a.	85	280
New Mexico	20,000	2,126	n.a.	13	1,600
North Dakota	150	90	n.a.	5	0
Oregon	n.a. <sup>3</sup>	n.a.	n.a.	10	150
South Dakota	900 <sup>4</sup>	63	n.a.	2	360
Texas	11,900	1,655	n.a.	25	0
Utah	20,000	1,774	n.a.	64	2,000
Washington	n.a. <sup>5</sup>	n.a.	n.a.	61	100
Wyoming	2,649	715	n.a.	132	280

Notes: Data for number of mines (column 1) and number reclaimed (column 2) are from state databases or records and include all known abandoned mine sites on state, private and federal land including BLM, Park Service, and Forest Service. Data for number of mines on federal land are shown for informational purposes (columns 3, 4, and 5) and are from federal databases. Because federal and state agencies define what constitutes a "site" in different ways, one should not compare numbers or draw conclusions based upon numbers from different columns or add state numbers to develop a total for abandoned mines in the West.  
n.a. — not available. BLM estimates a total of 64,748 sites on BLM property for the states listed.

<sup>1</sup> Inventories in the California Desert Parks are incomplete; work is being initiated in 1998 on the 3.1 million acres transferred to the NPS as part of the 1994 California Desert Protection Act. It is estimated that over 1,000 additional sites exist in those parks.

<sup>2</sup> Represents predominately mine openings physically secured by fencing and signage.

<sup>3</sup> The BLM and Forest Service have completed inventories on federal land. The Oregon Department of Geology and Mineral Industries is working with EPA Region X, Idaho, and Washington to develop partnerships for reclamation at this time.

<sup>4</sup> Mines are limited to Black Hills area.

<sup>5</sup> While there have been scattered investigations conducted by federal, state, and county agencies to identify AML sites in the state, no valid estimate of the number of such sites can be given. The main technical barrier to ranking AML sites on a statewide basis is the lack of an effective process for identifying, classifying, and prioritizing them. Also contributing to this situation are the lack of consistently applicable, objective yardsticks for measuring natural resources impacts from these sites and the lack of funding.

The table shows that AZ, CA and NV have an estimated 170,000 abandoned mines. Total for all states shown is 263,031 sites (Math Verified by John Illson on 7/14/08) These states receive no SMCRA funds for reclamation of non-coal mine sites **G.01 SMCRA**. CO and UT also have a significant legacy of abandoned mines, but these states have received funding from SMCRA for reclamation of non-coal mine sites.

The California section of the BLM AML Strategic Plan **J.BLM.20 AML Strategic Plan** (parts of section copied below) notes that there are about 13,000 abandoned mines on BLM land in California; 1,000 of these mines may impact water quality and 3,000 contain hazardous openings.

**California State Office  
Abandoned Mine Land Workplan  
Period: FY 2006 – FY 2013**

**Summary**

Significant mining areas in (State) are: Sierra Nevada Mountains, Klamath Mountains, Foothill Copper-Lead-Zinc Belt, Coast Range Province, Mojave Desert Region, Colorado River Belt, Inyo-White Mountains, Tranverse Range, Tehachapi Mountain Region.

Commodities mined were primarily (gold, silver, mercury, copper, lead, zinc, chrome, antimony, nickel, iron, rare earth, uranium, sulphur, asbestos)

G.02 Legacy of Hardrock Mining

Current estimates regarding the total number of abandoned mines in California is roughly 50,000. An estimated 13,000 abandoned mines exist on BLM-administered public lands, of which 1,000 may impact water quality and over 3,000 contain hazardous mine openings. BLM California currently has an inventory of 520 known abandoned mine sites on BLM-administered public lands. This inventory includes 60 mines that may impact water resources within 17 priority watersheds; over 120 sites likely pose physical safety hazards. To date, 8 impaired water quality sites have been remediated. Approximately 88 sites with physical safety hazards have been remediated, to date.

**Methodology:**

Reviewed source document.

Submission:	Submitted	William McMullen	01/11/2008 08:53 25 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	07/14/2008 04:07:11 PM

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**Purpose:**

Document legacy of hardrock mining in the West.

**Scope:**

Legacy of mining in the West.

**Source:**

Report by Western Governor's Association found at <http://www.westgov.org/wga/publicat/miningre.pdf> and attached:



WGA AML Report.pdf

BLM AML Strategic Plan at [J.BLM.20 AML Strategic Plan](#) ■

**Conclusion:**

In a 1998 report, AZ, CA and NV have a significant legacy of thousands of abandoned mines. ■

- BLM CA estimates there are 18,000 abandoned or inactive mines in CA and nor hwest NV on BLM land and hat 3,000 of these present safety and/or environmental hazards.

**Details:**

Table 1 on page 4 of he report follows:

Table 1

1998 Western Hardrock Abandoned Mines Summary

	State Estimated Number of AML Sites Statewide	Total Number Reclaimed Statewide	BLM Estimated Number of AML Sites on BLM Land	Park Service Estimated Number of AML Sites on NPS Land	Forest Service Estimated Number of AML Sites on Forest Lands
Alaska	432	4	n.a.	459	172
Arizona	100,000	500	n.a.	238	2,400
California	20,000	3	n.a.	238 <sup>1</sup>	6,000
Colorado	22,000	3,618	n.a.	39	2,500
Idaho	9,000	100	n.a.	11	877
Montana	6,000	1,656	n.a.	45	1,300
Nevada	50,000	4,616 <sup>2</sup>	n.a.	85	280
New Mexico	20,000	2,126	n.a.	13	1,600
North Dakota	150	90	n.a.	5	0
Oregon	n.a. <sup>3</sup>	n.a.	n.a.	10	150
South Dakota	900 <sup>4</sup>	63	n.a.	2	360
Texas	11,900	1,655	n.a.	25	0
Utah	20,000	1,774	n.a.	64	2,000
Washington	n.a. <sup>5</sup>	n.a.	n.a.	61	100
Wyoming	2,649	715	n.a.	132	280

Notes: Data for number of mines (column 1) and number reclaimed (column 2) are from state databases or records and include all known abandoned mine sites on state, private and federal land including BLM, Park Service, and Forest Service. Data for number of mines on federal land are shown for informational purposes (columns 3, 4, and 5) and are from federal databases. Because federal and state agencies define what constitutes a "site" in different ways, one should not compare numbers or draw conclusions based upon numbers from different columns or add state numbers to develop a total for abandoned mines in the West.  
n.a. — not available. BLM estimates a total of 64,748 sites on BLM property for the states listed.

<sup>1</sup> Inventories in the California Desert Parks are incomplete; work is being initiated in 1998 on the 3.1 million acres transferred to the NPS as part of the 1994 California Desert Protection Act. It is estimated that over 1,000 additional sites exist in those parks.

<sup>2</sup> Represents predominately mine openings physically secured by fencing and signage.

<sup>3</sup> The BLM and Forest Service have completed inventories on federal land. The Oregon Department of Geology and Mineral Industries is working with EPA Region X, Idaho, and Washington to develop partnerships for reclamation at this time.

<sup>4</sup> Mines are limited to Black Hills area.

<sup>5</sup> While there have been scattered investigations conducted by federal, state, and county agencies to identify AML sites in the state, no valid estimate of the number of such sites can be given. The main technical barrier to ranking AML sites on a statewide basis is the lack of an effective process for identifying, classifying, and prioritizing them. Also contributing to this situation are the lack of consistently applicable, objective yardsticks for measuring natural resources impacts from these sites and the lack of funding.

The table shows that AZ, CA and NV have an estimated 170,000 abandoned mines. These states receive no SMCRA funds for reclamation of non-coal mine sites **G.01 SMCRA**. CO and UT also have a significant legacy of abandoned mines, but these states have received funding from SMCRA for reclamation of non-coal mine sites.

The California section of the BLM AML Strategic Plan **J.BLM.20 AML Strategic Plan** (parts of section copied below) notes that there are about 13,000 abandoned mines on BLM land in California; 1,000 of these mines may impact water quality and 3,000 contain hazardous openings.

California State Office  
Abandoned Mine Land Workplan  
Period: FY 2006 – FY 2013

Summary

Significant mining areas in (State) are: Sierra Nevada Mountains, Klamath Mountains, Foothill Copper-Lead-Zinc Belt, Coast Range Province, Mojave Desert Region, Colorado River Belt, Inyo-White Mountains, Transverse Range, Tehachapi Mountain Region.

Commodities mined were primarily (gold, silver, mercury, copper, lead, zinc, chrome, antimony, nickel, iron, rare earth, uranium, sulphur, asbestos)

Current estimates regarding the total number of abandoned mines in California is roughly 50,000. An estimated 13,000 abandoned mines exist on BLM-administered public lands, of which 1,000 may impact water quality and over 3,000 contain hazardous mine openings. BLM California currently has an inventory of 520 known abandoned mine sites on BLM-administered public lands. This inventory includes 60 mines that may impact water resources within 17 priority watersheds; over 120 sites likely pose physical safety hazards. To date, 8 impaired water quality sites have been remediated. Approximately 88 sites with physical safety hazards have been remediated, to date.

Methodology:  
Reviewed source document.

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**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Assignment Workpaper**

Prepared by: William McMullen 11/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.03 **Subsection**  
**Program Name** Audit Background  
**Subject** Population Growth

**Origination Doctlink** ■

**Purpose:**  
Document population growth especially in the West.

**Scope:**  
Population growth in US.

**Source:**  
Data on population found at [http://nationalatlas.gov/articles/people/a\\_popchange.html](http://nationalatlas.gov/articles/people/a_popchange.html) and attached:



Population 1990\_2000.pdf

- Conclusion:**  
Census 2000 data as reported in the Source document notes that:
- Overall population growth from 1990 to 2000 in US and Puerto Rico averaged 13.4%.
  - Overall population growth from 1990 to 2000 in US and Puerto Rico excluding 14 western states averaged 10%.
  - Overall population growth in 14 selected western states (excluding Hawaii) averaged 22.1%.
  - The fastest growing two states from 1990 to 2000 were Nevada (66.3%) and Arizona (40%) as shown in the tables below.
  - California had the largest population of any state as of 2000.

**Details:**  
The source document summarizes data from Census 2000 and contains the following table summarizing population growth in the US from 1990 to 2000. The data for the 14 western states (excluding Hawaii) are shown in Yellow. The average population growth for all states and Puerto Rico was calculated as 13.4%. If the 14 western states are removed from the analysis, the average population growth for the remaining states and Puerto Rico from 1990 to 2000 was 10% as shown in the table on the right below. The fastest growing two states from 1990 to 2000 were Nevada (66.3%) and Arizona (40%) as shown in the tables below.

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

G.03 Population Growth

STATE	Population		Change, 1990 - 2000	
	April 1, 1990	April 1, 2000	Number	%
Alabama	4,040,587	4,447,100	406,513	10.1
Alaska	550,043	626,932	76,889	14
Arizona	3,665,228	5,130,632	1,465,404	40
Arkansas	2,350,725	2,673,400	322,675	13.7
California	29,760,021	33,871,648	4,111,627	13.8
Colorado	3,294,394	4,301,261	1,006,867	30.6
Connecticut	3,287,116	3,405,565	118,449	3.6
Delaware	666,168	783,600	117,432	17.6
District of Co	606,900	572,059	-34,841	-5.7
Florida	12,937,926	15,982,378	3,044,452	23.5
Georgia	6,478,216	8,186,453	1,708,237	26.4
Hawaii	1,108,229	1,211,537	103,308	9.3
Idaho	1,006,749	1,293,953	287,204	28.5
Illinois	11,430,602	12,419,293	988,691	8.6
Indiana	5,544,159	6,080,485	536,326	9.7
Iowa	2,776,755	2,926,324	149,569	5.4
Kansas	2,477,574	2,688,418	210,844	8.5
Kentucky	3,685,296	4,041,769	356,473	9.7
Louisiana	4,219,973	4,468,976	249,003	5.9
Maine	1,227,928	1,274,923	46,995	3.8
Maryland	4,781,468	5,296,486	515,018	10.8
Massachusetts	6,016,425	6,349,097	332,672	5.5
Michigan	9,295,297	9,938,444	643,147	6.9
Minnesota	4,375,099	4,919,479	544,380	12.4
Mississippi	2,573,216	2,844,658	271,442	10.5
Missouri	5,117,073	5,595,211	478,138	9.3
Montana	799,065	902,195	103,130	12.9
Nebraska	1,578,385	1,711,263	132,878	8.4
Nevada	1,201,833	1,998,257	796,424	66.3
New Hampsh	1,109,252	1,235,786	126,534	11.4
New Jersey	7,730,188	8,414,350	684,162	8.9
New Mexico	1,515,069	1,819,046	303,977	20.1
New York	17,990,455	18,976,457	986,002	5.5
North Carolin	6,628,637	8,049,313	1,420,676	21.4
North Dakota	638,800	642,200	3,400	0.5
Ohio	10,847,115	11,353,140	506,025	4.7
Oklahoma	3,145,585	3,450,654	305,069	9.7
Oregon	2,842,321	3,421,399	579,078	20.4
Pennsylvania	11,881,643	12,281,054	399,411	3.4
Rhode Island	1,003,464	1,048,319	44,855	4.5
South Carolin	3,486,703	4,012,012	525,309	15.1
South Dakote	696,004	754,844	58,840	8.5
Tennessee	4,877,185	5,689,283	812,098	16.7
Texas	16,986,510	20,851,820	3,865,310	22.8
Utah	1,722,850	2,233,169	510,319	29.6
Vermont	562,758	608,827	46,069	8.2
Virginia	6,187,358	7,078,515	891,157	14.4
Washington	4,866,692	5,894,121	1,027,429	21.1
West Virginia	1,793,477	1,808,344	14,867	0.8
Wisconsin	4,891,769	5,363,675	471,906	9.6
Wyoming	453,588	493,782	40,194	8.9
Puerto Rico	3,522,037	3,808,610	286,573	8.1
			<b>Average Population Growth</b>	<b>13.4</b>

STATE	Population		Change, 1990 - 2000	
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Wisconsin	4,891,769	5,363,675	471,906	9.6
Puerto Rico	3,522,037	3,808,610	286,573	8.1
			<b>Average Population Growth (excluding 14 western states)</b>	<b>10.0</b>

Vermont	6,187,358	7,078,515	891,157	14.4
Virginia	4,866,692	5,894,122	1,027,429	21.1
Washington	1,793,477	1,808,344	14,867	0.8
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Puerto Rico				
			<b>Average Population Growth</b>	<b>13.4</b>

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

Population growth for the 14 western states are shown in yellow above. The average growth from 1990 to 2000 was calculated as 22.5%. (Ma h Verified by SGC 1/23/08)

**Methodology:**

Extracted data from source document and calculated average growth for 14 western states versus all states.

Submission: Submitted William McMullen 01/23/2008 01:09 39 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 04/28/2008 12:49 21 PM

**Linkage Information**

**History**

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**In Progress Edit** Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
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**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Assignment Workpaper**

Prepared by: William McMullen 11/06/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.04 **Subsection**  
**Program Name** Audit Background  
**Subject** OHV Use

**Origination Doclink** 

**Purpose:**  
 Document OHV use in western states.

**Scope:**  
 Recreational use of Off-Highway Vehicles (OHV).

**Source:**  
 Report by U.S. Forest Service Southern Research Station found at [http://www.fs.fed.us/recreation/programs/ohv/OHV\\_final\\_report.pdf](http://www.fs.fed.us/recreation/programs/ohv/OHV_final_report.pdf).  
 Report is titled " Off-Highway Vehicle Recreation in he United States, Regions and States: A National Report from the National Survey on Recreation and the Environment (NSRE)" published in June 2005 and is attached:



OHV\_final\_report.pdf

**Conclusion:**

Summary Western States	OHV Users
AK	148.70
AZ	982.70
CA	4,351.30
CO	877.10
ID	320.80
MT	201.10
NV	360.80
NM	345.90
ND	127.80
OR	581.50
SD	156.20
UT	490.00
WA	1,010.90
WY	127.40
<b>Total</b>	<b>10,082.20</b>
<b>% of OHV Pop</b>	<b>25.4%</b>
<b>% of Total Pop</b>	<b>4.7%</b>

(Math Verified in Table by SGC 1/23/08)

- From 1999 -2004, he summary table shows there over 10 million people aged 16 or older in the 14 western states who participated in OHV activities.

- This population represents over 25% of all OHV users in the U.S and almost 5% of the total U.S. population 16 and older.
- OHV use is "widely recognized now as one of the fastest growing outdoor activities."
- As of 2004, an estimated almost 40 million people 16 and older in the country participate in OHV use out of a population of about 214 million (16 and older).
- The average user rides an OHV almost 27 days per year.

**Details:**

from page 1 of the report:

This report was prepared for the Forest Service's National OHV Policy & Implementation Teams. The source of data is the National Survey on Recreation and the Environment (NSRE). The data used in this report from the NSRE were collected between the fall of 1999 through late 2004. More about the NSRE can be found at this web site, [www.srs.fs.fed.us/trends](http://www.srs.fs.fed.us/trends).

From page 6 of the report:

**Trend Overview**

As the U.S. population grows, so too does demand for outdoor recreation. Demand for OHV driving and riding has especially grown in recent years. In 1960, when the first U. S. National Recreation Survey was done for the Outdoor Recreation Resources Review Commission, off-highway motorized recreation was not even on the "radar" as a recreational activity. There were, of course, many people who rode motorcycles on back country trails and used 4-wheel-drive vehicles (such as jeeps) to gain access to the back country, with and without roads. But there was no recognition of off-highway motorized recreation (then referred to as off-road driving) as a population-wide outdoor activity. OHV use is widely recognized now as one of the fastest growing outdoor activities.

From 1982 to 2000-01, driving motor vehicles 'off-road' became one of the fastest growing activities in the country, growing in number of participants over 12 years old by more than 100 percent (Cordell et al. 2004, p. 37). (The 1982 national survey asked about participation by people age 12 and older, so the 2000-2001 results, which focused on persons 16 or older, had to be adjusted to allow a direct comparison. Earlier surveys also used the terminology "off road" to describe motorized use. For this report, we will refer to "off-highway" use to capture a broader band of uses including backcountry roads, trails and cross country riding.) Growth in OHV driving between an earlier NSRE conducted in 1994-1995 and the time when the next round of NSRE data were collected, between fall 1999 and summer 2000, showed a 32-percent increase. This represented growth from about 27.3 million OHV users in 1994-1995 to about 36.0 million in 1999-2000 (Cordell et al. 2004, p. 71). A slightly higher growth rate continued from 1999-2000 to the most recent NSRE interviewing period in late 2004. The proportion of people age 16 and older who said they participated in OHV recreation increased from 16.8 percent in 1999-2000 to 23.8 percent in 2003-2004 (Table 2). This resulted in growth in the number of OHV participants during that time period from 36.0 million to 51.0 million, a 42 percent increase (Table 3). While statistical surveys are always subject to sampling error, the sizeable sample sizes in each of the five interviewing seasons assures small standard errors and hence, relatively precise estimates. (The season with the smallest sample size, 2003-2004, has the least precise estimate.) Further, there has been a consistent upward trend in the five interviewing periods between 1999 and 2004. Based on the latest season, nearly 1-in-4 Americans (23.8 percent) age 16 and older participated one or more times in OHV recreation within the past year. A more conservative estimate uses the combined or pooled NSRE 1999-2004 sample of more than 73,000 individuals to arrive at an estimate of 39.7 million OHV participants (Table 3), 18.6 percent of the population (Table 2) or almost 1-in-5 people age 16 and older.

From page 10 of the report:

**Trends in Annual OHV Activity Days**

In three of the 16 versions of the 1999-2004 NSRE that asked respondents if they had participated in OHV recreation during the past 12 months, a follow-up question was asked: *On how many different days did you drive off-road?* The total number of individuals responding to this question was 2,875. Of these, 1,650 were interviewed in 2001 and 1,225 were interviewed in 2003. (See Appendix Table 2 for sample size for both years and by demographic strata.) Combining all of the interviews, the average (mean) number of activity days per year by all OHV participants was 26.6 (line 1 of Table 4).

Table 6 below (pages 14-16 of the report) show OHV use by state. The 14 western states are highlighted:

Table 6—Percent of population and estimated number of people age 16 or older participating in off-highway vehicle recreation and percent of U.S. total, listed alphabetically by state, 1999-2004.

Name	Population age 16 & older (1000s)	Percent of U.S. population age 16 & older	Sample size	Percent in state participating in OHV recreation	OHV Participa nts (1000s)	Percent of Total U.S. Participants
Alabama	3,401.90	1.6	2,358	22.1	753.9	1.9
Alaska	451.1	0.2	519	32.9	148.7	0.4
Arizona	3,851.30	1.8	1,023	25.5	982.7	2.5
Arkansas	2,042.80	1	1,097	25.4	520.5	1.3
California	25,230.60	11.8	5,347	17.2	4,351.30	10.9
Colorado	3,274.60	1.5	1,026	26.7	877.1	2.2
Connecticut	2,613.30	1.2	936	14.3	373.3	0.9
Delaware	601.5	0.3	513	14.4	86.6	0.2
District of Columbia	461.8	0.2	503	10.6	49.1	0.1
Florida	12,558.30	5.9	2,782	14.2	1,781.40	4.5
Georgia	6,160.70	2.9	2,916	20.3	1,253.20	3.2
Hawaii	935.5	0.4	571	12.3	114.9	0.3
Idaho	955.2	0.4	642	33.5	320.8	0.8
Illinois	9,393.10	4.4	2,367	14	1,320.60	3.3
Indiana	4,615.00	2.2	1,444	15.8	728	1.8
Iowa	2,248.20	1.1	995	16.8	377.4	0.9
Kansas	2,028.80	0.9	980	19	385.5	1
Kentucky	3,115.80	1.5	1,470	24.2	753.9	1.9
Louisiana	3,346.00	1.6	1,318	19.7	661.2	1.7
Maine	995.7	0.5	648	26.8	267.1	0.7
Maryland	4,026.50	1.9	1,257	14.3	577.6	1.5
Massachusetts	4,935.90	2.3	1,388	13.1	648.8	1.6
Michigan	7,518.30	3.5	2,106	19.9	1,499.30	3.8
Minnesota	3,728.30	1.7	1,265	23.9	893.4	2.2
Mississippi	2,129.10	1	1,390	23.2	494.4	1.2
Missouri	4,269.60	2	1,583	21.1	901.4	2.3
Montana	691.3	0.3	619	29.1	201.1	0.5
Nebraska	1,296.00	0.6	780	18.1	235.1	0.6
Nevada	1,515.80	0.7	624	23.8	360.8	0.9
New Hampshire	946.8	0.4	570	19.7	186.6	0.5
New Jersey	6,451.20	3	1,603	12.7	819.2	2.1
New Mexico	1,350.40	0.6	689	25.6	345.9	0.9
New York	14,584.20	6.8	3,353	13.1	1,915.80	4.8
North Carolina	6,200.60	2.9	2,382	20.7	1,288.10	3.2
North Dakota	494.9	0.2	603	25.8	127.8	0.3
Ohio	8,663.00	4	2,358	15.6	1,356.40	3.4
Oklahoma	2,627.60	1.2	1,140	24.1	632.9	1.6
Oregon	2,634.80	1.2	930	22	581.5	1.5
Pennsylvania	9,554.40	4.5	2,474	19.3	1,844.00	4.6
Rhode Island	815.6	0.4	569	11.5	94	0.2
South Carolina	3,070.30	1.4	1,415	18.9	581	1.5
South Dakota	569.1	0.3	623	27.4	156.2	0.4
Tennessee	4,382.00	2	2,353	20.1	880.8	2.2
Texas	15,393.20	7.2	3,602	16.6	2,551.90	6.4
Utah	1,575.50	0.7	718	31.1	490	1.2
Vermont	472.4	0.2	514	18.8	88.9	0.2
Virginia	5,449.80	2.5	1,718	21.5	1,173.70	3
Washington	4,487.10	2.1	1,370	23.5	1,010.00	2.5

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

<b>Oregon</b>	2,034.80	1.2	930	22	381.9	1.9
<b>Pennsylvania</b>	9,554.40	4.5	2,474	19.3	1,844.00	4.6
<b>Rhode Island</b>	815.6	0.4	569	4.3	94	0.2
<b>South Carolina</b>	3,070.30	1.4	1,415	18.9	581	1.5
<b>South Dakota</b>	569.1	0.3	623	27.4	156.2	0.4
<b>Tennessee</b>	4,382.00	2	2,353	20.1	880.8	2.2
<b>Texas</b>	15,393.20	7.2	3,602	16.6	2,551.90	6.4
<b>Utah</b>	1,575.50	0.7	718	31.1	490	1.2
<b>Vermont</b>	472.4	0.2	514	18.8	88.9	0.2
<b>Virginia</b>	5,449.80	2.5	1,718	21.5	1,173.70	3
<b>Washington</b>	4,487.10	2.1	1,270	22.5	1,010.90	2.5
<b>West Virginia</b>	1,434.40	0.7	1,034	34.5	496	1.2
<b>Wisconsin</b>	4,096.80	1.9	2,780	26.3	1,079.70	2.7
<b>Wyoming</b>	376.4	0.2	510	33.8	127.4	0.3
<b>TOTAL</b>	<b>214,022.50</b>				<b>39,747.80</b>	

**Methodology:**

Reviewed source documents and summarized information for 14 western states.

Submission: Submitted William McMullen 01/23/2008 01:09 09 PM  
 Level 1 Approval:  
 Level 2 Approval: Approved John Illson 04/28/2008 12:49 39 PM

**Linkage Information**

**History**

**Status** Approved **Request Review**

**In Progress Edit** Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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### Assignment Workpaper

Prepared by: William McMullen 10/25/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section G.05 Subsection  
Program Name Audit Background  
Subject Mining Law and Proposed Changes

Origination Doctlink

**Purpose:**  
Document issues related to 1982 Mining Law and currently proposed changes.

**Scope:**  
Mining on public lands.

**Source:**  
Congressional Research Service Report "Mining on Federal Lands: Hardrock Minerals" by Marc Humphries, May 18, 2007 found at <http://www.ncseonline.org/NLE/CRS/abstract.cfm?NLEid=1873> and attached:



CRS report.pdf

**Conclusion:**  
The CRS report provides a summary of issues surrounding efforts to revise the 1872 General Mining Law and discusses the pros and cons with regard to environmental protection and mandates for multiple use.

**Details:**  
The Summary of the source report follows:

[Summary](#)

The Background section follows:

[Background](#)

Other legislation is reviewed as follows:

[Other Legislation](#)

Environmental protection is addressed as follows:

[Environmental Protection](#)

Land withdrawals are discussed as follows:

[Land Withdrawals](#)

**Methodology:**  
Reviewed source document.

Submission: Submitted William McMullen 01/11/2008 08:54 53 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:18:13 AM

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G.05 Mining Law and Proposed Changes

Purpose:

Document issues related to 1982 Mining Law and currently proposed changes.

Scope:

Mining on public lands.

Source:

Congressional Research Service Report "Mining on Federal Lands: Hardrock Minerals" by Marc Humphries, May 18, 2007 found at <http://www.ncseonline.org/NLE/CRS/abstract.cfm?NLEid=1873> and attached:



CRS report.pdf

Conclusion:

The CRS report provides a summary of issues surrounding efforts to revise the 1872 General Mining Law and discusses the pros and cons with regard to environmental protection and mandates for multiple use.

Details:

The Summary of the source report follows:

Summary

Mining of hardrock minerals on federal lands is governed primarily by the **General Mining Law of 1872**. The law grants free access to individuals and corporations to prospect for minerals in public domain lands, and allows them, upon making a discovery, to stake (or "locate") a claim on that deposit. A claim gives the holder the right to develop the minerals and may be "patented" to convey full title to the claimant. A continuing issue is whether this law should be reformed, and if so, how to balance mineral development with competing land uses.

The right to enter the public domain and freely prospect for and develop minerals is the feature of the claim-patent system that draws the most vigorous support from the mining industry. Critics consider the claim-patent system a giveaway of publicly owned resources because of the small amounts paid to maintain a claim and to obtain a patent. Congress, however, has imposed a moratorium on mining claim patents through the annual Interior spending bill since FY1995.

The lack of direct statutory authority for environmental protection under the Mining Law of 1872 is another major issue that has spurred reform proposals. Many Mining Law supporters contend that other current laws provide adequate environmental protection. Critics, however, argue that these general environmental requirements are not adequate to assure reclamation of mined areas.

Broad-based legislation to reform the General Mining Law of 1872, the Hardrock Mining and Reclamation Act of 2007 (H.R. 2262), was introduced on May 10, 2007. The bill would establish an Abandoned Locatable Minerals Mine Reclamation Fund, a Locatable Minerals Community Impact Assistance Fund, and an 8% royalty on "net smelter returns." New reclamation standards would be established, and a reclamation bond or other financial guarantee would be required before exploration and operation permits are approved.

The Background section follows:

Background

Other legislation is reviewed as follows:

Other Legislation

Environmental protection is addressed as follows:

Environmental Protection

Land withdrawals are discussed as follows:

Land Withdrawals

Methodology:  
Reviewed source document.

History

Status Approved Request Review

In Progress Edit William McMullen/DEN/OIG/DOI

Confidentiality Standard

Add Document Readers

Read Authorization [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

Current Editor List [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 11/13/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.06 **Subsection**  
**Program Name** Audit Background  
**Subject** Federal Lands

**Origination Doctlink** ■

### Purpose:

Document how much land key DOI bureaus manage.

### Scope:

DOI management of federal lands.

### Source:

Data from national atlas found at <http://nationalatlas.gov/printable/fedlands.html> and attached:



Federal Lands.pdf

BLM public lands by state from 2005 Public Land Statistics found at [http://www.blm.gov/natacq/pls05/pls1-4\\_05.pdf](http://www.blm.gov/natacq/pls05/pls1-4_05.pdf) and attached:



BLM public lands by state.pdf

Lands managed by Fish and Wildlife Service (FY 2008 DOI Budget Highlights) found at <http://www.doi.gov/budget/2008/08Hilites/BH057.pdf> and attached:



FWS lands.pdf

Lands managed by NPS (FY 2008 DOI Budget Highlights) found at <http://www.doi.gov/budget/2008/08Hilites/BH069.pdf> and attached:



NPS lands.pdf

Indian Trust lands administered by BIA (FY 2008 DOI Budget Highlights) found at <http://www.doi.gov/budget/2008/08Hilites/BH081.pdf> and attached:



BIA lands.pdf

Data on US Forest Service land in CA found at <http://www.fs.fed.us/r5/> and shown in Details section below.

### Conclusion:

- Federal government owns almost 650 million acres in the US.
- BLM manages almost 262 million acres.
- NPS manages almost 84 million acres.
- BLM and NPS manage over 50% ( 53% - Math Verified SGC 1/16/08) of all federally owned land in the US.

### Details:

Federal lands encompass almos 650 million acres (Federal lands source document).

G.06 Federal Lands

The Federal Government owns nearly 650 million acres of land - almost 30 percent of the land area of the United States. Federally-owned and managed public lands include National Parks, National Forests, and National Wildlife Refuges. These are lands that are held for all Americans. The Federal agencies responsible for managing America's natural resources must meet both the public desire to protect them and the public expectation of economic growth based on them. Within the Federal Government, a number of agencies contribute to the management of natural resources associated with public lands. All of these Federal agencies are partners in the production of [nationalatlas.gov](http://nationalatlas.gov).

**BLM manages almost 262 million acres** (BLM public lands by state source document).

**PUBLIC LANDS UNDER EXCLUSIVE JURISDICTION OF  
THE BUREAU OF LAND MANAGEMENT,  
FISCAL YEAR 2005**

261,762,912

**FWS manages about 96 million acres** (FWS lands source document).

The national wildlife refuge system is among the world's most significant land and water systems managed for the benefit of fish and wildlife. The 96 million-acre network provides stepping stones of habitat for many species of migratory birds and other wildlife, sanctuary for hundreds of threatened and endangered species, and secure spawning areas for healthy wild salmon fisheries. The system includes 547 refuges and 37 wetland management districts. These refuges provide recreational opportunities for photography, hiking, fishing, hunting, and education programs for 38 million visitors annually.

**NPS manages about 84 million acres** (NPS lands source document).

**Program Overview** — Since 1872, the stewardship responsibilities of NPS have become more complex. The national park system has experienced significant growth over the past 30 years, with the addition of more than 100 new parks since 1973. Currently, the national park system includes 390 units encompassing 84 million acres in 49 States, the District of Columbia, American Samoa, Guam, Puerto Rico, the Northern Mariana Islands, and the U.S. Virgin Islands.

In its entirety, the national park system represents and interprets the story of human history and natural sciences and preserves both the natural and cultural sites that are testaments to the Nation's history. The parks offer an array of rewarding opportunities for much needed respite, reflection, and outdoor recreation to the American public. In 2006, over 270 million people visited the Nation's national parks.

**BIA manages about 56 million acres** (BIA lands source document).

G.06 Federal Lands

Collectively, the Department's Indian programs cover virtually the entire range of State and local government services. Programs administered by either Tribes or BIA include social services such as welfare assistance, natural resources management on 56 million acres of trust land, economic development programs, law enforcement, administration of tribal courts, implementation of Indian settlements, replacement and repair of schools, repair and maintenance of roads and bridges, operation and maintenance of irrigation infrastructures, and repair of structural deficiencies on high hazard dams. Programs administered by either Tribes or BIE include an education system for almost 46,000 elementary and secondary students and 28 tribal colleges, universities, and post-secondary schools.

Summary Table:

BLM and NPS manage over 50% of all federal lands.

Bureau	Lands Under Management	% of Total
BLM	262	40 Math Verified SGC 1/16/08
NPS	84	13 Math Verified SGC 1/16/08
FWS	96	15
BIA	56	9
TOTAL FEDERAL	655	

USFS land in California is estimated a 20 million acres (source link as copied below).

The Pacific Southwest Region of the USDA Forest Service manages 20 million acres of National Forest land in California and assists the State and Private forest landowners in California, Hawaii and the U.S. Affiliated Pacific Islands. The Pacific Southwest Region is commonly referred to as Region 5 (R5).

BLM manages over 15 million acres in California (see source document "BLM Public lands by state.pdf" attachment).

Methodology:

Reviewed source documents.

Submission: Submitted William McMullen 01/23/2008 01:10 04 PM  
 Level 1 Approval:  
 Level 2 Approval: Approved John Illson 04/28/2008 12:49 55 PM

[Linkage Information](#)

**History**

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 In Progress Edit Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
 Confidentiality Standard

Add Document Readers

Read Authorization [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

Current Editor List [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 11/14/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.07 **Subsection**  
**Program Name** Audit Background  
**Subject** MSHA Incident Data

**Origination Doctlink** ■

### Purpose:

Document abandoned mine incidents as reported in Mine Safety and Health Administration (MSHA) online database.

### Scope:

AML injuries and fatalities.

### Source:

Data on AML fatalities and injuries found at <http://www.msha.gov/SOSA/SOSAhome.asp> and attached:



MSHA 1999\_2007 fatalities.pdf MSHA 2004\_2007 injuries.pdf

### Conclusion:

- From 2004 to 2007, MSHA reported:
  - 12 fatalities in abandoned mines in the West
  - 14 injuries in abandoned mines in the West.
- It is not possible, using MSHA data, to determine how many fatalities and injuries occurred on federal land.
- MSHA does not represent a comprehensive source of information of abandoned mine incidents.

### Details:

According to MSHA's online database, there were 33 fatalities at abandoned mines from 1999 to 2007 in the Western US (CA, AZ, WA, AK, OR, SD, ID, CO, NM, and NV). There were 12 fatalities from 2004 to 2007. From 2004 to 2007 (only years injury data is reported by MSHA), there were 14 injuries in abandoned mines in the West. MSHA does not collect information of the owners of mines where incidents occur, so it is impossible to determine how many fatalities and injuries have occurred on federal land.

MSHA does not purport to be a comprehensive set of incident data [D.MSHA.01 MSHA AML Injury Database](#) ■. MSHA relies on newspaper articles or other information submitted to it as their data sources.

### Methodology:

Reviewed MSHA data and extracted information on fatalities and injuries at abandoned mine sites in Western US.

Submission: Submitted William McMullen 01/23/2008 12:02 50 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 04/28/2008 12:50 09 PM

### Linkage Information Set By William McMullen/DEN/OIG/DOI On 05/01/2008 10:30:15 AM

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Thu 05/01/2008 10:30 AM. For original text, refer to the field(s) above.

### Purpose:

Document abandoned mine incidents as reported in [Mine Safety and Health Administration \(MSHA\)](#) online database.

### Scope:

AML injuries and fatalities.

Source:

Data on AML fatalities and injuries found at <http://www.msha.gov/SOSA/SOSAhome.asp> and attached:



MSHA 1999\_2007 fatalities.pdf MSHA 2004\_2007 injuries.pdf

Conclusion:

From 2004 to 2007 MSHA reported:

- 12 fatalities in abandoned mines in the West
- 14 injuries in abandoned mines in the West.
- It is not possible, using MSHA data, to determine how many fatalities and injuries occurred on federal land.
- MSHA does not represent a comprehensive source of information of abandoned mine incidents.

Details:

According to MSHA's online database there were 33 fatalities at abandoned mines from 1999 to 2007 in the Western US (CA, AZ, WA, AK, OR, SD, ID, CO, NM, and NV). There were 12 fatalities from 2004 to 2007. From 2004 to 2007 (only years injury data is reported by MSHA), there were 14 injuries in abandoned mines in the West. MSHA does not collect information of the owners of mines where incidents occur, so it is impossible to determine how many fatalities and injuries have occurred on federal land.

MSHA does not purport to be a comprehensive set of incident data [D.MSHA.01 MSHA AML Injury Database](#). MSHA relies on newspaper articles or other information submitted to it as their data sources.

Methodology:

Reviewed MSHA data and extracted information on fatalities and injuries at abandoned mine sites in Western US.

History

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		
<b>Read Authorization</b>	[Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI	
<b>Current Editor List</b>	[C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI	

## Assignment Workpaper

Prepared by: William McMullen 11/14/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.08 **Subsection**  
**Program Name** Audit Background  
**Subject** EPA AML Reference Notebook

**Origination Doctlink** ■

### Purpose:

Document EPA's AML Reference Notebook, dated September 2004.

### Scope:

Abandoned mine hazards

### Source:

EPA AML Reference Notebook attached:



EPA Reference Notebook.pdf

### Conclusion:

Abandoned mines can present environmental and safety hazards as noted below.

### Details:

The Notebook notes the following potential environmental problems with abandoned mines:

1. Stream sedimentation and sediment contamination
2. Water pollution including acid mine drainage
3. Air pollution from contaminated dust

Safety problems are:

1. Deep vertical shafts
2. Horizontal openings
3. Cave-ins
4. Deadly gases
5. Unused or misfired explosives
6. Unstable highwalls and cliffs
7. Unstable piles
8. Hidden ledges, mining debris, water-filled pits (or mines)

### Methodology:

Reviewed source document.

Submission: Submitted William McMullen 01/11/2008 08:57:45 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:19 01 AM

### Linkage Information

### History

**Status** Approved **Request Review**

**In Progress Edit** William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

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**Assignment Workpaper**

Prepared by: William McMullen 01/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.09 **Subsection**  
**Program Name** Audit Background  
**Subject** Abbreviations

**Origination Doclink** ■

**Purpose:**  
 Define abbreviations relevant to the AML audit.

**Scope:**  
 DOI AML audit.

**Source:**  
 Abbreviations defined by auditors based on knowledge or as shown in links to W/Ps.  
 OIG (Office of Inspector General) abbreviation found at <http://www.doiog.gov/index.php?menuid=357&viewid=461&viewtype=PAGE>  
 GAO (Government Accountability Office) abbreviation found at <http://www.gao.gov/>.

**Conclusion:**  
 Abbreviations relevant to the audit were identified.

**Details:**

AML.....	Abandoned Mine Lands	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
BIA.....	Bureau of Indian Affairs	<a href="#">A.07 Audit Plan and Program</a> ■
BLM.....	Bureau of Land Management	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
BOR.....	Bureau of Reclamation	<b>Auditor Defined</b>
CFR.....	Code of Federal Regulations	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
Department and DOI.....	Department of the Interior	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
FWS.....	U.S. Fish and Wildlife Service	<a href="#">A.07 Audit Plan and Program</a> ■
FY.....	Fiscal Year	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
GAO.....	Government Accountability Office	<b>See source <a href="http://www.gao.gov/">http://www.gao.gov/</a></b>
GPRA.....	Government Performance and Results Act	<a href="#">G.DOI.06 Relevant GPRA Goals</a> ■
GRD.....	Geologic Resources Division	<a href="#">B.NPS.01 NPS- GRD Organization chart</a> ■ and Results Act <a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
NPS.....	National Park Service	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
OIG.....	Office of Inspector General	<b>See source <a href="http://www.doiog.gov/index.php?menuid=357&amp;viewid=461&amp;viewtype=PAGE">http://www.doiog.gov/index.php?menuid=357&amp;viewid=461&amp;viewtype=PAGE</a></b>
OMB.....	Office of Management and Budget	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■
SMCRA.....	Surface Mining Control and Reclamation Act	<a href="#">J.BLM.13 BLM AML Program Policy Handbook</a> ■

**Methodology:**  
 N/A

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## Assignment Workpaper

Prepared by: Stephanie Christian 06/22/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section G.BLM.01 Subsection  
Program Name Audit Background  
Subject BLM AML Background

Origination Doctlink 

### Purpose:

To determine the background of the AML program in DOI and its bureau

### Scope:

DOI AML program

### Source:

[http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/About\\_AML.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/About_AML.html)

### Conclusion:

The AML program supports the overall BLM mission of public land and water conservation. The AML program addresses physical safety and environmental hazards associated with abandoned hardrock mines on public lands administered by BLM. Abandoned mines addressed by the program are those that were abandoned prior to January 1, 1981, the effective date of BLM's Surface Management regulations issued under authority of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 et seq.).

Over the last 150 years, much of the land managed by BLM has experienced some form of mining activity. This activity ranged from exploration to full development. As ore was mined and eventually depleted, mining operations were abandoned or moved to other locations leaving scarred and contaminated land across many parts of the West. In many cases, these activities were not properly reclaimed. Typically, there are no financially responsible parties to help pay for the cleanup. As a result, BLM must pay for and address physical safety and environmental threats associated with abandoned mines.

The AML program has identified approximately 11,500 abandoned mine sites. BLM prioritizes and takes appropriate action on these historic abandoned mine sites using a **risked-based approach**. It is an enormous task that will take lots of time, money, and cooperation with other **federal, state, and local partners**. Meanwhile, the risks associated with abandoned mines remain and continue to increase because more and more remote areas are being developed or accessed for recreation. Even dangerous mines that have been properly sealed off are sometimes vandalized, entered, and left open. This can expose anyone nearby to unexpected, serious danger.

### Details:

## Background of the AML program:

### Mining History

#### Mining History

The rich history of mining in the West extends back more than 150 years. Mining played a significant role in the settlement and development of this once imposing frontier. As the ore was mined out or the operations became otherwise uneconomical, the mines were either boarded up or the miners simply walked away from them. Over the years, several hundred thousand abandoned mines may have been left scattered across the western United States. A large number of these mines are on public lands that came under the management of the Federal Government only in recent years. The Bureau of Land Management (BLM) manages roughly 258 million surface acres in 12 western states, approximately one-eighth of the total land surface in the United States. These old deserted mines were abandoned long before the passage of safety and environmental regulations that apply to modern mines.

Over the last 150 years, much of the land managed by BLM has experienced some form of mining activity. This activity ranged from exploration to full development. As ore was mined and eventually depleted, mining operations were abandoned or moved to other locations leaving scarred and contaminated land across many parts of the West. In many cases, these activities were not properly reclaimed. Typically, there are no financially responsible parties to help pay for the cleanup. As a result, BLM must pay for and address physical safety and environmental threats associated with abandoned mines.

Unfortunately, the location and nature of early mining activities on these lands is often poorly documented. Due to the large amounts of abandoned mine lands, a Abandoned Mine Land program was established to clean up abandoned hard rock mine sites in the Western United States. It supports the mission of public land conservation and water quality restoration through partnerships with government and non-government organizations.

The AML program supports the overall BLM mission of public land and water conservation. The AML program addresses physical safety and environmental hazards associated with abandoned hardrock mines on public lands administered by BLM. Abandoned mines addressed by the program are those that were abandoned prior to January 1, 1981, the effective date of BLM's Surface Management regulations issued under authority of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 et seq.). The AML program has identified approximately 11,500 abandoned mine sites.

Abandoned Mine Lands are an enormous task that will take lots of time, money, and cooperation with other federal, state, and local partners. Meanwhile, the risks associated with abandoned mines remain and continue to increase because more and more remote areas are being developed or accessed for recreation. Even dangerous mines that have been properly sealed off are sometimes vandalized, entered, and left open. This can expose anyone nearby to unexpected, serious danger.

[http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/About\\_AML.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/About_AML.html)

## **BLM AML Program**

### **BLM AML Program**

The AML program supports the overall BLM mission of public land and water conservation. The AML program addresses physical safety and environmental hazards associated with abandoned hardrock mines on public lands administered by BLM. Abandoned mines addressed by the program are those that were abandoned prior to January 1, 1981, the effective date of BLM's Surface Management regulations issued under authority of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 et seq.).

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## **General AML Program at a Glance**

### **General AML Program at a Glance**

Details regarding AML:

Source: [http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_REALTY\\_AND\\_RESOURCE\\_PROTECTION\\_/aml.Par.92895.File.dat/AMLglance-factsheet.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/aml.Par.92895.File.dat/AMLglance-factsheet.pdf)

Division of Engineering and Environmental Services (WO-360) Rev. 6/7/2006

**Bureau of Land Management**  
*Abandoned Mine Lands (AML)*

**Program At-A-Glance**

**Abandoned mines are important relics of the past, but can present unforeseen problems to human health and the environment unless properly handled.**

**What is the AML program?**

The AML program is a cooperative conservation program that cleans up abandoned hard rock mine sites in the Western United States. It supports the mission of public land conservation and water quality restoration through partnerships with government and non-government organizations. **AML program activities are funded in the range of \$10 million - \$12 million annually.**

**What is the objective of the AML program?**

The AML program's overall objective is to support core BLM programs by mitigating physical safety hazards at abandoned mine land sites on or affecting BLM-managed lands, and by providing solutions to degraded water quality and other environmental impacts.

**Why is the AML program important?**

The AML program works to eliminate or reduce the dangers to public health, safety, and the environment as a result of impacts related to abandoned hard rock mines on or affecting public lands. The AML program supports BLM core programs including land-use planning, water quality, fisheries and wildlife biology, recreation, hazard management, and resource restoration.

**AML Success Throughout the Country**

- **Partnership Quickly Backfills 55 Mines:** BLM's Nevada State Office recently put together one of the most ambitious AML efforts ever undertaken by organizing a broad partnership that included the Nevada mining industry, State officials, independent scientists, and other volunteers. In a few short days, the partners backfilled a total of 55 mines. The cost to taxpayers was minimal. The value to the public, now and for the future, is beyond measure.
- **Partners Restore Wildlife through Leveraged Cleanup Funds:** In the Upper Animas River near Silverton, Colorado, downstream fish populations are on an increasing trend, and there is evidence of self-sustaining fish populations in lower reaches. Partners have completed approximately 50 cleanup projects for a total of \$28.6 million at a cost one tenth of the typical Superfund mining cleanup. In the Animas, the BLM has leveraged its cleanup funds of \$2.7 million by a ratio of 1 to 10.
- **Multi-Agency Cleanup Removes 1,700 Tons of Mercury Tailings:** In California, the BLM, Environmental Protection Agency, and the U.S. Forest Service are finishing the last phase of a multi-year, multi-agency mercury cleanup effort in the Rinconada Mine located in the headwaters of the Salinas River. Reclamation of over 50 acres of stream and historic mercury mill sites and removal of mercury mill tailings will reduce the mobilization of mercury and improve downstream conditions.

**What are the hazards of AML sites?**

**Physical hazards:** Unsecured AML sites pose a risk of death or serious injury resulting from falls down open mine shafts.

**Human health hazards:** Exposure to toxic gases and chemicals, cave-ins, explosives, and water hazards endanger human health.

**Environmental hazards:** Water contaminated by mine tailings threatens nearby communities and destroys habitats. Unstable AML structures create

dangerous situations.

Old headframes may cover open mine shafts.

Open mine shafts create falling hazards.

Acid mine drainage contaminates water, negatively affects local environments, and threatens communities.

Remnants of abandoned mine.

Off-highway vehicle accident in vertical mine shaft.

#### **How many AML sites are there?**

There are approximately 12,000 known sites in the BLM's AML database, with an estimated 100,000 to 500,000 sites to be fully identified or characterized.

Approximately 20 percent to 30 percent of AML sites pose safety hazards.

Approximately 5 percent to 10 percent pose environmental hazards.

**With so many AML sites,**

#### **how are AML cleanup project sites selected?**

Overall, sites are divided into **physical safety** and **water quality** sites, although there can be overlap. The AML program selects cleanup projects through a BLM programwide collaborative process that occurs once a year.

The selection process includes:

- Using a **risk-based approach** for physical safety hazard sites.
- Applying a **watershed approach** reflecting State government priorities.
- Coordinating with State and Federal partners.
- Planning projects through **multi-year AML work plans**.
- Focusing on priority watersheds and high-use areas.
- Conducting **peer review** by program leads.

#### **Which types of sites become cleanup priorities?**

The decision is made on a site-by-site basis, but typically the following factors are taken into consideration when determining priorities.

For **physical safety** sites:

- **Safety:** Death or injury has occurred;
- **Public use:** Have high public visitation;
- **Accessibility:** Are easily accessible;
- **Population:** Are located near populated areas;
- **Cost:** Have cost-effective partnerships available.

For **water quality** sites:

- **Safety:** Pose threats to public health, safety, and the environment;
  - **Watershed:** Are located within State-designated watersheds;
  - **Partnerships:** Have cost-effective partnerships available;
  - **Cost:** Have the potential for cost avoidance/recovery;
  - **Water quality:** Contain impaired water quality;
  - **Work status:** Are continuing projects;
  - **Location:** Affect BLM-managed lands.
-

## **BLM's AML Program Details**

### **What is the objective of the BLM AML program?**

The AML program's overall objective is to support core BLM programs by providing solutions to environmental and physical safety hazards associated with abandoned hardrock mines on or affecting lands administered by BLM.

Hard rock minerals generally include gold, silver, copper, lead, zinc, magnesium, nickel, molybdenum, tungsten, uranium, and selected other minerals.

### **Why is the AML program important?**

The AML program works to eliminate or reduce the dangers to public health, safety, and the environment as a result of impacts related to abandoned hard rock mines on public lands. The AML program supports BLM core programs including Land Use Planning, Water Quality, Fisheries and Wildlife Biology, Recreation, and Hazard Management and Resource Restoration.

### **What is an abandoned mine?**

Abandoned mines generally include a range of mining impacts, or features that may pose a threat to water quality, public safety, and/or the environment. For many abandoned mines, no current claimant of record or viable potentially responsible party exists.

The AML program addresses hardrock mines on or affecting public lands administered by BLM, at which exploration, development, mining, reclamation, maintenance, and inspection of facilities and equipment, and other operations ceased as of January 1, 1981 (the effective date of BLM's Surface Management regulations codified at 43 CFR 3809) with no intention of resuming active operation. [See more definitions in the AML Glossary.](#)

### **What are examples of AML hazards?**

- *Physical hazards* Unsecured AML sites pose a risk of death or serious injury by falling down open mine shafts.
- *Human health hazards* Exposure to toxic gases and chemicals, cave-ins, explosives, and water hazards endanger human health.
- *Environmental hazards* Water contaminated by mine tailings threatens nearby communities and destroys habitats.

### **How many abandoned mines are there?**

There are approximately 11,500 known sites in the BLM AML database. Approximately twenty to thirty percent of AML sites pose safety hazards, and approximately five to ten percent pose environmental hazards.

In addition, there are an estimated total of 100,000–500,000 AML sites to be fully identified or characterized. Unfortunately, a comprehensive inventory of abandoned mines does not currently exist; however, other Federal agencies including the [Forest Service \(FS\)](#) EXIT ↗, the [U.S. Environmental Protection Agency \(EPA\)](#) EXIT ↗, the [National Park Service \(NPS\)](#) EXIT ↗, the [Office of Surface Mining \(OSM\)](#) EXIT ↗, and most mining states and tribes have their own inventories. The Government Accountability Office (GAO) summarized abandoned mine estimates in a report entitled, "Federal Land Management: Information on Efforts to Inventory Hard Rock Mines," issued in February, 1996 ([GAO/RCED-96-30](#)). EXIT ↗

### **How much will it cost and how much time will it take to reclaim these abandoned mine sites?**

It is difficult to estimate and how much it will cost or how long it will take to reclaim abandoned mines. Currently, BLM AML program activities are funded within the \$10-12 million dollar range; however, it costs much more to do all the work that is necessary at abandoned mine sites. As a result, BLM actively partners with other federal, state, tribal and local entities to leverage additional funds to address physical safety and environmental hazards associated with abandoned mines.

### **Where are abandoned mines located?**

Abandoned mines are located in western states as follows:

State	Number of Sites*
Alaska	164
Arizona	1,862
California	405
Colorado	2,860
Idaho	605
Montana	1,230
Nevada	2,326
New Mexico	599
Oregon	43
South Dakota	2
Utah	485
Washington	68
Wyoming	934
<b>Total</b>	<b>11,583</b>

\*Number of Known Sites as of April 2006

**How are cleanup projects selected?**

Overall, sites are divided into **physical safety** and **water quality** sites, although there can be overlap. Priority watersheds are identified by State government agencies in their Clean Water Act reports provided to the U.S. Environmental Protection Agency. BLM prioritizes sites and projects based on a risk-based approach, and are typically located near high population centers or high-use areas. The AML Program selects cleanup projects through a program-wide collaborative process that occurs once a year.

The selection process includes:

- Applying **risk-based watershed approaches** reflecting State government priorities.
- Using risk-based approach for physical safety hazard sites.
- Coordinating with State and Federal partners.
- Planning projects through multi-year AML work plans.
- Focusing on priority watersheds and high-use areas.
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The decision is made on a site-by-site basis, but typically the following factors are taken into consideration when determining priorities.

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- *Safety* Pose threats to public health, safety, and the environment;
- *Watershed* Are located within State-designated watersheds;
- *Partnerships* Have cost-effective partnerships available;
- *Cost* Have the potential for cost avoidance/recovery;

- *Water quality* Contain impaired water quality standards;
- *Work status* Are continuing projects;
- *Location* Impact BLM-administered lands.

For **physical safety** sites:

- *Safety* Death or injury has occurred;
- *Public use* Have high public visitation;
- *Accessibility* Are easily accessible;
- *Population* Are located nearby populated areas;
- *Cost* Have cost-effective partnerships available.

#### **How many abandoned mines has BLM reclaimed?**

Between 2000 and 2003, BLM along with its partners cleaned up approximately 281 sites with water quality issues. Another 1,300 acres of land affected by water quality issues were cleaned up between 2004 and 2006.

In addition, since 2000, approximately 2,755 physical safety sites have been remediated

#### **What are some of the ways BLM addresses hazards at abandoned mine sites?**

**BLM addresses physical safety hazards associated with abandoned mine sites by:**

- Posting warning signs and fencing off access to dangerous areas;
- Closing horizontal opening (adits) to keep people out. Where bats are present, BLM uses bat gates that allow them to use the adit for habitat;
- Closing vertical openings (shafts) either by filling them, or by covering them with little roofs (cupolas); and/or
- Removing and properly disposing hazards such as mining and milling equipment, oil and chemical drums, and other debris.

**BLM addresses environmental hazards associated with abandoned mine sites by:**

- Redirecting stream flow to avoid mine wastes and tailings;
- Capping mine waste and tailings piles located in and around stream beds, or removing and transporting them to an appropriate repository;
- Plugging adits to reduce or control flow of metals-laden water;
- Applying low-cost, low-maintenance water treatment methods; and/or
- Removing toxic soils impacting groundwater.

#### **How can I report an abandoned mine site?**

The first thing you should do is “STAY OUT and STAY ALIVE!” If you come across what appears to be an abandoned mine that has no sign or is not closed up, report what you have encountered to local fire, police, or other rescue authorities. They in turn, will notify the appropriate land management agency to investigate the site.

#### **What else can I do to help?**

There is still much AML work to be done. See how you can [volunteer through BLM](#).

#### **Methodology:**

N/A

Submission:	Submitted	Stephanie Christian	08/23/2007 03:39:48 PM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:47:14 PM

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Purpose:

To determine the background of the AML program in DOI and its bureau

Scope:

DOI AML program

Source:

[http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/About\\_AML.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/About_AML.html)

Conclusion:

■ The AML program supports the overall BLM mission of public land and water conservation. The AML program addresses physical safety and environmental hazards associated with abandoned hardrock mines on public lands administered by BLM. Abandoned mines addressed by the program are those that were abandoned prior to January 1, 1981, the effective date of BLM's Surface Management regulations issued under authority of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 et seq.).

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Details:

**Background of the AML program:**

**Mining History**

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The rich history of mining in the West extends back more than 150 years. Mining played a significant role in the settlement and development of this once imposing frontier. As the ore was mined out or the operations became otherwise uneconomical, the mines were either boarded up or the miners simply walked away from them. Over the years, several hundred thousand abandoned mines may have been left scattered across the western United States. A large number of these mines are on public lands that came under the management of the Federal Government only in recent years. The Bureau of Land Management (BLM) manages roughly 258 million surface acres in 12 western states, approximately one-eighth of the total land surface in the United States. These old deserted mines were abandoned long before the passage of safety and environmental regulations that apply to modern mines.

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## **BLM AML Program**

### **BLM AML Program**

The AML program supports the overall BLM mission of public land and water conservation. The AML program addresses physical safety and environmental hazards associated with abandoned hardrock mines on public lands administered by BLM. Abandoned mines addressed by the program are those that were abandoned prior to January 1, 1981, the effective date of BLM's Surface Management regulations issued under authority of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 et seq.).

Over the last 150 years, much of the land managed by BLM has experienced some form of mining activity. This activity ranged from exploration to full development. As ore was mined and eventually depleted, mining operations were abandoned or moved to other locations leaving scarred and contaminated land across many parts of the West. In many cases, these activities were not properly reclaimed. Typically, there are no financially responsible parties to help pay for the cleanup. As a result, BLM must pay for and address physical safety and environmental threats associated with abandoned mines.

The AML program has identified approximately 11,500 abandoned mine sites. BLM prioritizes and takes appropriate action on these historic abandoned mine sites using a risked-based approach. It is an enormous task that will take lots of time, money, and cooperation with other federal, state, and local partners. Meanwhile, the risks associated with abandoned mines remain and continue to increase because more and more remote areas are being developed or accessed for recreation. Even dangerous mines that have been properly sealed off are sometimes vandalized, entered, and left open. This can expose anyone nearby to unexpected, serious danger.

## **General AML Program at a Glance**

### **General AML Program at a Glance**

Details regarding AML:

Source: [http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_REALTY\\_AND\\_RESOURCE\\_PROTECTION\\_/aml.Par.92895.File.dat/AMLglance-factsheet.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/aml.Par.92895.File.dat/AMLglance-factsheet.pdf)

Division of Engineering and Environmental Services (VO-360) Rev. 6/7/2006

Bureau of Land Management

*Abandoned Mine Lands (AML)*

*Program At-A-Glance*

Abandoned mines are important relics of the past, but can present unforeseen problems to human health and the environment unless properly handled.

What is the AML program?

The AML program is a cooperative conservation program that cleans up abandoned hard rock mine sites in the Western United States. It supports the mission of public land conservation and water quality restoration through partnerships with government

and non-government organizations. AML program activities are funded in the range of \$10 million - \$12 million annually.

**What is the objective of the AML program?**

The AML program's overall objective is to support core BLM programs by mitigating physical safety hazards at abandoned mine land sites on or affecting BLM-managed lands, and by providing solutions to degraded water quality and other environmental impacts.

**Why is the AML program important?**

The AML program works to eliminate or reduce the dangers to public health, safety, and the environment as a result of impacts related to abandoned hard rock mines on or affecting public lands. The AML program supports BLM core programs including land-use planning, water quality, fisheries and wildlife biology, recreation, hazard management, and resource restoration.

**AML Success Throughout the Country**

- Partnership Quickly Backfills 55 Mines: BLM's Nevada State Office recently put together one of the most ambitious AML efforts ever undertaken by organizing a broad partnership that included the Nevada mining industry, State officials, independent scientists, and other volunteers. In a few short days, the partners backfilled a total of 55 mines. The cost to taxpayers was minimal. The value to the public, now and for the future, is beyond measure.
- Partners Restore Wildlife through Leveraged Cleanup Funds: In the Upper Animas River near Silverton, Colorado, downstream fish populations are on an increasing trend, and there is evidence of self-sustaining fish populations in lower reaches. Partners have completed approximately 50 cleanup projects for a total of \$28.6 million at a cost one tenth of the typical Superfund mining cleanup. In the Animas, the BLM has leveraged its cleanup funds of \$2.7 million by a ratio of 1 to 10.
- Multi-Agency Cleanup Removes 1,700 Tons of Mercury Tailings: In California, the BLM, Environmental Protection Agency, and the U.S. Forest Service are finishing the last phase of a multi-year, multi-agency mercury cleanup effort in the Rinconada Mine located in the headwaters of the Salinas River. Reclamation of over 50 acres of stream and historic mercury mill sites and removal of mercury mill tailings will reduce the mobilization of mercury and improve downstream conditions.

**What are the hazards of AML sites?**

**Physical hazards:** Unsecured AML sites pose a risk of death or serious injury resulting from falls down open mine shafts.

**Human health hazards:** Exposure to toxic gases and chemicals, cave-ins, explosives, and water hazards endanger human health.

**Environmental hazards:** Water contaminated by mine tailings threatens nearby communities and destroys habitats.

Unstable AML structures create dangerous situations.

Old headframes may cover open mine shafts.

Open mine shafts create falling hazards.

Acid mine drainage contaminates water, negatively affects local environments, and threatens communities.

Remnants of abandoned mine.  
Off-highway vehicle  
accident in vertical mine  
shaft.

**How many AML sites are there?**

There are approximately 12,000 known sites in the BLM's AML database, with an estimated 100,000 to 500,000 sites to be fully identified or characterized.

Approximately 20 percent to 30 percent of AML sites pose safety hazards.

Approximately 5 percent to 10 percent pose environmental hazards.

**With so many AML sites,**

**how are AML cleanup project sites selected?**

Overall, sites are divided into **physical safety** and **water quality** sites, although there can be overlap. The AML program selects cleanup projects through a BLM programwide collaborative process that occurs once a year.

The selection process includes:

- Using a **risk-based approach** for physical safety hazard sites.
- Applying a **watershed approach** reflecting State government priorities.
- Coordinating with State and Federal partners.
- Planning projects through **multi-year AML work plans**.
- Focusing on priority watersheds and high-use areas.
- Conducting **peer review** by program leads.

**Which types of sites become cleanup priorities?**

The decision is made on a site-by-site basis, but typically the following factors are taken into consideration when determining priorities.

For **physical safety** sites:

- **Safety:** Death or injury has occurred;
- **Public use:** Have high public visitation;
- **Accessibility:** Are easily accessible;
- **Population:** Are located near populated areas;
- **Cost:** Have cost-effective partnerships available.

For **water quality** sites:

- **Safety:** Pose threats to public health, safety, and the environment;
- **Watershed:** Are located within State-designated watersheds;
- **Partnerships:** Have cost-effective partnerships available;
- **Cost:** Have the potential for cost avoidance/recovery;
- **Water quality:** Contain impaired water quality;
- **Work status:** Are continuing projects;
- **Location:** Affect BLM-managed lands.

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## **BLM's AML Program Details**

### **What is the objective of the BLM AML program?**

The AML program's overall objective is to support core BLM programs by providing solutions to environmental and physical safety hazards associated with abandoned hardrock mines on or affecting lands administered by BLM.

Hard rock minerals generally include gold, silver, copper, lead, zinc, magnesium, nickel, molybdenum, tungsten, uranium, and selected other minerals.

**Why is the AML program important?**

The AML program works to eliminate or reduce the dangers to public health, safety, and the environment as a result of impacts related to abandoned hard rock mines on public lands. The AML program supports BLM core programs including Land Use Planning, Water Quality, Fisheries and Wildlife Biology, Recreation, and Hazard Management and Resource Restoration.

**What is an abandoned mine?**

Abandoned mines generally include a range of mining impacts, or features that may pose a threat to water quality, public safety, and/or the environment. For many abandoned mines, no current claimant of record or viable potentially responsible party exists

The AML program addresses hardrock mines on or affecting public lands administered by BLM, at which exploration, development, mining, reclamation, maintenance, and inspection of facilities and equipment, and other operations ceased as of January 1, 1981 (the effective date of BLM’s Surface Management regulations codified at 43 CFR 3809) with no intention of resuming active operation. See more definitions in the AML Glossary.

**What are examples of AML hazards?**

- *Physical hazards* Unsecured AML sites pose a risk of death or serious injury by falling down open mine shafts.
- *Human health hazards* Exposure to toxic gases and chemicals, cave-ins, explosives, and water hazards endanger human health.
- *Environmental hazards* Water contaminated by mine tailings threatens nearby communities and destroys habitats.

**How many abandoned mines are there?**

There are approximately 11,500 known sites in the BLM AML database. Approximately twenty to thirty percent of AML sites pose safety hazards, and approximately five to ten percent pose environmental hazards.

In addition, there are an estimated total of 100,000–500,000 AML sites to be fully identified or characterized. Unfortunately, a comprehensive inventory of abandoned mines does not currently exist; however, other Federal agencies including the Forest Service (FS) [EXIT ↗](#), the U.S. Environmental Protection Agency (EPA) [EXIT ↗](#), the National Park Service (NPS) [EXIT ↗](#), the Office of Surface Mining (OSM) [EXIT ↗](#), and most mining states and tribes have their own inventories. The Government Accountability Office (GAO) summarized abandoned mine estimates in a report entitled, “Federal Land Management: Information on Efforts to Inventory Hard Rock Mines,” issued in February, 1996 (GAO/RCED-96-30). [EXIT ↗](#)

**How much will it cost and how much time will it take to reclaim these abandoned mine sites?**

It is difficult to estimate and how much it will cost or how long it will take to reclaim abandoned mines. Currently, BLM AML program activities are funded within the \$10-12 million dollar range; however, it costs much more to do all the work that is necessary at abandoned mine sites. As a result, BLM actively partners with other federal, state, tribal and local entities to leverage additional funds to address physical safety and environmental hazards associated with abandoned mines.

**Where are abandoned mines located?**

Abandoned mines are located in western states as follows:

State	Number of Sites*
Alaska	164
Arizona	1,862
California	405

Colorado	2,860
Idaho	605
Montana	1,230
Nevada	2,326
New Mexico	599
Oregon	43
South Dakota	2
Utah	485
Washington	68
Wyoming	934
<b>Total</b>	<b>11,583</b>

\*Number of Known Sites as of April 2006

#### How are cleanup projects selected?

Overall, sites are divided into **physical safety** and **water quality** sites, although there can be overlap. Priority watersheds are identified by State government agencies in their Clean Water Act reports provided to the U.S. Environmental Protection Agency. BLM prioritizes sites and projects based on a risk-based approach, and are typically located near high population centers or high-use areas. The AML Program selects cleanup projects through a program-wide collaborative process that occurs once a year.

The selection process includes:

- Applying **risk-based watershed approaches** reflecting State government priorities.
- Using risk-based approach for physical safety hazard sites.
- Coordinating with State and Federal partners.
- Planning projects through multi-year AML work plans.
- Focusing on priority watersheds and high-use areas.
- Conducting peer review by program leads.

#### Which types of sites become cleanup priorities?

The decision is made on a site-by-site basis, but typically the following factors are taken into consideration when determining priorities.

For **water quality** sites:

- *Safety* Pose threats to public health, safety, and the environment;
- *Watershed* Are located within State-designated watersheds;
- *Partnerships* Have cost-effective partnerships available;
- *Cost* Have the potential for cost avoidance/recovery;
- *Water quality* Contain impaired water quality standards;
- *Work status* Are continuing projects;
- *Location* Impact BLM-administered lands.

For **physical safety** sites:

- *Safety* Death or injury has occurred;
- *Public use* Have high public visitation;
- *Accessibility* Are easily accessible;
- *Population* Are located nearby populated areas;

- *Cost* Have cost-effective partnerships available.

**How many abandoned mines has BLM reclaimed?**

Between 2000 and 2003, BLM along with its partners cleaned up approximately 281 sites with water quality issues. Another 1,300 acres of land affected by water quality issues were cleaned up between 2004 and 2006.

In addition, since 2000, approximately 2,755 physical safety sites have been remediated

**What are some of the ways BLM addresses hazards at abandoned mine sites?**

BLM addresses physical safety hazards associated with abandoned mine sites by:

- Posting warning signs and fencing off access to dangerous areas;
- Closing horizontal opening (adits) to keep people out. Where bats are present, BLM uses bat gates that allow them to use the adit for habitat;
- Closing vertical openings (shafts) either by filling them, or by covering them with little roofs (cupolas); and/or
- Removing and properly disposing hazards such as mining and milling equipment, oil and chemical drums, and other debris.

BLM addresses environmental hazards associated with abandoned mine sites by:

- Redirecting stream flow to avoid mine wastes and tailings;
- Capping mine waste and tailings piles located in and around stream beds, or removing and transporting them to an appropriate repository;
- Plugging adits to reduce or control flow of metals-laden water;
- Applying low-cost, low-maintenance water treatment methods; and/or
- Removing toxic soils impacting groundwater.

**How can I report an abandoned mine site?**

The first thing you should do is “STAY OUT and STAY ALIVE!” If you come across what appears to be an abandoned mine that has no sign or is not closed up, report what you have encountered to local fire, police, or other rescue authorities. They in turn, will notify the appropriate land management agency to investigate the site.

**What else can I do to help?**

There is still much AML work to be done. See how you can [volunteer through BLM](#).

Methodology:

N/A

**History**

Status	Approved	Request Review
<b>In Progress Edit</b>	Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		
<b>Read Authorization</b>	[Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI	
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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

G.BLM.01 BLM AML Background

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Stephanie Christian 06/22/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.DOI.01 **Subsection**  
**Program Name** Audit Background  
**Subject** Fact Sheet - Public Safety Issues on Abandoned Mine Lands

**Origination Doctlink** ■

### Purpose:

To document the justification for performing the AML audit.

### Scope:

Fact Sheet - AML program

### Source:

Created by:  
Stephanie Christian  
Central Region Audits  
Evaluator  
Phone: 303-236-9112

### Conclusion:

Each year, dozens of children and adults are injured or killed from accidents that occur at active and inactive underground mines, sinkholes, pits and quarries. Nationally, in 1999 alone, 17 people died in non-mining accidents on mine property, according to the U.S. Department of Labor's Mine Safety and Health Administration. Three additional fatalities have occurred as of March 2000.

In addition to fatalities, serious injuries related to Abandoned Mine Lands (AML) safety hazards also continue to occur. Most of these hazards comprise shafts and other mine openings, often hundreds of feet deep. Vertical shafts and openings may be partially covered by vegetation to the point where a person may not even see the hole in the ground before stepping into it. People who enter mine openings may not become aware of deadly gases and lack of oxygen until it is too late to escape.

The potential for injuries and deaths to continue to occur each year increases as western population sprawl and recreational use of public lands increase, bringing the public into contact with formerly isolated AML sites. Moreover, when injuries occur on DOI-managed lands, liability risks can ensue against the United States. Persons who become injured while visiting AML sites on public lands can attempt to recover damages from the United States under the Federal Tort Claims Act ("FTCA"), 28 U.S.C. 2671 et seq.

### Details:

## Fact Sheet Public Safety Issues on Abandoned Mine Lands BLM, NPS, FWS

### Type of Audit

Performance Audit

## Background

Each year, dozens of children and adults are injured or killed from accidents that occur at active and inactive underground mines, sinkholes, pits and quarries. Nationally, in 1999 alone, 17 people died in non-mining accidents on mine property, according to the U.S. Department of Labor's Mine Safety and Health Administration. Three additional fatalities have occurred as of March 2000.

In addition to fatalities, serious injuries related to Abandoned Mine Lands (AML) safety hazards also continue to occur. Most of these hazards comprise shafts and other mine openings, often hundreds of feet deep. Vertical shafts and openings may be partially covered by vegetation to the point where a person may not even see the hole in the ground before stepping into it. People who enter mine openings may not become aware of deadly gases and lack of oxygen until it is too late to escape.

The potential for injuries and deaths to continue to occur each year increases as western population sprawl and recreational use of public lands increase, bringing the public into contact with formerly isolated AML sites. Moreover, when injuries occur on DOI-managed lands, liability risks can ensue against the United States. Persons who become injured while visiting AML sites on public lands can attempt to recover damages from the United States under the Federal Tort Claims Act ("FTCA"), 28 U.S.C. 2671 et seq. With certain exceptions, the FTCA provides that the United States will be liable for death, personal injury, or property damage caused by the negligent or wrongful act or omission by the United States. Recently, the Bureau of Land Management (BLM) was involved in a tort claim settlement resulting from an accident that occurred when two individuals were injured after entering an abandoned mine in proximity to a BLM recreation site. The settlement cost the United States an amount well into the hundreds of thousands of dollars. At this particular site, the BLM had placed a sign reading "Day Use Only - No Overnight Camping" in the general area where the AML site was located. Plaintiffs argued that the sign posting could have created an invitation for public use and a corresponding expectation that the area was safe for use. (BLM Instruction Memorandum - number 2000-182, <http://www.blm.gov/nhp/efoia/wo/fy00/im2000-182.html>)

According to a 1996 GAO report entitled; Federal Land Management: Information on Efforts to Inventory Abandoned Hard Rock Mines, thousands of hard rock mines lie abandoned on federal lands. Many of these mines present physical safety hazards. Many of these abandoned mines are located on federal lands in the western United States managed by the Department of the Interior's BLM, National Park Service (NPS), and Fish and Wildlife Service (FWS). The DOI major land-managing agencies—the BLM, NPS, and FWS—are in various stages of inventorying the mine sites on the lands they manage. Over the years several hundred thousand abandoned mines have been left scattered across the Western United States. A large number of these mines are on public lands that have come under the formal management of the Federal government only in recent years. While the BLM does not have an agency-wide estimate, the NPS estimates that it has about 2,500 sites, and the FWS estimates it has about 240 sites.

NPS and FWS lands have generally been withdrawn from mineral exploration. However, there are abandoned hard rock mine sites on these lands. Some are sites that preexisted the establishment or expansion of a park or wildlife refuge, and some are sites whose operators had valid existing rights when the lands were withdrawn from mining but have not reclaimed the sites.

Over the last 150 years, much of the land managed by BLM, NPS and FWS has experienced some form of mining activity, ranging from exploration to full development. In many cases, these activities were not properly reclaimed, and there are no identifiable responsible parties to help with the clean-up, leaving safety and environmental concerns that the Department of Interior must deal with today.

## Proposed Audit Objective and Scope

The proposed objective of the audit is to determine whether the Department of the Interior, the Bureau of Land Management, Fish and Wildlife Service and the National Park Service have effectively remedied the physical hazards posed by abandoned mines on DOI land. Specific objectives will be to determine if:

DOI and its bureaus have a proactive approach to identify safety hazards on all DOI lands, particularly those adjacent to populated areas.

DOI and its Bureaus have acted to remediate and close potential and known physical hazards on DOI lands.

DOI and its Bureaus have a plan to remediate safety hazards on their lands.

## Reason for Audit Proposal

### *Hazardous Waste Audit – Site Visit Findings*

During a site visit on the OIG's 2003 audit of DOI's Management of Hazardous Sites, evaluators learned of serious physical safety hazards on BLM's Snyder Hill Property located in Tucson, Arizona. This site is within a few miles of the Saginaw Hill property which posed similar safety hazards. These hazards included numerous open shafts, adits and pits. This property is currently being used for recreational camping. While these findings were outside the scope of our audit, we felt that the safety issues found at these sites were symptoms of a larger problem. The open shafts pictured below were just a few of the shafts found on this property.



### Accidents associated with abandoned mine lands sites

The Snyder Hill property is just one example of the physical hazards posed by old mining shafts on DOI land. Listed below are a few excerpts from news stories obtained from the BLM website. The news stories identified incidents of serious injuries and even death caused by abandoned mine shafts, adits and pits on BLM's land. ([http://www.blm.gov/aml/accidents\\_articles.htm](http://www.blm.gov/aml/accidents_articles.htm))

██████████ in abandoned mine (From BLM article by Krista Moore): On ██████████ an Abandoned Mine Land (AML) ██████████ He was rappelled down a shaft at the Maryland Mine near Salmon, Idaho in search of his dog, when friends say that he complained of difficulty breathing. Soon after, they lost contact with him and called emergency crews. Later, Salmon search and rescue crews pulled his body from the shaft located within the Salmon-Challis National Forest. The Lemhi County Sheriff's Department reports that he succumbed to a lack of oxygen and fell down the 125-foot vertical shaft. This was the first reported fatality of the year in an Idaho abandoned mine.

██████████ (BLM notification and [The Daily Independent](#)): RIDGECREST, CA. ██████████ ██████████ escapes serious injury after tumble down mine shaft. A ██████████ serious injury after falling 25 feet into a mine shaft Saturday afternoon in the Wagon Wheel off-road campground area.

██████████ (Internal BLM Notification): ██████████ Yuma County Sheriff's Department reported that a woman sustained injuries when she fell approximately 32 feet down a mine shaft. She suffered a possible dislocated shoulder, numerous cuts and abrasions along with a deep cut to her right thigh, which penetrated to the bone. The subject was transported from the scene by Marine Corp Air Station Search and Rescue helicopter to the Yuma Regional Medical Center where she remains hospitalized.

### **Prior Audit Coverage**

OIG issued a flash report in March 2005 entitled; Public Safety Issues on Saginaw Hill. This report identified physical safety hazards and contamination on BLM's Saginaw Hill Property located in Tucson, Arizona.

GAO prepared a report in February of 1996 entitled; Federal Land Management: Information on Efforts to Inventory Abandoned Hard Rock Mines. In this report GAO reported: the approximate number of abandoned hard rock mines on federally managed land, types of hazards these mines pose, and approximate cost to reclaim these mines. (<http://www.gao.gov/archive/1996/rc96030.pdf>)

### **Methodology:**

N/A

Submission:	Submitted	Stephanie Christian	08/23/2007 03:43 03 PM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:45 54 PM
Level 2 Approval:	Approved	John Illson	01/09/2008 11:19 58 AM

Linkage Information Set By William McMullen/DEN/OIG/DOI On 01/10/2008 01:12:18 PM

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Purpose:

To document the justification for performing the AML audit.

Scope:

Fact Sheet - AML program

Source:

Created by:

Stephanie Christian

Central Region Audits

Evaluator

Phone: 303-236-9112

Conclusion:

Each year, dozens of children and adults are injured or killed from accidents that occur at active and inactive underground mines, sinkholes, pits and quarries. Nationally, in 1999 alone, 17 people died in non-mining accidents on mine property, according to the U.S. Department of Labor's Mine Safety and Health Administration. Three additional fatalities have occurred as of March 2000.

In addition to fatalities, serious injuries related to Abandoned Mine Lands (AML) safety hazards also continue to occur. Most of these hazards comprise shafts and other mine openings, often hundreds of feet deep. Vertical shafts and openings may be partially covered by vegetation to the point where a person may not even see the hole in the ground before stepping into it. People who enter mine openings may not become aware of deadly gases and lack of oxygen until it is too late to escape.

The potential for injuries and deaths to continue to occur each year increases as western population sprawl and recreational use of public lands increase, bringing the public into contact with formerly isolated AML sites. Moreover, when injuries occur on DOI-managed lands, liability risks can ensue against the United States. Persons who become injured while visiting AML sites on public lands can attempt to recover damages from the United States under the Federal Tort Claims Act ("FTCA"), 28 U.S.C. 2671 et seq.

Details:

**Fact Sheet**  
**Public Safety Issues on Abandoned Mine Lands**  
**BLM, NPS, FWS**

**Type of Audit**

Performance Audit

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Over the last 150 years, much of the land managed by BLM, NPS and FWS has experienced some form of mining activity, ranging from exploration to full development. In many cases, these activities were not properly reclaimed, and there are no identifiable responsible parties to help with the clean-up, leaving safety and environmental concerns that the Department of Interior must deal with today.

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DOI and its Bureaus have acted to remediate and close potential and known physical hazards on DOI lands.

DOI and its Bureaus have a plan to remediate safety hazards on their lands.

### Reason for Audit Proposal

#### **Hazardous Waste Audit – Site Visit Findings**

During a site visit on the OIG's 2003 audit of DOI's Management of Hazardous Sites, evaluators learned of serious physical safety hazards on BLM's Snyder Hill Property located in Tucson, Arizona. This site is within a few miles of the Saginaw Hill property which posed similar safety hazards. These hazards included numerous open shafts, adits and pits. This property is currently being used for recreational camping. While these findings were outside the scope of our audit, we felt that the safety issues found at these sites were symptoms of a larger problem. The open shafts pictured below were just a few of the shafts found on this property.



**Accidents associated with abandoned mine lands sites**

The Snyder Hill property is just one example of the physical hazards posed by old mining shafts on DOI land. Listed below are a few excerpts from news stories obtained from the BLM website. The news stories identified incidents of serious injuries and even death caused by abandoned mine shafts, adits and pits on BLM’s land. ([http://www.blm.gov/aml/accidents\\_articles.htm](http://www.blm.gov/aml/accidents_articles.htm))

05/26/2003: Idaho man dies in abandoned mine (From BLM article by Krista Moore): On May 26, 2003, an Abandoned Mine Land (AML) site claimed the life of a twenty-five year-old Rexburg man. He was rappelled down a shaft at the Maryland Mine near Salmon, Idaho in search of his dog, when friends say that he complained of difficulty breathing. Soon after, they lost contact with him and called emergency crews. Later, Salmon search and rescue crews pulled his body from the shaft located within the Salmon-Challis National Forest. The Lemhi County Sheriff’s Department reports that he succumbed to a lack of oxygen and fell down the 125-foot vertical shaft. This was the first reported fatality of the year in an Idaho abandoned mine.

01/06/2003 (BLM notification and [The Daily Independent](#)): RIDGECREST, CA. Motorcycle rider escapes serious injury after tumble down mine shaft. A 14-year-old Fresno boy escaped serious injury after falling 25 feet into a mine shaft Saturday afternoon in the Wagon Wheel off-road campground area.

03/17/01 (Internal BLM Notification): Woman falls down Arizona Mine Shaft. Yuma County Sheriff’s Department reported that a woman sustained injuries when she fell approximately 32 feet down a mine shaft. She suffered a possible dislocated shoulder, numerous cuts and abrasions along with a deep cut to her right thigh, which penetrated to the bone. The subject was transported from the scene by Marine Corp Air Station Search and Rescue helicopter to the Yuma Regional Medical Center where she remains hospitalized.

**Prior Audit Coverage**

IG issued a flash report in March 2005 entitled; [Public Safety Issues on Saginaw Hill](#). This report identified physical safety hazards and contamination on BLM’s Saginaw Hill Property located in Tucson, Arizona

GAO prepared a report in February of 1996 entitled; [Federal Land Management: Information on Efforts to Inventory Abandoned Hard Rock Mines](#). In this report GAO reported: the approximate number of abandoned hard rock mines on federally managed land, types of hazards these mines pose, and approximate cost to reclaim these mines. (<http://www.gao.gov/archive/1996/rc96030.pdf>)

Methodology:  
N/A

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Greta Bloomfield/DEN/OIG/DOI, Sean Petterson/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		
<b>Read Authorization</b>	[Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Petterson/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI	
<b>Current Editor List</b>	[C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Petterson/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI	

## Assignment Workpaper

Prepared by: William McMullen 10/25/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section G.DOI.02 Subsection  
Program Name Audit Background  
Subject Seymour Article

Origination Doctlink 

### Purpose:

Document article by John Seymour, DOI Solicitor's Office.

### Scope:

Environmental issues related to hard rock mines.

### Source:

"Hardrock Mining and the Environment: Issues of Federal Enforcement and Liability" by John Seymour, 2004, provided to OIG and attached:



Seymour article.pdf

### Conclusion:

- Adequate inventory of abandoned hardrock mining sites on public lands is lacking but estimates suggest hundreds of thousands of sites.
-  Various sources quoted by Seymour estimate remediation costs of AML sites to be billions of dollars.
-  BLM estimate concurs that billions will be needed to remediate mines on BLM administered land.
- Under FLPMA, DOI (BLM) has authority to prevent unnecessary and undue degradation of lands irrespective of the Mining Law and rights of locators or claimants but BLM has not construed this authority as possible. BLM has defined a "prudent man" standard by which mining can occur even if degradation occurs as long as laws and regulations are being followed and the degradation is incident to proper mining activity.

### Details:

page 797 of source document:

#### Introduction

Mining of minerals such as gold, silver, copper, lead, iron, and uranium has been an integral part of the economy of the United States— particularly in the West—since the mid-1800s. ^ Laws passed by Congress during the nineteenth century to promote the exploration and development of such "hardrock" minerals on public lands remain in effect today much as originally enacted. ^ They grant to miners broad rights to extract minerals from public lands and impose significant constraints on the authority of the United States to limit access to those lands, extract royalties or other fees from mining companies, or prevent physical disturbance to the lands that is an unavoidable consequence of such mining.

pages 809-811 of source document:

#### Inventory of Sites

 Page 815 of the source document indicates there may be hundreds of thousands of AML sites on public land. Since most public land is managed by BLM  [G.06 Federal Lands](#) , it is logical to conclude that most of the sites on public land would be on lands managed by BLM.

#### Sites on BLM land

*B. Hardrock Mining Sites Posing Threats to Human Health or the Environment*

The state of knowledge regarding hardrock mining sites that may threaten public health or the environment is no better. Based on field sampling on public lands subject to its management, together with data from the Bureau of Mines (BOM) and the USGS, BLM estimated in 1996 that about 4%–13% of abandoned mining sites on public lands—a range of 2,800 to 39,000 sites (based on its then-estimate of 70,000 to 300,000 abandoned mining sites on public lands)—may present a risk to human health and the environment and require a regulatory response to mitigate environmental conditions.<sup>66</sup> The Forest Service estimated in 1999 that, of approximately 39,000 abandoned mine sites then documented on its lands, about 5%—approximately 1,800 sites—were a high priority for cleanup because they are releasing or threatening to release hazardous substances into the environment.<sup>67</sup>

page 862 of source document quotes a source suggesting human health risks from hardrock mine sites in the West may "increase markedly."

**Growing Risks**

pages 816-819 from source document: NOTE: WGA means Western Governor's Association (see page 808 of source document for definition of acronym).

**Cleanup Costs**

pages 839 to 844 of source document. See also G.DOI.03 FLPMA  for wording of language in FLPMA.

**FLPMA vs Mining Law**

**Methodology:**

Reviewed source document.

Submission: Submitted William McMullen 06/02/2008 02:00 54 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:42 32 PM

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The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Fri 01/25/2008 08:10 AM. For original text, refer to the field(s) above.

**Purpose:**

Document article by John Seymour, DOI Solicitor's Office.

**Scope:**

Environmental issues related to hard rock mines.

**Source:**

"Hardrock Mining and the Environment: Issues of Federal Enforcement and Liability" by John Seymour, 2004, provided to OIG and attached:



Seymour article.pdf

**Conclusion:**

Adequate inventory of abandoned hardrock mining sites on public lands is lacking but estimates suggest hundreds of thousands of sites.

- Various sources quoted by Seymour estimate remediation costs of AML sites to be billions of dollars.
- BLM estimate concurs that billions will be needed to remediate mines on BLM administered land.
- Under FLPMA, DOI (BLM) has authority to prevent unnecessary and undue degradation of lands irrespective of the Mining Law and rights of locators or claimants but BLM has not construed this authority as possible. BLM has defined a "prudent man" standard by which mining can occur even if degradation occurs as long as laws and regulations are being followed and the degradation is incident to proper mining activity.

## Details:

page 797 of source document:

**Introduction**

■ Mining of minerals such as gold, silver, copper, lead, iron, and uranium has been an integral part of the economy of the United States— particularly in the West—since the mid-1800s. ^ Laws passed by Congress during the nineteenth century to promote the exploration and development of such "hardrock" minerals on public lands remain in effect today much as originally enacted. ^ They grant to miners broad rights to extract minerals from public lands and impose significant constraints on the authority of the United States to limit access to those lands, extract royalties or other fees from mining companies, or prevent physical disturbance to the lands that is an unavoidable consequence of such mining.

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**Sites on BLM land**

*B. Hardrock Mining Sites Posing Threats to Human Health or the Environment*

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**Growing Risks**

pages 816-819 from source document: NOTE: WGA means Western Governor's Association (see page 808 of source document for definition of acronym).

**Cleanup Costs**pages 839 to 844 of source document. See also [G.DOI.03 FLPMA](#) ■ for wording of language in FLPMA.**FLPMA vs Mining Law**

## Methodology:

Reviewed source document.

**History**

Status	Approved	Request Review
In Progress Edit	Sean Pettersen/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI	
Confidentiality	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 10/25/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section G.DOI.03 Subsection  
Program Name Audit Background  
Subject FLPMA

Origination Doctlink 

### Purpose:

Document DOI authority to prevent undue degradation of public lands.

### Scope:

DOI authority with respect to lands and Mining Law.

### Source:

Federal Land Policy Management Act (FLPMA) attached:



FLPMA.pdf

43 CFR 2300 found at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=86b7260506184aef02910d446c291562&rgn=div5&view=text&node=43:2.1.1.2.13&idno=43#43:2.1.1.2.13.1.1.2> (see applicable section at tab below).



Article on FLPMA and 3809 regulations found at <http://www.abanet.org/environ/committees/mining/newsletter/june03/hardrockmining/> and attached: FLPMA and 3809.pdf

### Conclusion:

- FLPMA Section 302(b) provides an overarching clause requiring the Secretary to prevent unnecessary or undue degradation of lands irrespective of the Mining Law and rights of locators or claimants under that law.
- DOI and BLM have not construed the authority provided in Section 302(b) as broadly as possible.
- Withdrawal of lands from mineral entry under the 1872 Mining Law are permitted under FLPMA and applicable regulations (43 CFR 2300).
- Closures are also allowed under regulations and have been used by BLM.

### Details:

pages 20 and 21 of source document shown below:

#### Prevent Undue Degradation

The 3809 regulations **J.BLM.25 Surface Management under Mining Laws** issued by BLM were promulgated pursuant to FLPMA and amplified the definition of unnecessary or undue degradation. The regulations **J.BLM.25 Surface Management under Mining Laws** require reclamation of disturbed areas. Reclamation is defined as: **Reclamation** means taking measures required by this subpart following disturbance of public lands caused by operations to meet applicable performance standards and achieve conditions required by BLM at the conclusion of operations. For a definition of "reclamation" applicable to operations conducted under the mining laws on Stock Raising Homestead Act lands, see part 3810, subpart 3814 of this title. Components of reclamation include, where applicable:

- (1) Isolation, control, or removal of acid-forming toxic, or deleterious substances;
- (2) Regrading and reshaping to conform with adjacent landforms, facilitate revegetation, control drainage, and minimize erosion;
- (3) Rehabilitation of fisheries or wildlife habitat;
- (4) Placement of growth medium and establishment of self-sustaining revegetation;
- (5) Removal or stabilization of buildings, structures, or other support facilities;
- (6) Plugging of drill holes and closure of underground workings; and
- (7) Providing for post-mining monitoring, maintenance, or treatment.

#### FLPMA and 3809

**Evolution of Key 3809 Issues During the Rulemaking**

*Unnecessary or Undue Degradation.* The debate over the definition of unnecessary or undue degradation is emblematic of the controversy that surrounded the 3809 rulemaking. Preventing unnecessary or undue degradation, which is a statutory mandate under the Federal Land Policy and Management Act of 1976 (FLPMA), is the principal focus of the 3809 regulations. The mining industry argued the original 1980 definition of unnecessary or undue degradation at § 3809.0-5 was effective in protecting the environment because it created a site specific, dynamic and comprehensive standard that required compliance “with all applicable environmental protection statutes and regulations.” In contrast, the Clinton administration and other mining critics contended a new, prescriptive standard was needed to provide BLM with additional discretionary authority to deny an applicant’s Plan of Operations or Notice of Intent for mining and mineral exploration activities on BLM managed public lands.

Section 204 of FLPMA describes the process by which the Secretary can withdraw public lands from various uses

**Withdrawals**

43 CFR 2300 notes that public lands can be removed from operation of the 1872 Mining Law only by withdrawal action pursuant to FLPMA.

**43 CFR 2300**

43 CFR 8364.1 also allows closure of public lands to various uses such as mineral entry **B.BLM.04 Federal Authority to Close Lands** . BLM has used this authority as well as that granted under 43 CFR 2300 to close lands for purposes of reclamation or protecting mitigation remedies **L.g. Withdrawal, Segregation and Closure of Lands** .

**Methodology:**

Reviewed source document.

Submission:	Submitted	William McMullen	05/05/2008 03:14:44 PM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	06/02/2008 01:51 23 PM

**Linkage Information**

**History**

Status	Approved	Request Review
In Progress Edit	William McMullen/DEN/OIG/DOI	
Confidentiality	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Petterson/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: William McMullen 10/25/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.DOI 04 **Subsection**  
**Program Name** Audit Background  
**Subject** Discussion with CHF and AML staff

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Lead Auditor	OIG Lakewood	303 236 9119	john_illson@doioig.gov
Bill McMullen	Asst Team Lead	OIG Lakewood	303 236 9123	william_mcmullen@doioig.gov
George Stone	BLM Senior Abandoned Mine Land Specialist	BLM L Street office, Washington	202 557 3573	George_Stone@blm.gov
Bob Wilson	DOI CHF Program Manager, Office of Environmental Policy and Compliance	Washington	202 208.7556	Robert_M_Wilson@ios.doi.gov
John Seymour (by teleconference)	Office of Solicitor	MIB, Washington		
Emily Joseph (by teleconference)	Office of Environmental Policy and Compliance	Washington	202 208 5303	Emily_Joseph@ios.doi.gov
Willie Taylor (by teleconference)	Director, Office of Environmental Policy and Compliance	Washington	202 208 3891	Willie_Taylor@ios.doi.gov

**Location** Bob Wilson's Office in Ballston, VA.

**Date/Time**  
 10/18/2007 08 00 AM

**Purpose:**  
 Discuss CHF responsibilities vis a vis BLM AML program.

**Scope:**  
 DOI and BLM abandoned mine land responsibilities.

- Conclusion:**
- CHF sees no additional management role over BLM or DOI AML sites.
  - Prior OIG audit has allowed CHF to increase staff.
  - The DOI Environmental Disposal Liability list could be a powerful tool to get additional funding to mitigate sites.
  - There may be 1,000 to 2,000 high priority DOI AML sites that need significant mitigation action based on current inventories and CHF experience with needed actions at various sites. Ideally, these sites would be on the EDL and in the BLM AML Strategic Plan and would represent a "targeted" high-priority inventory.
  - Better prioritization of sites is needed.
  - Better environmental expertise is needed in BLM field organizations.
  - BLM programs need to cooperate more to identify and mitigate AML sites.
  - Land withdrawals could be a powerful tool to limit claimants' ability to disturb remediated sites.
  - BLM needs outside pressure to raise awareness of AML issues, support increased budgets, and proactively deal with mining claimants.

- Summary:**
- Bob noted that CHF has been able to hire additional staff primarily as a result of the OIG HazMat audit.
- Bill Lodder in Denver is responsible for financial tracking and automating project nomination and prioritization
  - Emily Joseph in DC is responsible for budget issues and public outreach including development of a 1-800 reporting number
  - Kate Power is now in Denver
  - Rick ?? is a new hire hydrogeologist who has excellent qualifications in management of environmental projects

John provided a summary of the AML audit so far and that inventory and prioritization are key issues as they were in the Hazmat audit. All discussed the issue of AMM and CHF's Environmental Disposal Liability database and whether key BLM AML sites, such as Kelly, were on the EDL list. George thought virtually all major environmental projects listed in the Strategic Plan were on the EDL list but was not sure. All discussed the possibility of a DOI AML czar who could develop an integrated DOI AML inventory and project prioritization process and provide oversight to ensure timely mitigation. Willie Taylor was not in favor of OEPC assuming such a role.

All agreed that AML sites in the Strategic Plan and on the EDL could constitute a "targeted" inventory of high-priority sites.

CHF is trying to develop a concept of "locations of concern" that might include a number of AML features. He has found, typically, that about 15% of AML sites need some significant mitigation. Using this concept, bureaus would need to do "due care" on sites which would only be included in "locations of concern" if some triggering event occurred, such as the outflow of funds to address issues at these sites. With regard to EDL, Bob noted that KPMG was pushing hard to include AML sites on the list. Bob noted that he was trying to develop a protocol for identifying environmental sites that would then be listed on the EDL; however, such listing would not guarantee funding for mitigation. This protocol would include an assessment of risks to humans versus ecosystems. Bob thought there were 1000 sites on the EDL and that about 500 were mine sites. Bob also noted that it was likely that a performance goal would be established with respect to the EDL, e.g., a goal that showed whether the liability was being reduced over time. Bob was very enthusiastic that the EDL was a tool that could allow CHF could get more funding to mitigate sites and meet such a performance goal.

George noted that, based on AMM, there were about 11,000 to 12,000 records, but little was really known for about 10,000 of these. If the 4,000 NPS sites are included, perhaps there are 16,000 sites on current inventories. If Bob's figure of 15% is accurate, then 1,000 to 2,000 sites might need some serious attention. The problem is that it is difficult to determine the mix of sites presenting safety, environmental or mixed hazards, so determining funding needs is complicated.

John suggested that maybe BLM's role should focus on mitigation of sites with safety hazards, since this is relatively inexpensive per site and well within the ability of the Field Office structure to implement (they are doing it now to one degree or another). CHF would then focus on environmental sites. Taylor was not enthusiastic about this idea.

All discussed the way in which the Technical Review Committee of CHF reviews sites for funding. Sites are eligible for CHF funding only if the bureau has assumed CERCLA, instead of NEPA, authority for the site. Bureaus nominate sites that are reviewed by the TRC and then included in the budget process. These sites should ideally address the priorities and projects identified by BLM State offices in the AML Strategic Plan. Bob noted that for sites funded by CHF, he is moving to implement an internal control process to ensure CHF funds are being effectively spent to complete these projects.

George discussed the issue of environmental expertise in the BLM field offices and noted that there were several hundred collateralized staff with varying levels of expertise. He suggested that perhaps CHF could assist in providing some expertise to the field. All discussed the "zoning" of AML duties across several field offices or even states. Taylor suggested that perhaps BLM should request funding to conduct an analysis of how zoning might work and that State Directors should be encouraged to include this topic at one of their periodic meetings. George noted that BLM needed an external push to get AML elevated above field or even State levels. AML is counterculture to BLM who focuses on mineral development. In this vein, George noted that outside pressure was needed to get BLM to develop and implement policy on proactively dealing with claimants at sites with hazards.

All discussed issue of withdrawals to eliminate claimant access to sites but not sure what happens after remediation is done. Under 3809, unless land is withdrawn, claimants could enter remediated sites, file claims and develop operations, although under the bonding requirements of 3809. Seymour noted that sites remediated under CERCLA could include future land use restrictions in the CERCLA Record of Decision. He noted that CERCLA requires remedies to be protected short and long term. George was not sure he agreed with this view. All discussed use of mineral validity exams as a prerequisite to withdrawal of lands. Bob thought claimants should be for such exams and these should be done by BLM contractors.

George noted that all BLM programs needed to cooperate more to identify, prioritize and mitigate AML sites and was discouraged that 3809 and recreation staff generally took a hands-off approach to AML. He also noted that BLM is not actively updating cadastral surveys to ensure BLM staff knows what is federal land.

Submission: Submitted William McMullen 01/11/2008 09:01:34 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:21:43 AM

[Linkage Information](#)

**History**

Status Approved Request Review

In Progress Edit William McMullen/DEN/OIG/DOI

Confidentiality Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Petterson/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 11/05/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.DOI.06 **Subsection**  
**Program Name** Audit Background  
**Subject** Relevant GPRA Goals

**Origination Doclink** ■

### Purpose:

Document GPRA goals potentially relevant to AML program.

### Scope:

DOI GPRA Goals

### Source:

DOI GPRA 2007 - 2012 Strategic Plan found at [http://www.doi.gov/ppp/Strategic%20Plan%20FY07-12/strat\\_plan\\_fy2007\\_2012.pdf](http://www.doi.gov/ppp/Strategic%20Plan%20FY07-12/strat_plan_fy2007_2012.pdf) and attached. Selected pages copied in Details section.



GPRA.pdf

Spreadsheet of GPRA goals found at <http://www.doi.gov/ppp/MeasureTemplates/CopyofMeasuresMatrixv0.8.htm> (password protected) (sections included below).

Spreadsheet explaining goals found at <http://www.doi.gov/ppp/MeasureTemplates/Templates/1568.xls> (password protected) (sections included below).

### Conclusion:

The most relevant GPRA goals as stated in the FY 2007 -2012 Strategic Plan relate to reporting and preventing injuries and fatalities. However:

- For BLM, injuries and fatalities include only those occurring of recreation fee lands.
- For BLM, injuries and fatalities are to be taken as reported in LAWNET.
- For NPS, injuries and fatalities are to be taken as reported in IMARS.
- BLM has a GPRA goal of mitigating physical safety and chemical hazards so as to prevent injury or death.
- BLM AML Policy Handbook establishes the top priority for mitigation of AML sites with safety hazards as those sites where an injury or death has already occurred.

### Details:

AML Related GPRA Goals as defined in DOI GPRA 2007-2012 Strategic Plan are shown below (extracted by OIG).

Goals under Resource Protection relate to protecting water and watersheds, cultural and natural resources. Acid mine drainage from AML sites is a potential AML connection to these goals. AML sites with archeological, cultural or historic assets that should be protected are also covered in the Resource Protection area.

**Resource Protection**

No AML related goals were identified under the Resource Use area.

**Resource Use**

Satisfaction of visitors with their experiences on public land is a possible connection to AML sites in the Recreation area. Injuries and fatalities experienced by visitors to BLM (only recreation fee lands) and NPS lands also relate to AML sites.

**Recreation**

The goal of mitigating physical and chemical hazards to ensure visitor or public safety in an appropriate time is relevant to AML sites. The GPRA goal states that such hazards are to be "mitigated in appropriate time" or "controlling the exposure of the visitor or public in time to prevent injury or death from obvious and immediate hazards defined above. Sites may have more than one hazard and a site will not be considered mitigated until all identified hazards are controlled."

Examples of physical safety hazards include excavations or mineshafts and deteriorated or obstructed infrastructure. Chemical hazards are those associated with hazardous substances, materials or waste defined by laws such as CERCLA, RCRA, CWA, OPA, CAA and OSHA. The AML Policy Handbook J.BLM.13 BLM AML Program Policy Handbook notes that sites with physical safety hazards are prioritized, first, by whether someone has been injured or killed at the site. This seems inconsistent with the GPRA goal in the area of preventing injury or death.

**Serving Communities**

There were no GPRA goals in the Management Excellence area related to AML.

**Management Excellence**

**Methodology:**

Reviewed source documents and websites.

Submission:	Submitted	William McMullen	01/11/2008 09:03 30 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/11/2008 11:23 53 AM

**Linkage Information**

**History**

Status	Approved	Request Review
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### Assignment Workpaper

Prepared by: William McMullen 11/16/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section G.DOI.07 Subsection  
Program Name Audit Background  
Subject 2006/2007 PARs

Origination Doctlink

#### Purpose:

Document performance measures and independent auditor conclusions found in 2006 and 2007 DOI Performance Accountability Reports (PARs).

#### Scope:

DOI AML issues.

#### Source:

2006 and 2007 PARs found at <http://www.doi.gov/ppp/>. Selected relevant pages were extracted as attached:



PAR 2006 pages.pdf



PAR 2007 pages.pdf

DOI spreadsheet of supporting documentation for GPRA goal related to abandoned mines found at <http://www.doi.gov/ppp/MeasureTemplates/Serving%20Communities/FY06/SEM480.xls> and included as page 39 of attachment "PAR 2006 pages.pdf".

#### Conclusion:

- No material weaknesses related to AML issues were identified on DOI balance sheets by an independent auditor for 2005, 2006, or 2007.
- The 2006 and 2007 PARs have no performance measures related specifically to abandoned hardrock mines. Some measures in the 2007 PAR relate to potential effects from mines such as number of visitor injuries and fatalities; percent of physical and chemical hazards mitigated to protect public health and safety, and percent of contaminated sites remediated to protect watersheds, but these measures were reported as achieved.

#### Details:

##### Performance Measures

As shown on pages 2 and 39 of "PAR 2006 pages.pdf", there was a 2006 performance measure related to abandoned mine sites, but is specifically related to abandoned coal mines.

As shown in "PAR 2007 pages.pdf" and discussed in [G.DOI.06 Relevant GPRA Goals](#), there were several performance measures identified in the 2007 PAR that could relate to abandoned mines although there was no specific reference to abandoned hardrock mines. For example, number of visitor injuries and fatalities, percent of physical and chemical hazards mitigated to protect public health and safety, and percent of contaminated sites remediated to protect watersheds are identified in the 2007 PAR. According to the 2007 PAR, all of these measures were achieved.

No material weaknesses related to AML issues were identified on DOI balance sheets by an independent auditor for 2005, 2006, or 2007.

##### Independent Auditor Reports

#### Methodology:

Reviewed source documents for relevance to AML.

Submission: Submitted William McMullen 01/11/2008 09:07:10 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:24:44 AM

##### Linkage Information

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## Assignment Workpaper

Prepared by: William McMullen 12/03/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.DOI.08 **Subsection**  
**Program Name** Audit Background  
**Subject** OGC Response to OIG Questions

**Origination Doclink** ■

### Purpose:

Document OGC response to questions posed by OIG regarding AML issues.

### Scope:

DOI AML program.

### Source:

Memorandum provided by OGC (Chris Martinez) to OIG attached:



Chris Martinez writeup.PDF

### Conclusion:

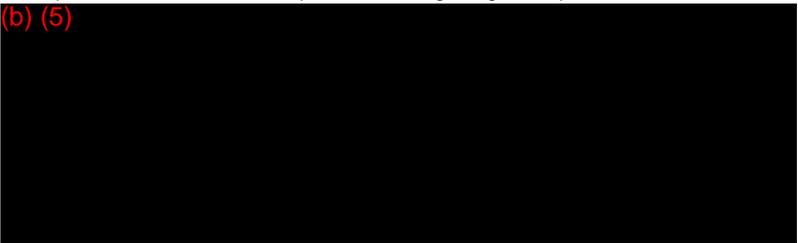
OGC responded to OIG questions regarding AML issues:

- OGC noted the various applicable laws related to mitigating AML sites.
- OGC proffered the view that bureaus have substantial authority to mitigate hazards regardless of the existence of active claimants.
- OGC noted that past opinions supported the view that BIA does not have environmental cleanup authority on Indian trust lands for hazards that BIA did not create and over which BIA has no direct and active control.

### Details:

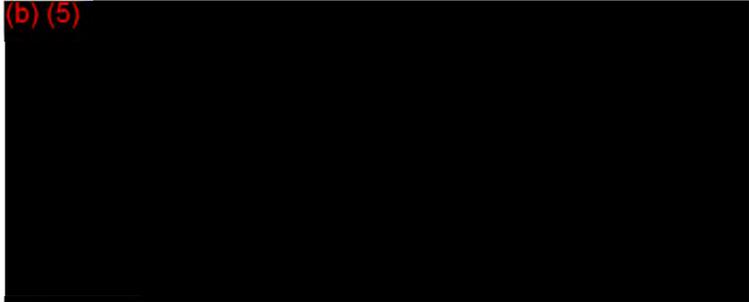
As part of the AML audit, OIG inquired of OGC regarding three specific issues:

(b) (5)

A large black rectangular redaction box covering the majority of the page's content.

OGC's short response follows:

**Short Answers:**



**Methodology:**

N/A.

Submission: Submitted William McMullen 01/11/2008 09:07 33 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/11/2008 11:26 02 AM

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## Assignment Workpaper

Prepared by: Greta Bloomfield 05/15/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** G.NPS.1 **Subsection**  
**Program Name** Audit Background  
**Subject** Total Number of Employees Contact during Audit

**Origination Doclink** ■

### Purpose:

To determine the number of staff we contacted during the audit.

### Scope:

DOI , NPS and BLM staff we contacted during our audit

### Source:

Other workpapers citing employees we contacted: **K. BLM (Site Visits)** ■, **H.NPS.11 Number of Parks and personnel visited** ■

### Conclusion:

**We talked to 79 employees from 13 BLM offices and 5 National Parks.**

**We talked to 84 employees from DOI, BLM and NPS**

### Number of Staff:

DOI = 5 ■

BLM = 64 ■

NPS = 15 ■

**Total = 84 Employees** [math verified by Sean Pettersen 05/15/08 ]

### Details:

#### **DOI Staff** **K. BLM (Site Visits)** ■

1. Martinez
2. Meredith
3. Wilson
4. Joseph
5. Taylor

**BLM Staff - In order to count the number of staff, I copied and pasted the list of staff noted in:K. BLM (Site Visits)** ■ **Then formatted the list with number bullets to determine the total.**

1. stone
2. torrence
3. haskins
4. seymore
5. stith
6. cooper
7. dean
8. lasell
9. moreson
10. moore
11. brown
12. murrelwright
13. gingrich

G.NPS.1 Total Number of Employees Contact during Audit

14. seum
15. drummond
16. downing
17. moore
18. martinez
19. rogers
20. seath
21. elam
22. singleton
23. harrison
24. snyder
25. ginouves
26. poole
27. berger
28. borchard
29. villalobos
30. weiwood
31. gum
32. forester
33. graves
34. lawler
35. key
36. grabowski
37. livingood
38. carroll
39. burch
40. harris
41. zielinski
42. mclure
43. lovato
44. sanches
45. czapski
46. hogan
47. huntington
48. maes
49. plis
50. fusilier
51. misiaszek
52. ross
53. kelso
54. wenker
55. johnson
56. morlan
57. mcfarlane
58. bjorkland
59. netcher
60. ruhs
61. peterson
62. hicks
63. neumann
64. nelson

**NPS Staff** H.NPS.11 Number of Parks and personnel visited ■

1. David EK
  2. Linda Manning
  3. Stewart Jones
  4. J.T Reynolds (Park Superintendent)
2. Joshua Tree National Park
  5. Luke Sabala
  6. Paul DePrey

G.NPS.1 Total Number of Employees Contact during Audit

- 3. Grand Canyon National Park
  - 7. John Rihs
  - 8. Steven Rice
- 4. Mojave National Preserve
  - 9. Robert Bryson
  - 10. Ted Weasma
  - 11. Dennis Schramm (Preserve Superintendent)
- 5. Lake Mead National Recreation Area
  - 12. Bryan Moore
- Geologic Resources Division
  - 13. John Burghardt
  - 14. Dave Steensen
  - 15. James Woods

**Methodology:**

In order to count the number of staff, I copied and pasted the list of staff then formatted the list with number bullets to determine the total.

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                      John Illson                      06/02/2008 02:42 59 PM

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**Confidentiality**                      Standard

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 04/27/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section H.  
 Assignment Program Name NPS (Overall)

**Objective:**

Describe relevant issues of NPS AML program.

**Background:**

**Assignment Steps:**

H – National Park Service (Overall)		
Audit Step	Staff	Work Paper Reference
Obtain inventories from NPS and Parks and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.	Sean	See discussion below for cross-indexing ■
Determine how NPS ensure that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)	Sean	
Determine if the NPS has a specific AML policy for staff and visitor safety.	Sean	
Obtain NPS criteria for prioritizing AML sites.	Sean	See discussion below for cross-indexing ■
Does NPS adequately inform the public about abandoned mine hazards at the visitor centers, in literature, or on the websites?	Sean	I.NPS.JOTR.12 JOTR - Warning the public about AML hazards ■ I.NPS.DEVA.12 DEVA - Warning the public about AML hazards ■

**Conclusion:**

We believe that NPS has generally been more effective in protecting the public from AML hazards than BLM. We found that Death Valley, Joshua Tree, and Lake Mead had mitigated many of their high priority abandoned mine sites that posed the largest risks to visitors because they were easily accessible. However, we found instances of extremely dangerous physical safety hazards that were readily accessible to the public and were not mitigated due to lack of funding. In addition, NPS has not issued adequate policies and procedures to manage AML issues.

We believe NPS has been more effective in part due to the limited scope of their AML program, including fewer sites, few or no contaminated sites near populated areas, and restrictions visitor access and ORV use, and a culture within NPS that does not hinder site identification and mitigation (auditor opinion). We believe the culture is different within NPS (vs BLM) because the natural resources employees who perform AML work within parks appear to be more eager to mitigate sites for wildlife protection as well as visitor protection. In general NPS mission is geared more toward resource protection and preservation (auditor opinion). NPS has a total of 3,351 sites listed on its inventory compared to the 11,500 (C. Survey-Inventory ■ ■).

**Inventories at Parks Visited**

**Inventories at Parks Visited**

The Parks we visited generally have good, reliable inventories that have all of the most dangerous sites recorded (a targeted inventory). Although we were told that the Park inventories are not complete, they are adequate for the purpose of identifying and prioritizing the most dangerous sites (Auditor Conclusion).

The NPS nationwide inventory is maintained by the Geologic Resources Division (GRD), in Denver, Colorado. Each individual Park prepares an inventory of AML sites within its boundaries and then supplies that information to GRD. GRD, with assistance from Parks, has been updating and revising the database over the past several years. For example, the total number of NPS sites went from 3,184 to 3,351 in 2007. Although we do not believe that all of these sites need to be addressed, we believe it is safe to assume that hundreds of sites will need to be addressed to protect the public. According to NPS, 20-30% of its inventory present a serious hazard, that would be 670-1000 sites (3351x.2 and 3351x.3). H.NPS.01 Estimate of the number of sites that pose hazards. The inventory also includes abandoned oil and gas wells but account for less than one percent (1%) of the total inventory.

The vast majority of AML in National Parks are within the Pacific West Region. Eighty-two percent (82%) of the NPS official nationwide inventory have been recorded by four Parks within this region. The California Desert area, specifically Death Valley National Park, Lake Mead National Recreation Area, Mojave National Park, and Joshua Tree National Park have recorded ninety-seven percent (97%) of the sites within the Pacific West Region (C.NPS.01 NPS AML Inventory).

The inventories at the Parks we visited (Death Valley, Lake Mead, and Joshua Tree) were not complete. However, many of the sites that still need to be added to the inventory are/were remote, or merely estimates. For example,

- Death Valley is still adding sites to their inventory as they become aware of them. Death Valley told us about an area (that receives more and more visitation) that had already been inventoried but it was discovered that there were more openings in the area. The new openings are being added to the inventory (I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS).
- Lake Mead informed us that their inventory is about 60% complete, however, further discussion revealed that this is an estimate and the remaining sites are remote. The park plans to use aircraft to spot mine openings in remote areas and then have volunteers hike into the areas to gather detailed site data (C.NPS.LAME.01 Lake Mead Recreation Area Site Visit).
- Joshua Tree National Park has not updated all of the known information about sites. According to the Park official responsible for maintaining the inventory, "he doesn't have the time" to keep up with the task of maintaining the data (I.NPS.JOTR.01 Joshua Tree - NPS AML Inventory & High Priority Sites).

The inventories at Lake Mead, Death Valley and Joshua Tree have been compiled over many years. Joshua Tree and Lake Mead have been using volunteers to field truth existing data as well as to identify new sites (I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead, I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS, C.NPS.LAME.01 Lake Mead Recreation Area Site Visit). According to both Parks, this has been an effective and inexpensive way to gather data.

In many cases, these parks had taken steps to permanently seal mine openings and stabilize mine structures. We saw these closures at the Parks we visited. Examples from each park are Death Valley (I.NPS.DEVA.18 Death Valley - Abandoned Mine Visit(s)), Lake Mead (C.NPS.LAME.01 Lake Mead Recreation Area Site Visit), and Joshua Tree (I.NPS.JOTR.03 Mitigation Efforts Performed Over the Years). In other cases, they had taken temporary measures to install fencing and signs to protect and warn the public of mine hazards (examples include Death Valley, and Mojave).

## AML Safety Policy

### AML Safety Policies

A Draft Handbook for the remediation of Abandoned Mine Lands was developed for NPS in June, 1992. According to John Burghard -NPS-GRD the handbook was never finalized and distributed to the parks. Therefore, NPS has not issued formal policy and procedures for AML sites. The draft handbook appears to be adequate but it has not been issued. We told NPS that they need to revise the handbook and issue it as soon as possible.

Although we believe that NPS has adequate internal controls, we will make the recommendation that NPS update and issue their handbook to all AML staff.

### Criteria for Prioritizing Sites

There is no official, formal or consistent NPS policy for prioritizing AML sites. According to the NPS AML handbook high priority sites have the following characteristics:

- Extreme health and safety hazards
- Ease of access
- High Visitation
- Difficult Rescues
- Severe and progressive environmental degradation.
- However, the handbook has never been issued as formal NPS policy (H.NPS.05 NPS Criteria for Prioritization).

Sites are prioritized at the Park level.

Each of the known AML sites for Death Valley have been assigned ranking scores. The overall hazard score is a combination of a Hazard Ranking and an Access Ranking (C.NPS.DEVA.01 Death Valley National Park Site Visit). The top priorities for Death Valley NP are at (C.NPS.DEVA.04 Death Valley Priorities).

Hazard Ranking and an Access Ranking (C.NPS.DEVA.01 Death Valley National Park Site Visit).

At Joshua Tree NP sites were identified as "high priority" based on internal and informal criteria. For their purposes, high priority sites 1) receive extremely limited and 3) are located 1/4 mile from a trail or road (I.NPS.JOTR.01 Joshua Tree - NPS AML Inventory & High Priority Sites).

high visitation 2) present hazards where self-rescue is

At Lake Mead there is minimal NPS funding for AML mitigation. The money that's used is from SNPLMA Capital Improvements projects. Lake Mead used priorities established by the SNPLMA and "prioritized the mine openings by which species of bats are occupying the roosts, high use areas, their accessibility by visitors and the presence of desert tortoise".

The ranking criteria for SNPLMA Capital Improvements are:

- Does this project provide opportunities to inform and educate the public about the environment and the responsible use of federal lands?
- Will this project result in improved quality and/or management of federal lands?
- Does this project enhance interagency and other partnerships in the promotion of conservation initiatives?
- Will project evaluation process be built-in?

GRD provided information on ranking sites, however, Lake Mead has not ranked the sites in the Park's database. Over the past 15 years the Park has closed/mitigated the sites that can be driven up to and are the most hazardous. He acknowledged that ranking the sites is something that he needs to do and get into the database (C.NPS.LAME.01 Lake Mead Recreation Area Site Visit [REDACTED]).

According to <http://www.nature.nps.gov/rm77/restore.cfm> criteria for ranking may include historical, current, and potential impacts; the resources at risk and their value; the potential for restorative success; current and future visitor use; the relative effect of restoration on the integrity or recovery of the larger natural system; legal or ownership constraints; safety issues; and cost. NPS laws, management policies, and guidelines, and the park's enabling legislation should also guide the ranking process (C.NPS.05 NPS Roles and Responsibilities for Disturbed Land Restoration [REDACTED]).

## Informing the Public

### Safety Hazards Observed at the Parks we Visited

Although NPS has been generally effective in protecting the public from AML hazards, we found instances of dangerous physical hazards that were readily accessible to the public. We visited was the Keane Wonder Mine and the Greenwater Mining District in Death Valley National park. These sites have not been mitigated because of funding shortfalls. [REDACTED] [REDACTED]

#### Keane Wonder Mine:

There are many hazardous mine features at the Keane Wonder Mine that are easily accessible to visitors. Although the hike to the open mine features was difficult, it still receives heavy visitation. For example, during our site visit there was a family exploring to old dangerous mine shafts. The most accessible mine features located near the parking lot have been covered with steel cable netting, but there are no signs warning visitors to stay off the old mine structures (C.NPS.DEVA.01 Death Valley National Park Site Visit [REDACTED] [REDACTED]).

#### Greenwater Mining District:

In our visit, we found that two of three Greenwater Mining District AML sites were mitigated. These two sites were of two mine shafts estimated to be 1,000 feet deep. Each shaft was surrounded by an 8 foot barbed wire chain link fence, fully restricting public access. The third site was also a mine shaft, estimated to be several hundred feet deep, yet it was left largely open and easily accessible despite the loose strands of barbed wire which surrounded it. Ineffective warning signs were also in place at the third site. These signs were worn, faded and barely legible. No warning signs were found at the mitigated sites. In addition, the road ends at the mine shafts and there was evidence of people camping at the site (I.NPS.DEVA.03 Greenwater - Site Visit / Meeting with NPS Officials [REDACTED] [REDACTED]).

N/A

Submission:	Submitted	William McMullen	07/18/2008 09:26 03 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	07/21/2008 03:28 27 PM

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Assignment Program/Summary Workpaper H.

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

H.NPS 01 Estimate of the number of sites that pose hazards.

## Assignment Workpaper

Prepared by: Sean Pettersen 01/10/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** H NPS 01 **Subsection**  
**Program Name** NPS (Overall)  
**Subject** Estimate of the number of sites that pose hazards .

**Origination Doctlink** ■

### Purpose:

To determine the number of sites representing serious hazards on NPS lands.

### Scope:

Number of physical and environmental hazards on BLM land.

### Source:

John E. Burghardt, Geologist, Certified Mineral Examiner #0075  
National Park Service, Natural Resource Program Center  
Geologic Resources Division  
P.O. Box 25287  
Denver, CO 80225-0287  
(303) 969-2099; Fax (303) 987-6792  
e-mail: john\_burghardt@nps.gov

### Conclusion:

According to John Burghardt - GRD, BLM's number of 20-30% presenting serious hazards would be pretty close for NPS. Unlike BLM, NPS sites aren't generally prone to ATVs and the like. So as for how many sites require some sort of environmental cleanup, Burghardt estimated 5%.

### Details:

Of course, there are degrees of hazard and environmental contamination, and when our database is complete, we do have a ranking system, but I'm not sure we'll have that field filled out by many parks. In many cases, they might not have the time or means to go out and make an assessment, depending on the number of mines they have and the expertise of the people who would assess them. Some of these rankings would require underground entry, which we reserve for a select few who have training, such as me. What we DON'T ask parks to do is to enter underground mines for data they can't get from outside.

Some parks have inventoried a number of non-hazardous, non-environmental prospects for archeological reasons, but they wouldn't necessarily want to do anything with them and they aren't really hazardous, so one of the fields we have in the new database that we should get pretty good participation on is whether or not they foresee doing anything on each particular feature ("Feature\_status"). When we go to truth our data with our parks, we realize that they may not have time to fill out every field, but we've asked them to prioritize 20 "essential" fields, and this is one of them. This way, we'll have a good count on how many features will actually require future attention.

Here are descriptions of our new database fields, and the hazard and environmental ranking system is at the bottom of it:



NPS-AML\_Database\_Fields-2007-May-semifinal.xls

As you'll see, we also have essential fields for feature hazards and site natural resource impacts asking whether action is required (yes/no/unknown).

All that said, and looking over our hazard rankings (based on accessibility and degree of hazard), I'm thinking BLM's number of 20-30% presenting serious hazards would be pretty close for NPS, if you had to put a number on it at this point.

As for environmental, again, that's a matter of degree. For instance, there are a lot of sites out there that we wish weren't there from the perspective of preferring a pristine environment, but few of those would merit the disturbance required to re-open access roads and do a total reclamation. Also, such as with our uranium mines in the Colorado Plateau - which are now somewhat armored with a natural crust that has developed since they were mined in the 1950s - I've made the argument (and our EPA partners would agree) that in most cases you'd probably re-mobilize more contaminants and needlessly expose workers if you tried to bury, reclaim, or remove the waste piles - thereby creating more impact than just leaving the site as it is. Unlike BLM, our sites aren't generally prone to ATVs and the like. So as for how many sites require some sort of environmental

H.NPS 01 Estimate of the number of sites that pose hazards.

cleanup, I'd say under 5%.

Another statistic I like to throw out is that 10-15% of them provide habitat worthy of protecting with bat gates and other wildlife-friendly gates. Certainly bats are the primary ones we've protected, but other species include endangered tortoises in the southwest deserts and endangered amphibians and rodents that I can think of in a number of parks. I can also think of a few flooded mines where they want to leave a bit of the entrance open as a wildlife guzzler.

By the way.... On that budget chart that I gave you yesterday, I just transposed the numbers for DLR AML projects onto the AML sheet. I just found out how to link the two sheets to copy the values from the DLR sheet to the AML sheet automatically, and in the process noted that I mis-transposed the DLR-AML number for FY07. It should be \$192,900, not \$192,100 as I had it yesterday. That's fixed in the attached. -jeb



1998-2012\_AML\_Summary-pettersen.xls

.....  
John E. Burghardt, Geologist, Certified Mineral Examiner #0075  
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.....

Sean Pettersen/DEN/OIG/DOI@OIG

Sean Pettersen/DEN/OIG/DOI@OIG

01/04/2008 12:30 PM MST

To John Burghardt/DENVER/NPS@NPS@NPSX

cc

Subject Percentage of AML hazards, environmental problems, and habitat

Do you guys have an estimate of how many sites in the inventory are hazardous? BLM stated that 20-30% of their sites pose a safety hazard and 5-10% pose environmental issues. I would like to say the same thing about NPS.

**Methodology:**

Obtain information from NPS personnel

Submission: Submitted Sean Pettersen 02/19/2008 11:47 56 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 01:51:49 PM

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H.NPS 01 Estimate of the number of sites that pose hazards.

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



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### Assignment Workpaper

Prepared by: Sean Pettersen 02/04/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** H NPS.10 **Subsection**  
**Program Name** NPS (Overall)  
**Subject** NPS AML Staff Collateral Duty

**Origination Doclink** ■

**Purpose:**  
To determine if NPS staff at Parks have collateral AML duties.

**Scope:**  
Collateral Duties

**Source:**  
John E. Burghardt, Geologist, Certified Mineral Examiner #0075  
National Park Service, Natural Resource Program Center  
Geologic Resources Division  
P.O. Box 25287  
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(303) 969-2099; Fax (303) 987-6792  
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**Conclusion:**  
The personnel at the Parks we visited (Joshua Tree, Death Valley, Lake Mead, Grand Canyon) all have collateral AML duties. Although AML duties are collateral within NPS, we believe that this has not prevented the Parks from addressing and mitigating their most dangerous sites. Our overall conclusion for NPS is that they have generally done a good job.

**Details:**  
I called John Burghardt to determine if any of the park staff are full-time AML personnel or if AML duties are collateral. According to John, they personnel at the Parks we visited (Joshua Tree, Death Valley, Lake Mead, Grand Canyon) all have collateral AML duty. John stated that personnel spend a significant amount of time dealing with AML issues, NPS does not have enough funding to pay for full-time AML staff.

**Methodology:**  
Phone conversation

Submission: Submitted Sean Pettersen 02/19/2008 11:49:41 AM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 06/02/2008 01:52 28 PM

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H.NPS.10 NPS AML Staff Collateral Duty

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H.NPS.11 Number of Parks and personnel visited

## Assignment Workpaper

Prepared by: Sean Pettersen 05/05/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section H NPS.11 Subsection  
Program Name NPS (Overall)  
Subject Number of Parks and personnel visited

Origination Doctlink [REDACTED]

### Purpose:

To determine the number of parks visited and the number of personnel we met and/or discussed AML issues with.

### Scope:

Site Visits

### Source:

Prepared by Sean Pettersen. Information was compiled from the work-papers.

### Conclusion:

We visited 5 National Parks and met with 15 Park Service Personnel at the park units and at the Geologic Resources Division (GRD). They were:

1. Death Valley National Park **I.NPS.DEVA.03 Greenwater - Site Visit / Meeting with NPS Officials** [REDACTED]
    1. David EK
    2. Linda Manning
    3. Stewart Jones
    4. J.T Reynolds (Park Superintendent)
  2. Joshua Tree National Park **I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead** [REDACTED]
    5. Luke Sabala
    6. Paul DePrey
  3. Grand Canyon National Park **I.NPS.GRCA.03 Summary of Grand Canyon** [REDACTED]
    7. John Rihs
    8. Steven Rice
  4. Mojave National Preserve **I.NPS.MOJA.01 Mojave National Preserve** [REDACTED]
    9. Robert Bryson
    10. Ted Weasma
    11. Dennis Schramm (Preserve Superintendent)
  5. Lake Mead National Recreation Area **C.NPS.LAME.01 Lake Mead Recreation Area Site Visit** [REDACTED]
    12. Bryan Moore
- Geologic Resources Division
13. John Burghardt **C.NPS.01 NPS AML Inventory** [REDACTED]
  14. Dave Steensen **B.NPS.01 NPS- GRD Organization chart** [REDACTED]
  15. James Woods **B.NPS.01 NPS- GRD Organization chart** [REDACTED]

### Details:

None

### Methodology:

Personnel names and Park units taken from site visit work-papers and discussions.

Submission: Submitted Sean Pettersen 05/05/2008 02:24:12 PM

H.NPS.11 Number of Parks and personnel visited

Level 1 Approval:    Approved                    William McMullen                    05/05/2008 02:41 54 PM  
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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 04/27/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section I.  
 Assignment Program Name NPS (Site Visits)

**Objective:**

Document visits to NPS units and to AML sites to gather information on AML program, to assess specific site hazards, and to evaluate what actions NPS has taken to mitigate hazards at these sites.

**Background:**

**Assignment Steps:**

<b>I – National Park Service (Site Visits)</b>		
<b>Audit Step</b>	<b>Staff</b>	<b>Work Paper Reference</b>
Obtain the prioritized list of AML sites from each Park visited and obtain any supporting documentation for the prioritization, location and characterization of all known mine openings at sites visited (i.e. Randsburg).	Sean	I-01 C.NPS.DEVA.04 Death Valley Priorities ■  I.NPS.JOTR.01 Joshua Tree - NPS AML Inventory & High Priority Sites ■  I.NPS.GRCA.01 Priority List for Grand Canyon ■
Determine why prioritized, mitigated or other sites are not entered into the Park inventory. (i.e. don't ask - don't tell, training, other priorities or other reasons). Estimate number of known sites not entered into the Park inventory.		I-02
Obtain an inventory of all known abandoned mines that have been mitigated and details on the mitigation performed over the past 10 years at each Park visited. Mitigation includes temporary and permanent closures, fences and signs posted at the site.	Sean	I-03  I.NPS.GRCA.03 Mitigated sites ■  I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead ■ ■
For known injuries and fatalities, what have the Parks done to mitigate safety risks at the site?	Sean	I-04 I.NPS.04 Mitigation at fatality sites ■  I.NPS.GRCA.03 Summary of Grand Canyon ■ ■ I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead ■ ■ ■
Determine if NPS performs and maintains documentation on site	Sean	I-05 I.NPS.05 Documenting Site Inspections ■

<p>inspections and re-inspections of high priority sites including those with prior mitigation.</p>		<p>I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED] I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead [REDACTED] [REDACTED]</p>
<p>Has NPS closed public roads or trails to limit public access to dangerous old mining structures and mine openings.</p>	Sean	<p>I-06 I.NPS.JOTR-06 Road or trail closures [REDACTED] I.NPS.DEVA.06 Road or trail closures [REDACTED] I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED]</p>
<p>Discuss and evaluate the methods available and used for temporary and permanent closure of mines.</p>	Sean	<p>I-07 C.NPS.04 NPS- AML Mitigation Methods [REDACTED] I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead [REDACTED], [REDACTED]) I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS [REDACTED], [REDACTED]) I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED]</p>
<p>Determine if NPS has requested specific funding for mitigating high risk sites including those with high mitigation costs. If so, obtain all documentation supporting prior funding requests.</p>	Sean	<p>I-08 I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED] I.NPS.DEVA.08 Funding Requests [REDACTED] I.NPS.JOTR.08 JOTR- Funding Requests [REDACTED]</p>
<p>Determine if Parks have any documented plans to mitigate the highest risk sites? (i.e. risks assessment, mitigation required and cost estimates). If not, why not?</p>	Sean	<p>I-09 I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED] I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead [REDACTED] [REDACTED]</p>
<p>Have Parks designated or determined whether any mine openings have historic value?</p>	Sean	<p>I-10 I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED] I.NPS.DEVA.08 Funding Requests [REDACTED] [REDACTED]</p>
<p>Does NPS take any action to encourage site visits (i.e. site identification on visitor publications) and do they ever mitigate hazards at those sites?</p>	Sean	<p>I-11 I.NPS.DEVA.12 DEVA - Warning the public about AML hazards [REDACTED] I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]. [REDACTED] I.NPS.JOTR.12 JOTR - Warning the public about AML hazards [REDACTED]</p>
<p>Aside from on site warnings does NPS have any documented warnings to the public on the dangers of AML sites (i.e. public brochures or internet access provided by BLM)?</p>	Sean	<p>I-12 I-12 Death Valley National Park [REDACTED] I.NPS.JOTR.12 JOTR - Warning the public about AML hazards [REDACTED]</p>

		I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]
Do Parks have any realistic plans to mitigate the highest priority sites? If not, why not?	Sean	I-13 I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead [REDACTED]  I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED]
Obtain details on Mike Ward's experience (Keene Wonder Mine).	Sean	I-14 I.NPS.DEVA.14 DEVA - Mike Ward incident [REDACTED]
Have Parks requested specific funding for mitigating sites?	Sean	I-15

**Conclusion:**

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                    John Illson                    06/02/2008 02:43 31 PM

**Linkage Information**

**History**

**Status**                    Approved **Request Review**

**Confidentiality**                    Standard

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**Assignment Workpaper**

Prepared by: Sean Pettersen 08/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.04 **Subsection** Audit Step I-04  
**Program Name** NPS (Site Visits)  
**Subject** Mitigation at fatality sites

**Origination Doctlink** [REDACTED]

**Purpose:**

To determine what have the Parks have done to mitigate safety risks at the sites where here were injuries and fatalities. The two sites we looked at for NPS was Lake Mead National Recreation Area and Death Valley National Park.

**Scope:**

Mitigation of AML sites where there were injuries and fatalities.

**Source:**

Information was provided during site visits. See:

- [C.NPS.DEVA.01 Death Valley National Park Site Visit](#) [REDACTED]
- [C.NPS.LAME.01 Lake Mead Recreation Area Site Visit](#) [REDACTED]

**Conclusion:**

According to NPS, the site in Lake Mead where a visitor died was backfilled. However, we were unable to confirm because no one knew exactly where the opening was.

The site in Death Valley was sealed with a steel cable net. However, the closure has been vandalized, allowing complete access to the dangerous mine shaft.

**Details:**

See conclusion

**Methodology:**

Visited sites were fatalities occurred to determine what mitiga ion measures were put in place.

Submission:	Submitted	Sean Pettersen	08/02/2007 04:37 34 PM
Level 1 Approval:	Approved	William McMullen	08/08/2007 09:38:10 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:53:11 PM

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**History**

**Status** Approved **Request Review**  
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I.NPS.04 Mitigation at fatality sites

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

### Assignment Workpaper

Prepared by: Sean Pettersen 08/02/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.05 **Subsection** Audit Step I-05  
**Program Name** NPS (Site Visits)  
**Subject** Documenting Site Inspections

**Origination Doctlink** [REDACTED]

**Purpose:**

To determine if NPS performs and maintains documentation on site inspections and re-inspections of high priority sites including those with prior mitigation.

**Scope:**

Documenting Site Inspections

**Source:**

Information provided during site visits. See:  
[C.NPS.DEVA.01 Death Valley National Park Site Visit \[REDACTED\]](#),  
[I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead \[REDACTED\]](#)

**Conclusion:**

At Death Valley National park, inspections were not documented and a report of any site was given through "verbal communication" only. NPS confirmed that there is no written policy on how or how often inspections are to be conducted, and no record of the inspection results or conclusions, or follow-ups. NPS shared that inspections may also be prompted by serious vandalism or "case incident" reports. But, even inspections performed on these occasions are not documented. Note: in an earlier discussion with David Ek he stated that Stewart, nor any other employee, have been to the Keane Wonder Mine to inspect the cable netting that was placed in the adit where the visitor died ([C.NPS.DEVA.01 Death Valley National Park Site Visit \[REDACTED\]](#)).

At Joshua Tree National Park, inspections and follow-up are not regularly done either. Once a site is mitigated there is no plan to re-visit unless there is known vandalism or other sites that still need to be mitigated are within the same area. Further, there is no "up to date" process for depositing information within the park, or NPS, on site inspections ([I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead \[REDACTED\]](#)).

**Details:**

See conclusion

**Methodology:**

Obtained relevant information from NPS personnel about site inspections during site visits.

Submission: Submitted Sean Pettersen 02/19/2008 11:56 01 AM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 06/02/2008 01:53 31 PM

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**History**

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**Record of Discussion**

Prepared by: Guest\_Theresa Gumataotao 05/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.DEVA.03 **Subsection** Audit step I-03  
**Program Name** NPS (Site Visits)  
**Subject** Greenwater - Site Visit / Meeting with NPS Officials

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Linda Manning	Wildlife Biologist	Death Valley, California - NPS Resource Management Office	760-786-3258	
Stewart Jones	Abandoned Mine Lands Project Lead	Death Valley, California - NPS Resource Management Office	760-786-3258	
Sean Pettersen	Auditor	Central Region Audits - 134 Union Blvd. Lakewood, CO.	303-236-9133	Sean_Pettersen@doioig.gov
Theresa Gumataotao	OJT (on the job training) - Auditor	Central Region Audits- 134 Union Blvd. Lakewood, CO.	303-236-9158	Guest_Theresa Gumataotao@doioig.gov

**Location** Death Valley National Park, California

**Date/Time**

05/01/2007 01 30 PM

**Purpose:**

To determine if three AML sites, on NPS managed property located in the Greenwater area of Death Valley National Park were properly mitigated to ensure public safety.

**Scope:**

AML Program and Sites - Death Valley National Park, CA.

**Conclusion:**

In our visit we found that two of three Greenwater Mining District AML sites were mitigated. These two sites were of two mine shafts estimated to be 1,000 feet deep. Each shaft was surrounded by an 8 foot barbed wire chain link fence, fully restricting public access. The third site was also a mine shaft, estimated to be several hundred feet deep, yet it was left largely open and easily accessible despite the loose strands of barbed wire which surrounded it. Ineffective warning signs were also in place at the third site. These signs were worn, faded and barely legible. No warning signs were found at the mitigated sites. In addition, the road ends at the mine shafts and there was evidence of people camping at the site.

(I have read and agree with the conclusion of this work-paper. SRP 05/23/07)

**Summary:**

Two NPS employees work full time on the Abandoned Mine Lands (AML) project, Tom Klein and Stewart Jones. Tom is new to the program and the office, but Stewart has been with the office for some time.

Linda Manning, is the wildlife biologist for the Death Valley NPS resource office. She has been working with NPS for about 6 years but has only recently transferred to Death Valley. She graduated with bachelor's in general biology. Her main purpose is to create programs about the wildlife in the park. This program should provide information on where the wildlife live, their estimated population, and their habits and roles in the park. The resource office must know that the wildlife in the park have a suitable habitat that is not disturbed by the Death Valley visitors, climate, or other types of impediments. For instance, mine shafts that are closed improperly may have an effect on specific wildlife. Bats, birds, barn owls and other wildlife tend to use mine shafts and adits as their homes or as resting places. If NPS fills or mitigates any mine shaft, adit, or general opening that poses a physical threat to the public, they must take into consideration the park wildlife who have called these same hazards their home.

Ms. Manning shared her view on prioritizing AML sites that need to be mitigated. "Wildlife is a secondary issue, we should prioritize closures or the potential for human injury." The NPS has estimated about 4,000 mines in the park area, and areas where the public visits is a priority. She stated that NPS's present inventory can offer the location, description of the mine feature, and the recommendations needed for closure. Unfortunately, the program was not in place for many years, so the inventory had not been updated. Reasons for this include: (1), the area is remote and is not considered one of the "crown jewel" parks of the NPS (2) the Death Valley resource office has only two employees assigned to the AML program, so there is a very small staff available to mitigate the sites, and (3) the culture of the Death Valley employees is sort of a "maverick / desert mentality" which houses autonomy and promotes decentralization from the overall NPS program.

In our meetings with the NPS we were taken to three sites. All three sites were located in the Greenwater Mining District. At two of the sites visited we assisted NPS secure digital cameras in place to photograph barn owls. Ms. Manning shared that the cameras were motioned censored so photographs of barn owls could be taken at any time. The first site, was an estimated 1,000 ft. shaft. The shaft was surrounded with an 8ft. tall fence.

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

I.NPS.DEVA.03 Greenwater - Site Visit / Meeting with NPS Officials

According to Stewart, the fence was erected in 2000 - 2001 and the estimated cost was \$3,000. Stewart shared that this mitigation is a lot cheaper than others, specifically referring to the copula which he estimated to be \$10,000. He stated the choice for mitigation, however, whether it be a fence, gate, cable net, or copula depends on the wildlife inhabiting the area. NPS officials pointed out that the barbed wiring, sitting on the top of the fence, was purposely placed about one ft. below the fence top and linked to the chain links to allow the barn owls to continue to perch on the top of the fence.

Ms. Manning also explained that aesthetics are also taken into consideration when sites are mitigated. For instance, the park is to ensure that any sites which are cured of their physical hazards, blend in with the surrounding area. She shared how the 8ft. fence does not appear to accomplish this, as the site appears to be a "missile site" of some sort. No signs surround or are placed in front of the fence. At this, visitors may be confused about the purpose of the fence; unless they are familiar with mine shafts and hazards. Stewart explained that signs were intended and are to be placed at the site, within due time.

The second site was located near a relatively flat area, which was described as an ideal camping site. In fact, a fire ring was present about 10-12 ft. from the site evidencing that campers have visited and recreated here. The site was a shaft estimated to be several hundred feet deep. This shaft poses a large danger to campers, visitors, and/or NPS employees in the area, as it is minimally mitigated. Three strands of barbed wire spaced about 1 ft. from each other, surround the shaft. The barbed wire is held up by four 7/12 - 8 ft. wooden posts, which are loosely placed. Four warning signs hang on the barbed wire, but are worn, faded and hardly legible. The 1ft. spaces between each barbed wire strand, although put in place to prohibit or discourage entry, are easily passable for any curious visitor. According to NPS officials the barbed-wire site was poorly mitigated by BLM, as NPS only acquired the site and some other areas in Greenwater around 1994. The road goes to within feet of the mine shaft.

In our third stop, NPS officials were set to do the same thing as the first, set digital cameras in place to photograph barn owls. The third site was similar to the first as it had been mitigated with 8ft. fences topped with barbed wire. The third site was also estimated to be 1,000 ft. deep.

Stewart shared that it takes lots of time to mitigate and maintain the mine sites. Several reasons, include the lack of employees and the physical condition of the employees assigned to the program. For instance, Stewart can no longer hike up to the Keane Wonder Mine because of his bad knees.

In a small discussion, Stewart shared the present condition of several sites. For instance:

- 1) Silverboard - there is still lots of hazards near the road
- 2) Skidoo - the site has pretty much been mitigated
- 3) Big Bell Mine - lots of foot access / but the mine is being pilfered / to include historical pieces of the mine such as work carts etc.
- 4) Mines in the Back-country - No idea what goes on here. There may be looting and poaching. No doubt that a lot of park history is lost here.

He also shared that there is a distinction between mine features vs. mine structures. Mine structures often contain historical significance, so maintenance to preserve the mine and its surroundings, to ensure public safety, is often considered. Mine features are often by default dangerous but also historical. The features of mine sites, also create historical significance, but often pose high threats to the visiting public, if left unmitigated. Despite the hazards, individual mine structures and features continue to be visited whether preserved and mitigated or left alone.

Submission:	Submitted	Sean Pettersen	06/20/2007 03:21 24 PM
Level 1 Approval:	Approved	William McMullen	06/20/2007 04:40:40 PM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:53 51 PM

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## History

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Guest_Theresa Gumataotao/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

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I.NPS.DEVA.06 Road or trail closures

Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



I.NPS.DEVA.08 Funding Requests

**Status** Approved **Request Review**  
**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI  
**Confidentiality** Standard

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## Assignment Workpaper

Prepared by: Sean Pettersen 05/08/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section I.NPS.DEVA.12 Subsection Audit step I-12  
Program Name NPS (Site Visits)  
Subject DEVA - Warning the public about AML hazards

Origination Doctlink 

### Purpose:

To identify the documented warnings for park visitors on the dangers of AML sites.

### Scope:

Warning the public.

### Source:

See attached documents below for additional source information.

[Death Valley National Park brochure that is handed out to visitors](#)

[Death Valley - Your complete guide to the park.](#)

[A Visitor's Guide \(Death Valley National Park newspaper\)](#)

[Death Valley website \(http://www.nps.gov/deva/planyourvisit/backcamp.htm\)](http://www.nps.gov/deva/planyourvisit/backcamp.htm)

[Death Valley National Park Visitor Center](#)

[History tours / interpretative messages](#)

### Conclusion:

We found warnings to the public on the dangers of AML sites in all the park publications, including their website, that are available to visitors.

### Details:

The following warnings were noted:

[Death Valley National Park brochure](#) that is handed out to visitors

The park brochure states, "For Your Safety...Heed safety warnings in the park newspaper, including extreme heat and dehydration, unsafe driving, flash floods, and **mine hazards**." See attachment



Scan001.PDF

[Death Valley - Your complete guide to the park.](#)

On page 23 of this guide, in the Park Regulations and Safety section, it states, **Mine Hazards**: "Do not enter mine tunnels or shafts. Mines may be unstable, have hidden shafts, pockets of bad air and poisonous gas." See page 2 of the attachment



Scan001.PDF

[A Visitor's Guide \(Death Valley National Park newspaper\)](#)

**Mine Hazards:** "Do not enter mine tunnels or shafts. Mines may be unstable, have hidden shafts, pockets of bad air and poisonous gas." See page 2 of the attachment



Scan001.PDF

Death Valley website (<http://www.nps.gov/deva/planyourvisit/backcamp.htm>) states,

**Hazards:** In winter, the higher elevations are cold enough that snow and ice conditions may require special safety equipment. **Do not enter mine shafts, tunnels, or buildings.** Watch for rattlesnakes, especially near old structures and vegetated areas near water. Do not camp in dry washes or drainages due to potential flash flood danger.

We watched an informative video about the history of the park that instructed visitors to stay out of abandoned mines and stay off old mine structures because they are dangerous

**Methodology:**

Reviewed source documents for warnings on mine hazards.

Submission:	Submitted	Sean Pettersen	05/24/2007 11:55:17 AM
Level 1 Approval:	Approved	William McMullen	06/01/2007 07:57:43 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:54:49 PM

**Linkage Information**

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Sean Pettersen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

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**Record of Discussion**

Prepared by: Guest\_Theresa Gumataotao 05/07/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.DEVA.17 **Subsection** Audit Step I-02  
**Program Name** NPS (Site Visits)  
**Subject** Meeting with David Ek - Assistant Chief of Resource, NPS

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
David Ek	Assistant Chief	Death Valley National Park - NPS Resource Management Office	760-786-3258	
Sean Pettersen	Auditor	Central Region Audits - 134 Union Blvd. Lakewood, CO.	303-236-9133	Sean_Pettersen@doioig.gov
Theresa Gumataotao	OJT (on the job training) - Auditor	Central Region Audits- 134 Union Blvd. Lakewood, CO.	303-236-9158	Guest_Theresa Gumataotao@doioig.gov

**Location** Death Valley National Park, CA.

**Date/Time**

05/02/2007 12 30 PM

**Purpose:**

To perform a follow-up site visit to Death Valley National Park, to clarify varying processes, policies, and responsibilities of their AML program.

**Scope:**

AML Program - Death Valley National Park, CA.

**Conclusion:**

NPS has not completed its inventory of all AML sites in the Death Valley park area and could not estimate when the inventory would be complete. NPS officials confirmed that not all sites identified have been included in the inventory, as well.

In our visit we observed that nearly 98% of the AML sites, with clear public road access, were mitigated with temporary and/or permanent closures and had warning signs posted in the area. The warning messages differed and most did not prohibit access. The majority stated that the mining area and/or specific site posed a "danger" or was "hazardous". These signs failed to inform the public of any specific danger. The signs posted at the Keane Wonder Mine were inadequate and didn't present the dangers posed by mines. Warning messages posted in park maps, museum displays, newspapers, informative displays, and visitor tours evidence NPS's due diligence to continue to warn the public of the many hazardous AML sites.

The NPS AML program at Death Valley employs two men from the Park's maintenance division. Both lack the resources to fulfill the program's objectives, as each lack funding and the physical and professional support needed to complete the AML inventories. These facts were concluded through documentation, discussion, and observation. NPS verbally informed us that an estimated 1/3 of thousands of AML sites inventoried have been mitigated. Poorly documented and nonexistent records challenge the AML program's success, as biannual site inspections are not consistent, documented, or guided by any formal policy. Further, several "high risk" sites have been identified and funding requests have been submitted by the Park to local managers and higher government levels. These requests are still in progress and have yet to be approved.

**Summary:**

David shared that there are an estimated 2,000 known mine sites that still need mitigation and only 1/3 of sites have been mitigated in the park. This statement was made after we shared that almost 90% of the sites we visited, with public access and presumed regular visitation, were mitigated with temporary closures and warning signs. Mitigation includes, warning signs (of all sorts) and permanent closures such as cable nets, wooden fences, and gate fences that prohibit or discourage entry.

David asked how much of the report will critique the park? Sean, responded that since a majority of the sites we visited appeared to protect the public safety then the report will show how NPS has made an effort, especially for those sites that have regular foot traffic. However, the report will also discuss the safety deficiencies at some of the sites we visited, to include Greenwater and Keane Wonder.

David stated that GRD is making a push to increase funding. But NPS follows their plans and their budgets then we will only mitigate about three sites per year. This means that it will take us more than half a century or more to complete cleaning up the sites. David states that in speaking with James Peterson from Senator Feinstein's Office (who deals with everything East and South of LA) they are trying to move Southern California hazards higher on the list of physical hazards, so physical hazards can be prioritized. It is difficult since physical hazards also sit on the list of sites with water quality issues, which is also of grave concern. David explained that we can elevate the issues with AML altogether and not separate issues about water quality or physical hazards.

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I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS

David also shared a little about Centennial projects. "If we want to invite people up to the mines then we have to make it safe for people to visit." In 2007 the Park submitted a proposal as part of the NPS Centennial Challenge, titled "Provide for Visitor Safety and Engage the Public on the Park's Rich Mining History." According to David Ek, the Keane Wonder Mine is included in this project. Attached is a summary but the proposal mainly states that certain mining districts/sites are visited frequently by park visitor.



Centennial Challenge Projects and Programs.pdf

In this proposal, NPS states that "many of the shafts are several hundred feet deep- the safety concern for the unwary park visitor is real." Additionally many of these mines have important and irreplaceable historic mining artifacts, buildings and other cultural resources in site that are being looted and deteriorating at an alarming rate. Using discretionary operating funds or occasional project funds can not begin to deal with the issue effectively and responsibly. Many of these mines also serve as important habitat for rare bat species.

David answered our questions which are directly related to the audit program. See below: D= David IG=Sean

(1) Are there park sites you know that are not listed on the NPS inventory?

D: Yes. For instance, a specific area in Gower Gulch ( a popular park area) was inventoried over six years ago. With increased visitation to the area, they found that the initial inventory didn't cover all the sites. These new sites are still being placed into the inventory, so we confirmed that they have not all been documented. The Park's inventory was created some time ago, but a little earlier than two or three years ago it was revisited. It hadn't been touched for at least eight years between that time.

Further, a recent fire, which required the assistance of the AML inventory to firefighters revealed that the inventory was not up dated. Fire crews clearing a specific area in the park needed to know where sites were to avoid the physical hazards, but NPS, at the time, confirmed that they couldn't provide the information requested. While clearing the area, fire crews discovered additional mine openings and shafts in the affected area.

(2) What documented warning does NPS have which informs the public on the dangers of AML sites (i.e. public brochures or internet access provided by NPS)? (see I-12 DEVA - Warnings the public about AML hazards for the actual warnings provided by the following sources ).

<u>Documented Warnings</u>	<u>Where you can find them (distribution / location)</u>	
D: A. Park Maps - 2 different types	(a) Visitor map and a back-country map. These maps can be acquired at park fee stations	or park hotel front desks.
B. "A visitor's Guide" to Death Valley	(b) The visitor guide can be picked up at visitor centers and hotels.	
C. The Death Valley Newspaper print media.	(c) The Death Valley newspaper is located in 12 different sites, It is considered the Park's	news the cheapest form of
D. History tours / interpretative messages	(c) These tours are given at Scotty's Castle and Furnace Creek.	
E. Park Visitor Center handouts / displays) shop. We watched an informative video at the	(d) Furnace Creek houses the park's small visitor center combined with a museum and gift visitor center and there was a segment that warned the public to stay out of abandoned mines and stay off old mining structures because they are dangerous.	(video displays /
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(3) Discuss and evaluate the methods available and used for temporary closure of mines.

D: Temporary closures exist, such as the bat gates, the cable netting, fences, and wooden gates, however some of these closures may be inappropriate and in violation of the environmental protection act or in violation of a or some park national cultural act. David explained that each site must be screened and surveyed to understand what type of site you are dealing with before any mitigation occurs. Specifically, the type of wildlife and / or smaller bio organisms, which either live, recreate, or reproduce in the area need to be understood. Most of the sites mitigated have not gone through this survey process. No cultural or historical studies have been done in the Keane Wonder Mine area, either.

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D: For the Kean Wonder Mine, it is possible to do this administratively, but the area is so large that we may waste our energy by installing even a temporary fixture. "You're looking at a 10 acre fence, that costs money" because of the labor and materials needed to construct. We don't want to put too much energy into the area until we are certain what type of mitigation it will allow. We can put signs up to let people know of the dangers, but we don't want to put chains or fences up anywhere to keep them out. Most especially if the site is historical like Keane Wonder.

D: These sites are also protected by provisions laid out in the National Parks of Historic Places guidelines. And although here are specific criteria which may allow specific AML sites to be included on the National Parks of Historic Places, a site must be treated as "historic" until deemed otherwise so the most to protect the property and area of its historical significance can be done

(4) Does NPS perform and maintain documentation on site inspections and/or re-inspections of high priority sites including those with prior mitigation.

D: Inspections are done by Stewart about two times a year. Until recently, inspections were not documented so the report of any site was given through "verbal communication" only. In short, the resource office has not been consistent with their inventories. NPS confirmed that there is no written policy on how or how often inspections are to be conducted, and no record of the inspection results or conclusions, or follow-ups. NPS shared

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I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS

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*Need to follow-up w/ Sean on this topic.* Yes. Sean received copies of the supporting documentation. Obtain and place a small summary here or reference to a corresponding workpaper where the funding requests will be filed.

Submission:	Submitted	Sean Pettersen	06/20/2007 03:14 34 PM
Level 1 Approval:	Approved	William McMullen	06/20/2007 04:02:47 PM
Level 2 Approval:	Approved	John Illson	06/22/2007 11:28 02 AM

**Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 08/02/2007 04:20:25 PM**

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<b>In Progress Edit</b>	Guest_Theresa Gumataotao/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

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**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Guest\_Theresa Gumataotao 05/17/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section I.NPS.DEVA.18 Subsection Audit Step I-03  
Program Name NPS (Site Visits)  
Subject Death Valley - Abandoned Mine Visit(s)

Origination Doctlink ■

### Purpose:

To determine if AML sites, which visitors are encouraged to visit, via park maps, the visitor center, and NPS park tours, are properly mitigated.

### Scope:

AML Program and Sites - Death Valley National Park, CA.

### Source:

### Conclusion:

We determined after visiting, five mining areas identified on the park map,

### Details:

The official Death Valley Park Map lists several historical mining areas available for visit. These include:

1. Leadfield Ghost Town
2. Keane Wonder Mine / Mill
3. Skidoo Mine / Mill
4. Eureka Mine
5. Ubehebe Lead Mine
6. Ashford Mill s

Of these six sites we visited four, not including the Ubehebe Lead Mine and Ashford Mill. These visits took place throughout the week of April 30, 2007. We also visited Devil's Hole, also an AML site, which is not listed on the map. At each of the five sites we observed mine structures, the general area, warning signs present, and the types of mitigation used if any. A discussion of each follows:

#### **Devils Hole - Visited April 30**

NPS officials described Devil's Hole as an old mining site. The site is securely mitigated, with an estimated 10ft. tall barbed wire fence surrounding it. I.19 Photos - Death Valley Mine Sites ■ ( Devil's Hole 4-14 030) The site, if unmitigated, would be extremely dangerous to park visitors as it sits on a steep rocky ridge, with a 25-30 ft. I.19 Photos - Death Valley Mine Sites ■ ( Devil's Hole 4-14 028) shaft in its center. The site is popularly known as home to the world's only population of " devil's hole pupfish" so it is highly maintained. The fish population live in the small pond laying at the bottom of the shaft. NPS officials explained that the mitigation costs for Devil's Hole have been one of the most expensive to date. We also observed the construction of wooden deck, which levels out the rocky ridge so park visitors can safely and clearly observe the deep shaft and pupfish pond. We did not observe other adits or shafts in the area.

#### **Twenty Mule Team Canyon - Visited April 30**

We drove through the Twenty Mule Team Canyon to document mitigation measures employed by the Park. We saw only one mine opening we saw that was easily accessible had a sign placed at the entrance. The sign depicted the dangers associated with abandoned mines and at the bottom of the sign it stated "Stay Out Stay Alive"

#### **Keane Wonder Mine / Mill - Visited May 1**

In our second visit to Keane Wonder, we primarily observed the bottom area surrounding the site, away from the old Tram Way. Primarily, we found several shafts mitigated with cable netting and debris of all sorts scattered all along the property. I.19 Photos - Death Valley Mine Sites ■ ( Keane Wonder 4-14 -149) The mitigated shafts were difficult to see from a distance as they were easily disguised among the rocky terrain and all the debris. We had to explore a bit and walk around the site before we could spot them. The debris included tin cans, lumber, shards of rusted metal, and an extremely large metal drum, assuming used for storage or mixing of water or liquid metals. I.19 Photos - Death Valley Mine Sites ■ (Keane Wonder 4-14 130) The skeleton of the drum went full circle and could be spotted from the Tram Way or the visitor parking area. I.19 Photos - Death Valley Mine Sites ■ (Keane Wonder 4-14 138) The only written warnings in the area comprised a small generic sign, stating "Mine Hazard Area " located on the road on the way to the site. However this sign was in an inconspicuous area and it was difficult to find... even though Sean knew the sign was there some where. Also, the verbage contained on the site description informing visitors about the Mine / Mill's history and a notice stating, "There are many hazards associated with old mining areas. Use caution when walking around." I.19 Photos - Death Valley Mine Sites ■ (Keane Wonder 4-14 153). Although it was good to see this warning, it is inadequate to warn visitors of the

specific dangers at AML sites

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Leadfield Ghost Town, was originally settled by hopeful miners who hoped to extract riches from the area. The few remnants of the towns small shacks and post office can be found along Titus Canyon. We observed little debris in the area and several small piles of mine tailings. [I.19 Photos - Death Valley Mine Sites](#) (Leadfield Ghost Town 4-14 180) Several adits along the mountain area were also visible, but two main adits were within walking distance from the parks main sinage which tells the story of the old town. We visited these two adits and observed that each were signed with general "hazardous warnings" at their entrance, but neither had a permanent closure. [I.19 Photos - Death Valley Mine Sites](#) (Leadfield Ghost Town 4-14 181) We did not observe any shafts in the area.

#### **Skidoo Mill / Mine - Visited May 2**

The Skidoo Mill appears to be the largest historical mining structure available for public tour, following Keane Wonder. The Mill is located along a high, steep, and narrow road located right off Emigrant Canyon Road. The road to the Mill is not directly accessible to vehicles, so interested visitors must park and endure a short walk to visit the structure. [At the sites entrance where the driving road ends, a warning sign reads "Walking distance to the Mill 600 ft. / Hazardous Conditions In Mill Please Stay Out of the Structure."](#) [I.19 Photos - Death Valley Mine Sites](#) (Skidoo Mine 4-14 312) This sign along with a second warning placed on the Mill structure reading "Unsafe Structures Keep Off" were the only signs present. Each seemed to be visible and strategically placed. We observed that the Mill experienced extensive stabilization work as well, appearing to sit safely on the steep mountain side it was originally erected upon. [I.19 Photos - Death Valley Mine Sites](#) (Skidoo Mine 4-14 314) Several cable wires secured the Mill stretching from its side to metal locks embedded into the ground. [I.19 Photos - Death Valley Mine Sites](#) (Skidoo Mine 4-14 301) At the top of the Mill a wooden deck also enhanced safety. The deck was blocked off by 4ft. wooden posts strung with a thick and heavy link chain, cautioning visitors who approached or crossed the chain. [I.19 Photos - Death Valley Mine Sites](#) (Skidoo Mine 4-14 299). We also observed debris in the general area comprised mostly of old wood and strips of tin. [There was also at least one adit that had a semi-permanent closure in the form of a bat gate.](#)

#### **Eureka Mine - Visited May 3**

The Eureka Mine area is complete with Mills, mine shafts and adits. The area has limited signs but appeared to be well mitigated. The largest shaft in the area, is quite visible and had been mitigated with wooden fences erected around it and a cable netting places just below the shafts entrance. [I.19 Photos - Death Valley Mine Sites](#) (Eureka Mine 4-14 383) We also found several visible shafts, not more than 20 ft. deep, but left open. [I.19 Photos - Death Valley Mine Sites](#) (Eureka Mine 4-14 388 and 386) Some adits in the area were mitigated with bat gates but left wide open, due to the season, so the bats could leave the mine area. [I.19 Photos - Death Valley Mine Sites](#) (Eureka Mine 4-14 370) Aside from the general warnings written into the sign describing the site in general no warning signs were nearby. [I.19 Photos - Death Valley Mine Sites](#) (Eureka Mine 4-14 365)

Located to the side of the mine, we also observed a deep shaft, which had been mitigated with a cable net. The shaft was dangerously hiding within a steep rocky area and would only be visible within a few feet of approaching it, if a visitor was hiking from the top of the Mill to the bottom. No warning sign was present near the shaft. [\(I.19 Photos - Death Valley Mine Sites](#) (Eureka Mine 4-14 394)

#### **Methodology:**

N/A

Submission:	Submitted	Sean Pettersen	06/20/2007 03:17:47 PM
Level 1 Approval:	Approved	William McMullen	06/20/2007 04:39 51 PM
Level 2 Approval:	Approved	John Illson	06/22/2007 11:28 29 AM

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#### **Purpose:**

To determine if AML sites, which visitors are encouraged to visit, via park maps, the visitor center, and NPS park tours, are properly mitigated.

#### **Scope:**

AML Program and Sites - Death Valley National Park, CA.

#### **Source:**

Site visits were conducted by Sean Pettersen and Theresa Gumataotao.

#### **Conclusion:**

We visited 5 sites, over three days, in Death Valley National Park and determined that mitigation measures had been employed at all of the sites. Mitigation was in the form of both permanent and temporary measures. At the Keane Wonder Mine we only explored the area closest to the visitor parking lot and did not go up the trail to the mine workings at the top.

#### **Details:**

The official Death Valley Park Map lists several historical mining areas available for visit. These include:

1. Leadfield Ghost Town
2. Keane Wonder Mine / Mill

## All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

I.NPS.DEVA.18 Death Valley - Abandoned Mine Visit(s)

3. Skidoo Mine / Mill
4. Eureka Mine
5. Ubehebe Lead Mine
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I.NPS.DEVA.18 Death Valley - Abandoned Mine Visit(s)

Methodology:

Performed site visits to determine if the sites were mitigated.

Workpaper reviewed John Illson June 2, 2008

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Guest\_Theresa Gumataotao/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

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## Assignment Workpaper

Prepared by: Guest\_Theresa Gumataotao 05/21/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section I.NPS.DEVA.19 Subsection  
Program Name NPS (Site Visits)  
Subject Photos - Death Valley Mine Sites

Origination Doclink 

### Purpose:

To record our physical observations of the following mines sites loated at Death Valley National Park as deccribed in the narrative at workpaper I.NPS.DEVA.18. These sites include the (1) Eureka Mine (2) Skidoo Mine (3) Leadfiled Ghost Town (4) Devil's Hole and (5) Keane Wonder Mine and Mill.

### Scope:

AML Program and Cites - Death Valley Na ional Park, CA.

### Source:

Photos were taken by Sean Pettersen and Theresa Gumataotao during the site visits.

### Conclusion:

See photos below.

### Details:

#### Eureka Mine



Eureka 4-14 388.jpg



Eureka 4-14 365.jpg



Eureka 4-14 394.jpg



Eureka 4-14 386.jpg



Eureka 4-14 383.jpg



Eureka 4-14 370.jpg



cable netting small.JPG

#### Skidoo Mine



Skidoo 4-14 299.jpg



Skidoo 4-14 301.jpg



Skidoo 4-14 312.jpg



Skidoo 4-14 314.jpg



Skidoo Cover.JPG



Skidoo Mill site small.JPG



Sign 1 small.JPG



Sign 2 small.JPG



Repaired mine structure.JPG



Warning sign small.JPG

#### Leadfiled Ghost Town



Leadfield 4-14 180.jpg



Leadfield 4-14 181.jpg

#### Devil's Hole



Devil's Hole 4-14 030.jpg



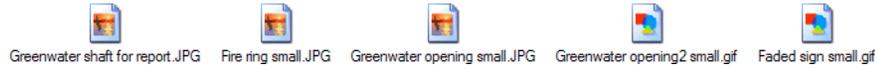
Devil's Hole 4-14 028.jpg

#### Keane Wonder

I.NPS.DEVA.19 Photos - Death Valley Mine Sites



**Greenwater Mining District**



**Twenty Mule Team Canyon**



These are signs that are similar to the sign we saw at the Twenty Mule Team Canyon mine opening. The signs graphically depict the hazards associated with abandoned mines. This is good because the signs don't have to be printed in multiple languages. We think it would be a good idea for the NPS to post these types of signs at high risk sites until the risk has been mitigated. Several NPS personnel have stated that some visitors don't read the signs anyway and simply ignore the warnings. We agree that the signs will not be effective to keep all visitors from entering dangerous mines, but we do believe that responsible visitors will heed the warning and stay out of the mines.



**Methodology:**

Submission:	Submitted	Sean Pettersen	06/20/2007 02:33:13 PM
Level 1 Approval:	Approved	William McMullen	06/20/2007 03:58 29 PM
Level 2 Approval:	Approved	John Illson	06/22/2007 11:28 55 AM

**Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 06/29/2007 02:06:33 PM**

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Purpose:  
To record our physical observations of the following mines sites located at Death Valley National Park as described in the narrative at workpaper I.NPS.DEVA.18. These sites include the (1) Eureka Mine (2) Skidoo Mine (3) Leadfiled Ghost Town (4) Devil's Hole and (5) Keane Wonder Mine and Mill.

Scope:  
AML Program and Cites - Death Valley National Park, CA.

Source:  
Photos were taken by Sean Pettersen and Theresa Gumataotao during the site visits.

Conclusion:  
See photos below.

**Details:**  
**Eureka Mine**



**Skidoo Mine**



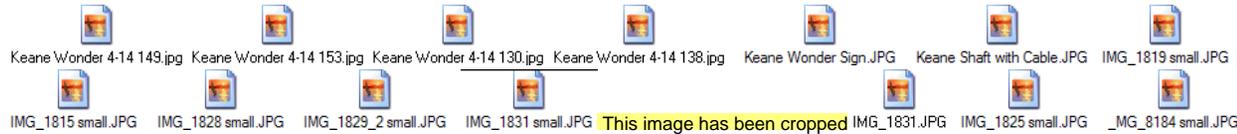
**Leadfiled Ghost Town**



**Devil's Hole**



**Keane Wonder**



**Greenwater Mining District**



These pictures show the ant-trap like opening at the Greenwater site as well as remnants of the fence. The small image is the one that is used in the report.



**Twenty Mule Team Canyon**



Warning sign small.JPG

These are signs that are similar to the sign we saw at the Twenty Mule Team Canyon mine opening. The signs graphically depict the hazards associated with abandoned mines. This is good because the signs don't have to be printed in multiple languages. We think it would be a good idea for the NPS to post these types of signs at high risk sites until the risk has been mitigated. Several NPS personnel have stated that some visitors don't read the signs anyway and simply ignore the warnings. We agree that the signs will not be effective to keep all visitors from entering dangerous mines, but we do believe that responsible visitors will heed the warning and stay out of the mines.



AMLbilingualSign small.jpg



AMLsafetySign small.jpg

Methodology:

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Guest_Theresa Gumataotao/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		
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### Assignment Workpaper

Prepared by: Sean Pettersen 07/25/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.DEVA.20 **Subsection**  
**Program Name** NPS (Site Visits)  
**Subject** Senator Feinstein Request/Response

**Origination Doctlink** ■

**Purpose:**  
To determine the number of high priority AML sites BLM and NPS reported to Senator Dianne Feinstein's office.

**Scope:**  
AML Inventories/priorities

**Source:**  
Document provided by Holly Bundock NPS Regional Headquarters, Oakland, CA (510)817-1320



**Conclusion:**  
For environmental hazards, BLM reported 31 high priority sites and NPS did not report any sites.  
For physical hazards, BLM reported 101 high priority sites and NPS reported 3 high priority sites.

**Details:**  
The information from 15 agencies was compiled by the CA - Department of Conservation - Office of Mine Reclamation. Two lists were prepared that represent the agencies' current assessment of priority sites for environmental and physical hazard remediation.

According to the cover document, Governor Schwarzenegger identified federal funding for abandoned mine restoration as a critical priority to CA and the nation. Key benefits to the people of CA from sustained new funding for a long-term abandoned mine lands (AML) remediation program would include:

- Improved public safety and a healthier environment
- Enhanced coordination among federal and state agencies on AML restoration and remediation projects throughout the State.
- Enhanced enforcement capabilities on sites with potentially responsible parties.

The report states that in recent years the number of people migrating to regions of the State with high densities of AML sites has increased significantly. Examples include the "Mother Lode", a historical gold mining region in the Sierra Nevada that stretches for 300 miles along historic Highway 49, where communities such as Grass Valley, Nevada City, Sutter Creek, and Jackson are undergoing rapid growth. Population increases in these areas have resulted in the development of properties for residential, recreational, and commercial uses on or near AML sites. Recreational use of public lands is also increasing in the CA desert regions and in other areas of the state that contain many hazardous AML sites.

#### PHYSICAL HAZARDS:

- Priority 1: High Agency Priority with Remediation Cost Estimated
- Priority 2: Preliminary Appraisal and Ranking (PAR) score of 5
- Priority 3: Preliminary Appraisal and Ranking (PAR) score of 4

The number of Priority sites for BLM and NPS physical hazards are: **Percentages verified by WHM on 8/8/07.**

Priority 1: BLM 12 (15% of the total)	NPS 5 (6% of the total)	TOTAL Priority 1 for all agencies 78
Priority 2: BLM 45 (38% of the total)	NPS 0	TOTAL Priority 2 for all agencies 117
Priority 3: BLM 44 (23% of the total)	NPS 3 (2% of the total)	TOTAL Priority 3 for all agencies 189

#### ENVIRONMENTAL HAZARDS:

Tiers based on capital cost of clean up

**Tier 1** includes abandoned mines where past and estimated capital costs range between \$10 million to \$100 million.

- Tier 1a. Contains sites where capital costs were incurred
- Tier 1b. Contains sites where there are only future capital cost estimates

**Tier 2** includes abandoned mines where past and estimated capital costs range between \$1 million to \$10 million.

- Tier 2a. Contains sites where capital costs were incurred
- Tier 2b. Contains sites where there are only future capital cost estimates

**Tier 3** includes abandoned mines where past and estimated capital costs range between \$100 thousand to \$1 million.

- Tier 3a. Contains sites where capital costs were incurred
- Tier 3b. Contains sites where there are only future capital cost estimates

The number of Priority sites for BLM and NPS environmental hazards are:

**Tier 1**

Tier 1a. BLM 1	NPS 0
Tier 1b. BLM 1	NPS 0

**Tier 2**

Tier 2a. BLM 0	NPS 0
Tier 2b. BLM 17	NPS 0

**Tier 3**

Tier 3a. BLM 4	NPS 0
Tier 3b. BLM 8	NPS 0

**Methodology:**

Obtained, reviewed and summarized source documents.

Submission:	Submitted	Sean Pettersen	07/25/2007 12:57:13 PM
Level 1 Approval:	Approved	William McMullen	08/08/2007 09:36 50 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:55 31 PM

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**History**

**Status** Approved **Request Review**

**In Progress Edit** Sean Pettersen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

I.NPS.DEVA.20 Senator Feinstein Request/Response

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Assignment Workpaper**

Prepared by: Sean Pettersen 07/25/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.DEVA.21 **Subsection**  
**Program Name** NPS (Site Visits)  
**Subject** DEVA Org Chart

**Origination Doctlink** 

**Purpose:**  
 To provide a copy of the organization charts for Death Valley National Park.

**Scope:**  
 Background

**Source:**  
 Provided by David Ek, Asst. Chief Natural Resources, DEVA 760-786-3245



Scan001.PDF

**Conclusion:**  
 See attached document

**Details:**  
 see conclusion

**Methodology:**  
 Obtained organization chart from NPS

Submission:	Submitted	Sean Pettersen	07/25/2007 02:27 52 PM
Level 1 Approval:	Approved	William McMullen	10/22/2007 09:46 06 AM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:55 51 PM

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**In Progress Edit** Sean Pettersen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**History**

**Status** Approved **Request Review**

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**Add Document Readers**

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A plan for mitigation at the Orphan Mine has not been developed since NPS is still in negotiations with a PRP.

**Funding Requests (page 2 of attachment):**

There has not been funding for actual physical mitigation, such as closing mine entrances. Funding was provided for 4 studies that were done on the Grand View Mine. There was an Environmental study performed in 1998, a study in 2001, one in 2002, and a PASI was performed in 2006. There was no other funding provided from the region for this site.

NPS has been reluctant to do anything at the Grand View Mine because they did not want to jeopardize ongoing negotiations with the PRP for the Orphan Mine (the Orphan Mine is located not far from the Grand View Mine).

In addition, according to GRCA, an EA was done by Linda Dansby's group back in 1998, specifically to pursue mitigating safety issues around the historic mining district. The most recent submit into PMIS includes gating 5 entrances and moving the trail off the tailings as recommended by Dr. Kenny. This proposal was not forwarded for park approval. There is concern that a new EA should be done first.

The Park is currently working to cleanup the Orphan Mine. Funding of the project is being supported by the Central Hazardous Material Fund (CHF). The site is expected to cost over \$10 million to cleanup. A large portion of the cleanup may be covered by potentially responsible parties so the amount of funding needed is uncertain at this time.

The following proposals are currently in PMIS: (Note: The PMIS documents are attached to the source document, pages 4 through 11).

PMIS 133125 - Last Chance Mine Closure and Trail Realignment, Draft, \$85,000.00, submitted in 2006 by GRCA Geologist.

PMIS 85824 - Preliminary Assessment/Site Investigation (PA/SI), Last Chance Mine, GRCA, WASO reviewed, \$64,700.00, 2001 by GRCA Maintenance Division. Uses Dr. Kenny's data, but not referenced.

Note: The above project may be redundant and unnecessary given the work done in the 90's. The park's geologist has inspected the site on several locations and has identified a number of hazards including the presence of high grade uranium minerals/ore, including Pitchblende. These findings have been verified by other investigators on three separate occasions, including the source used in the above (i.e. J. Burghardt, J. Rihs, et. al. 1995; B. Beacher, J. Rihs, 1997; R. Kenny, 2001).

**Park Mitigation Plans (page 1 of attachment):**

Grand Canyon National Park has no formal plan to mitigate Abandoned Mineral/Mining Land (AML) sites. Grand Canyon National Park has no formal plan to mitigate Abandoned Mineral/Mining Land (AML) sites. GRCA maintains up-to-date Environmental Cleanup Liability (ECL) Assessments. ECL Assessment is a government wide program to estimate the future cost for cleanup of contaminated government properties. Included in the GRCA ECL Assessments are mines (L. Schrage, Maint. Div.). Also, GRCA is developing a draft Cave, Karst, and Mine Management Plan that specifies the need to mitigate hazards in mines as opposed to natural features like caves in wilderness areas.

**Historical Value of Mining Sites within the Park (page 4 of attachment):**

According to the PMIS statement, #133125, attached (page 1), the Last Chance Mine (Grandview Mine) is listed in the National Registry of Historic Places



Scan001.PDF

This proposal is to correct health & safety hazards @ 5 abandoned mine openings associated with the Last Chance Copper Mine by constructing bat-accessible gates. 3 mine openings that pose little or no hazard would be left alone. The mine is listed in the Nat. Reg. of Historic Places and provides valuable habitat for bats (sp. of concern). The mine is located within proposed wilderness.

**Inviting the Public to AML Sites:**

Both sites we visited, the Grand View Mine and the Orphan Mine, were indicated on park maps. The Orphan Mine is the most accessible and has two layers of fencing and a trail had been diverted around the site. Physical hazards and contamination at both of these sites have not been mitigated.

The first mine we visited was the Last Chance (or Grandview Mine) along the popular Grandview Trail. [NPS.GRCA.15 Grandview Mine Site Visit](#). Although NPS knows there are thousands of visitors to this area every year where they "are in contact with potentially dangerous levels of contaminants", NPS has done very little to mitigate any hazards. There were no signs in the area warning visitors of physical hazards or of the potentially high levels of radiation that has been recorded in the area. The popular Grandview campground is only a few minutes walk from the mine site.

The second site we visited was the Orphan Mine, located along the popular Rim Trail. [NPS.GRCA.20 Orphan Mine Site Visit](#). The area around the Orphan Mine has been fenced off and signs have been posted in certain locations. Although there were two layers of fence around the site, there were holes in the fences that would still allow easy access. Fencing has been the only mitigation measure at the Orphan Mine. The contamination and physical hazards have not been addressed because NPS is in negotiations with a PRP.

**Warnings to the Public about the Dangers at AML Sites (page 2 of attachment):**

There are no warnings about the dangers posed by abandoned mines posted on the website for Grand Canyon National Park, nor were there warnings in literature that is distributed to the public. There were warning signs posted in areas around the Orphan Mine on the Rim Trail but there were no signs posted along the Grandview Trail or at the Grandview Mine. According to John Rihs, signs have been placed along the fence around the Orphan Mine and NPS distributed community fact sheets providing information about the history of the site and current activities (Note: We saw these signs during our site visit. The signs were highly visible and were a clear warning to the public to stay out of the old mine area).



In addition, John also stated the Grand Canyon issues drinking water warnings, issued on back-country permits, for areas with high radionuclide or other contaminant levels which may, or may not, be related to mining activities.

We searched the Grand Canyon website for AML warnings at the Grandview Trail and the Rim Trail because there are abandoned mines along these trails. There were no warnings posted on the internet for these trails. In addition, there is no mention of abandoned mines or warnings anywhere on the Grand Canyon National Park website.

During our site visit we noted that there were no signs at the Grandview Mine warning the public of physical hazards or the potential hazard with radiation at the mine.

**Methodology:**

Obtain, reviewed and summarized relevant information from NPS and performed a site visit.

Submission:	Submitted	Sean Pettersen	11/14/2007 11:50 06 AM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:30 02 PM
Level 2 Approval:	Approved	John Illson	05/02/2008 08:13 28 AM

**Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 05/13/2008 06:37:49 PM**

The following information was copied from the rich text field(s) above into this field by Sean Pettersen/DEN/OIG/DOI on Tue 05/13/2008 06:37 PM. For original text, refer to the field(s) above.

**Purpose:**  
To document Grand Canyon National Park's response to audit steps. The actual response is attached in the source section.

**Scope:**  
AML site mitigation

**Source:**  
John R. Rihs  
Earth Science Program Manager / Geologist / Hydrologist  
Grand Canyon National Park  
P.O. Box 129  
Grand Canyon, AZ., 86023  
Phone: 928.638.7905, Fax: 928.638.7755



Questions for Park Service3.doc

**Conclusion:**

Conclusions for multiple audit steps are in the details section. The answers to the audit steps were verified during out site visit. Conclusions will be added to the summary for NPS.

**Details:**

**Site Mitigation (page 1 of attachment):**

None of the AML sites within Grand Canyon National Park have been mitigated within the past 10 years. The Park was unable to provide any information on mitigated sites. In its written response, see attached page 1, Grand Canyon National Park stated that, "cost estimates for the mitigation of the Orphan Mine have been conducted but actual mitigation has not yet begun. The Park Service is currently in negotiations with potentially responsible parties".

**Injuries and Fatalities (page 2 of attachment):**

There have been no incidents of injury or death associated with AML sites within the Grand Canyon National Park".

**Site Inspection Documentation (page 1 & 2 of attachment):**

Documentation for AML sites within the Grand Canyon National Park are maintained with the park Geologist. In its written response, see attached page 1&2, Park personnel stated that, "documentation relating to ECL sites is maintained by the Park, including site assessments and cost analyses. For other AML sites, the majority of the assessments are conducted by non-NPS personnel. In addition, field notes and reports in hard copy for a number of investigations of Last Chance Mine, dating back to the mid 1990's, are maintained in the geologist's office, the majority of which were conducted with the park geologist."

**Road and Trail Closures (page 2 of attachment):**

The trail around the Park's highest priority, and most accessible, site has been diverted around that dangerous area. Two layers of fence were erected around the site, however, visitor could still enter the site through an opening in the fence. The Park has fenced and diverted trails around the Orphan Mine S. Rim workings (note: we verified that this area was fenced off during our site visit). We have posted closure using radiation warning signs at the main entrance of Last Chance Mine (note: we did not see warning signs at the last chance mine and a small chain at the entrance of a mine opening was ineffective).

**Mitigation Measures (page 2 of attachment):**

The preferred closure method for the Grand View Mines will be bat gates. The closure method for the Last Chance Mine has not been decided yet. According to the PMIS statement (page 4 of the source document) NPS plans to "correct health and safety hazards at 5 abandoned mine openings associated with the Last Chance Mine by constructing bat-accessible gates. Three mine openings that pose little or no hazard would be left alone. In addition, a short section (approx 500') of the Grandview Trail on Horseshoe Mesa needs to be moved to avoid crossing contaminated mine tailings."

A plan for mitigation at the Orphan Mine has not been developed since NPS is still in negotiations with a PRP.

**Funding Requests (page 2 of attachment):**

There has not been funding for actual physical mitigation such as closing mine entrances. Funding was provided for 4 studies that were done on the Grand View Mine. There was an Environmental study performed in 1998, a study in 2001, one in 2002, and a PASI was performed in 2006. There was no other funding provided from the region for this site. Funding has been an obstacle to performing the needed mitigation.

NPS has been reluctant to do anything at the Grand View Mine because they did not want to jeopardize ongoing negotiations with the PRP for the Orphan Mine (the Orphan Mine is located not far from the Grand View Mine).

In addition, according to GRCA, an EA was done by Linda Dansby's group back in 1998, specifically to pursue mitigating safety issues around the historic mining district. The most recent submit into PMIS includes gating 5 entrances and moving the trail off the tailings as recommended by Dr. Kenny. This proposal was not forwarded for park approval. There is concern that a new EA should be done first.

The Park is currently working to cleanup the Orphan Mine. Funding of the project is being supported by the Central Hazardous Material Fund (CHF). The site is expected to cost over \$10 million to cleanup. A large portion of the cleanup may be covered by potentially responsible parties so the amount of funding needed is uncertain at this time.

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**Inviting the Public to AML Sites:**

Both sites we visited, the Grand View Mine and the Orphan Mine, were indicated on park maps. The Orphan Mine is the most accessible and has two layers of fencing and a trail had been diverted around the site. Physical hazards and contamination at both of these sites have not been mitigated.

The first mine we visited was the Last Chance (or Grandview Mine) along the popular Grandview Trail. [NPS.GRCA.15 Grandview Mine Site Visit](#). Although NPS knows there are thousands of visitors to this area every year where they "are in contact with potentially dangerous levels of contaminants", NPS has done very little to mitigate any hazards. There were no signs in the area warning visitors of physical hazards or of the potentially high levels of radiation that has been recorded in the area. The popular Grandview campground is only a few minutes walk from the mine site.

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According to John Rihs, signs have been placed along the fence around the Orphan Mine and NPS distributed community fact sheets providing information about the history of the site and current activities (Note: We saw these signs during our site visit. The signs were highly visible and were a clear warning to the public to stay out of the old mine area).



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During our site visit we noted that there were no signs at the Grandview Mine warning the public of physical hazards or the potential hazard with radiation at the mine.

Methodology:

Obtain, reviewed and summarized relevant information from NPS and performed a site visit.

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**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	
<b>Add Document Readers</b>		
<b>Read Authorization</b>	[Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI	
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**Status** Approved **Request Review**

**In Progress Edit** Sean Pettersen/DEN/OIG/DOI

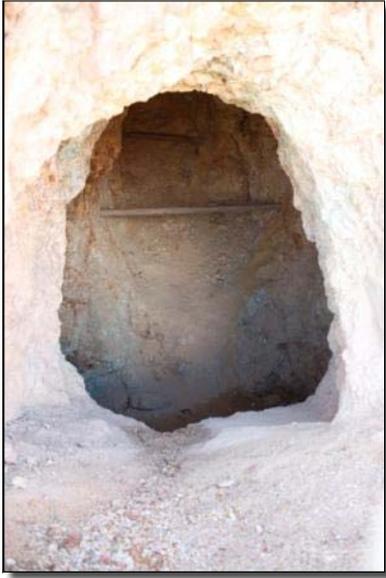
**Confidentiality** Standard

**Add Document Readers**

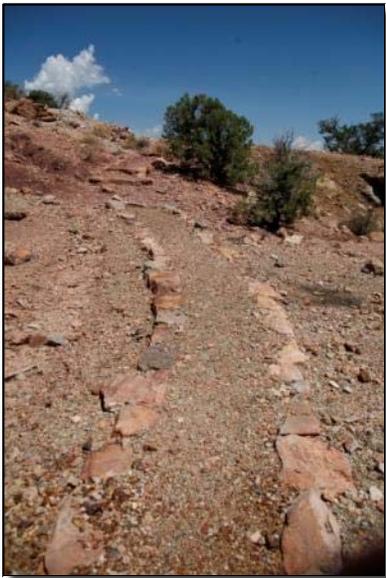
**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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Further down the trail there was another mine feature, an adit, that was located just off the trail. This adit was easily accessible from the well maintained trail. There was evidence that visitors enter the shaft (there were empty soda cans and shovels just inside the entrance). Approximately 200 bats were observed about thirty feet inside the entrance, and according to John Burghardt, this is an important maternity roost for the bats. [See picture of a well maintained trail running through the site:](#)



There was another adit which was the only place at the mine site where there was any effort to keep visitors out. NPS had put up a small chain across the entrance. The chain had been cut and was laying by the entrance and was completely ineffective at preventing hikers from entering. Even if the chain had been in place, it still would have been ineffective at preventing access. [See picture:](#)



NPS personnel also entered two adits and went a couple hundred feet into the adits to measure alpha radiation. The adits are over six feet in height and there was evidence in the first adit visited that hikers or campers had been far into the shafts and had perhaps even camped in there. The oxygen ratings were 20%, which is a normal oxygen level. The second adit NPS personnel entered was over a hundred feet above the first adit, and NPS said there was a vertical shaft connecting the two adits. This could pose a physical hazard, should someone enter the upper adit and fall into the shaft.

NPS personnel took meter readings at all of the mine openings to measure alpha radiation. Previous tests at the sites showed high levels of radiation (I.NPS.GRCA.15 1998 Environmental Assessment for the Grand View Mine ■), however, during our visit the readings were much lower. The following statement was in an e-mail from John Burghardt, NPS-GRD, as an explanation as to why the readings were low:

"Just wanted to let you know that, especially since we got much lower alpha readings this time than back in 1995, I checked the calibration of my alpha meter (the heavy blue box) as soon as I returned. It's standard protocol to do this anyway before and after each trip, which I did back in 1995 as well as this time. Suffice it to say that the meter calibrated dead-on, so I know our readings were good, even though they were much lower this time. Since alpha is airborne and we had no fluctuation in air quality throughout the workings, I'm thinking this stands to reason. I'm imagining the air was fresh due to the weather moving in and out over the past few days, meaning that a low pressure system probably "flushed out" the air just before we got here. Several of the older surveys recorded pockets of seemingly dead air, but we didn't encounter any".

**Methodology:**

Performed site visit and interviewed NPS personnel at the park.

Submission:	Submitted	Sean Pettersen	11/14/2007 11:47 56 AM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:26:49 PM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:56 55 PM

**Linkage Information Set By Greta Bloomfield/DEN/OIG/DOI On 01/11/2008 12:03:38 PM**

The following information was copied from the rich text field(s) above into this field by Greta Bloomfield/DEN/OIG/DOI on Fri 01/11/2008 12:03 PM. For original text, refer to the field(s) above.

**Purpose:**

To determine if Grand Canyon National Park deters visitors from entering mine features at the Grandview Mine or has posted warning signs informing the public of the presence of radiation at the mines.

**Scope:**

AML Mitigation

**Source:**

Site visit was performed by Sean Pettersen, DOI-OIG, Greta Bloomfield, DOI-OIG, John Burghardt, NPS-GRD, and John Rihs, NPS-GCNP.

Conclusion:

The mining features (shafts and adits) at the Grandview Mine complex remain open to the public. There are no signs in the area warning the public of either physical safety hazards or of radiation contamination at the mine. The Grandview trail (a well maintained trail) runs through the mine complex and comes close (within several feet) to several of the mine openings. The mine complex has not been mitigated (and the public has not been warned) even though NPS has known for many years that Alpha radiation levels within the mine openings were measured as high as 13.2 times above the working level (WL). The Mine Safety and Health Administration requires a dust filtering respirator at 1 WL alpha and a supplied air device in concentrations above 10 WL alpha (I.NPS.GRCA.15 1998 Environmental Assessment for the Grand View Mine ■■■). In addition, physical hazards exist because there are adits which are connected by vertical shafts over a hundred feet deep.

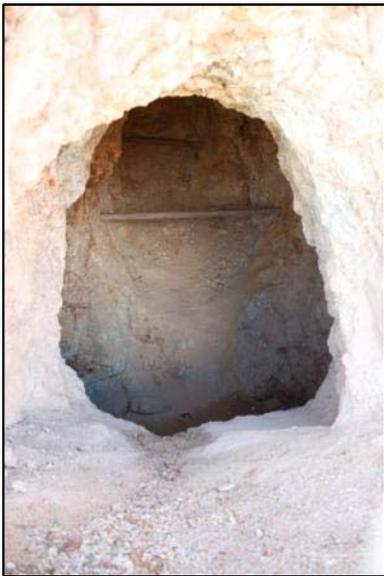
Details:

We conducted a 13 hour round trip hike to the Grandview Mine via the Grandview Trail on 08/28/07 to inspect the mine and determine what NPS has done to limit access to the mine openings and warn the public of health and safety hazards at the site. John Burghardt, NPS-GRD and John Rihs and another employee from Grand Canyon National Park (GRCA) accompanied us on the trip to take meter readings of the contamination levels at the mine.

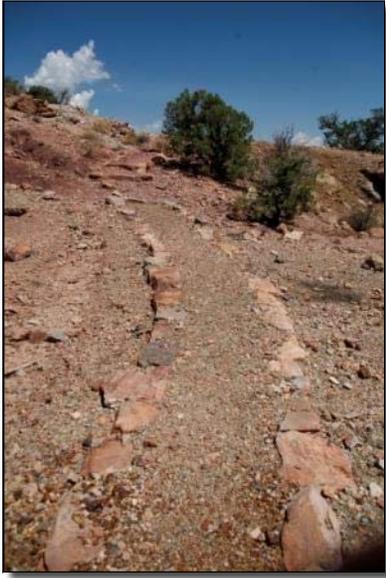
Three hours hike down the trail, we encountered a "glory-hole" dug into the side of a small hill. Although the physical hazard at this feature is minimal, the meter signaled the presence of radia ion.

We were told by Rihs that hikers often use this mine feature as a resting stop for lunch. He also said that the mine feature is the first stop on the trail that offers full shade from the sun. There are also several shafts in the vicinity that are either shallow or partially collapsed. Again, the physical hazard posed by the shafts appeared to be minimal.

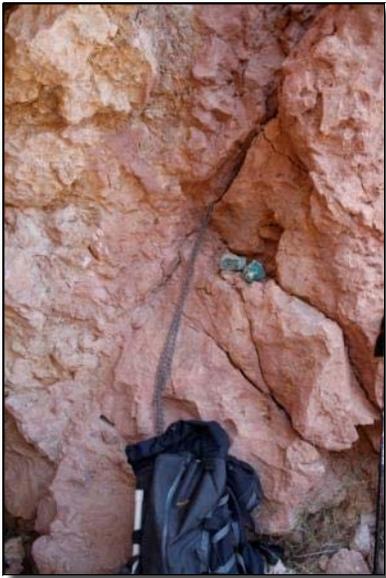
See picture of the glory-hole. Note hikers have set up make shift benches inside the hole. This feature is the first place to get shade after a several hour hike into the canyon:



Further down the trail there was another mine feature, an adit, that was located just off the trail. This adit was easily accessible from the well maintained trail. There was evidence that visitors enter the shaft (there were empty soda cans and shovels just inside the entrance). Approximately 200 bats were observed about thirty feet inside the entrance, and according to John Burghardt, this is an important maternity roost for the bats. See picture of a well maintained trail running through the site:



There was another adit which was the only place at the mine site where there was any effort to keep visitors out. NPS had put up a small chain across the entrance. The chain had been cut and was laying by the entrance and was completely ineffective at preventing hikers from entering. Even if the chain had been in place, it still would have been ineffective at preventing access. See picture:



NPS personnel also entered two adits and went a couple hundred feet into the adits to measure alpha radiation. The adits are over six feet in height and there was evidence in the first adit visited that hikers or campers had been far into the shafts and had perhaps even camped in there. The oxygen ratings were 20%, which is a normal oxygen level. The second adit NPS personnel entered was over a hundred feet above the first adit and NPS said there was a vertical shaft connecting the two adits. This could pose a physical hazard, should someone enter the upper adit and fall into the shaft.

NPS personnel took meter readings at all of the mine openings to measure alpha radiation.

Previous tests at the sites showed high levels of radiation (I.NPS.GRCA.15 1998 Environmental Assessment for the Grand View Mine [REDACTED]), however, during our visit the readings were much lower. The following statement was in an e-mail from John Burghardt, NPS-GRD, as an explanation as to why the readings were low:

"Just wanted to let you know that, especially since we got much lower alpha readings this time than back in 1995, I checked the calibration of my alpha meter (the heavy blue box) as soon as I returned. It's standard protocol to do this anyway before and after each trip, which I did back in 1995 as well as this time. Suffice it to say that the meter calibrated dead-on, so I know our readings were good, even though they were much lower this time. Since alpha is airborne and we had no fluctuation in air quality throughout the workings, I'm thinking this stands to reason. I'm imagining the air was fresh due to the weather moving in and out over the past few days, meaning that a low pressure system probably "flushed out" the air just before we got here. Several of the older surveys recorded pockets of seemingly dead air, but we didn't encounter any".

Methodology:  
N/A

**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI	
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<b>Read Authorization</b>	[Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI	
<b>Current Editor List</b>	[C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI	



Submission:	Submitted	Sean Pettersen	11/14/2007 11:48:47 AM
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Level 2 Approval:	Approved	John Illson	06/02/2008 01:57:12 PM

[Linkage Information](#)

**History**

<b>Status</b>	Approved	<b>Request Review</b>
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<b>Confidentiality</b>	Standard	

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**History**

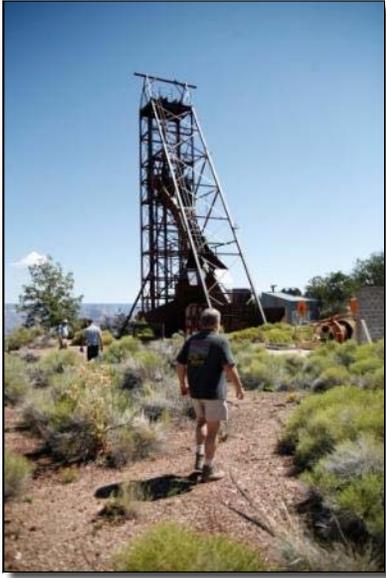
**Status** Approved **Request Review**  
**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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1,600' deep Shaft entrance



Warning Signs posted along fence



Warning Sign and site history posted along fence.



Park visitors hiking outside site



Breached fence



The headframe appeared to be very stable



Note: Grand Canyon is in negotiations with a Potentially Responsible Party (PRP) to help with the cleanup of this site. It has also received CHF funds in the past several years for assessments.

**Methodology:**

performed site visit and interview GCNP personnel

Submission:	Submitted	Sean Pettersen	11/14/2007 11:43 50 AM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:19:42 PM
Level 2 Approval:	Approved	John Illson	06/02/2008 01:57 56 PM

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Purpose:

To determine if Grand Canyon National Park is protecting the public from health and safety hazards at the Orphan Mine.

Scope:  
AML Mitigation

Source:  
Site visit was performed by Sean Pettersen, DOI-OIG, Greta Davidson, DOI-OIG, John Burghardt, NPS-GRD, and John Rihs, NPS-CRNP

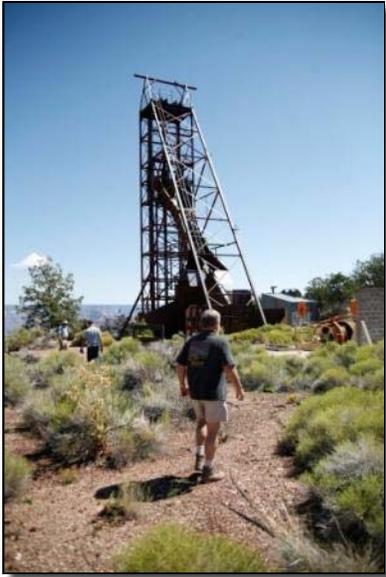
Conclusion:

Grand Canyon National Park is working with a Potentially Responsible Party, to mitigate the hazards at the Orphan Mine. Grand Canyon National Park has taken steps to dissuade visitors from visiting the Orphan Mine by posting warning signs and fencing at the adjacent Rim Trail. However, the first layer of fencing is simply a three wire fence that anyone could squeeze through and the chain link fencing adjacent to the headframe has been peeled back to allow entrance.

Details:  
The Orphan Mine is located adjacent to the easily accessible and popular Rim Trail in GRNP.

The park has erected fencing around the entire site and has re-routed the main trail away from, and around the site. Signs were posted in key areas around the site (see pictures below). However, there is at least one area where visitors could still access the mine features. The old headframe and other structures were not dilapidated and appeared to be stable (see pictures below). The mine shaft, approximately 1,600' deep, is still accessible if visitors were to come through the two layers of fence. There was chainlink fence around the shaft, but it had been removed.

#### Head Frame



1,600' deep Shaft entrance



Warning Signs posted along fence



Warning Sign and site history posted along fence.



Park visitors hiking outside site



**Breached fence**



**The headframe appeared to be very stable**



Note: Grand Canyon is in negotiations with a Potentially Responsible Party (PRP) to help with the cleanup of this site. It has also received CHF funds in the past several years for assessments.

Methodology:  
N/A

**History**

**Status** Approved **Request Review**  
**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI  
**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Sean Pettersen 05/14/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.GRCA.21 **Subsection**  
**Program Name** NPS (Site Visits)  
**Subject** Contamination levels at Orphan

**Origination Doclink** ■

### Purpose:

To indicate that the Orphan Mine is located on the South Rim of the Grand Canyon and that the radiation levels and the physical hazards at the site are significant enough to fence off the area .

### Scope:

Grand Canyon site visit.

### Source:

Community Fact Sheet - Orphan Mine Site obtained at <http://www.nps.gov/grca/parkmgmt/upload/orphan1.pdf> by Sean Pettersen



Scan001.PDF

The article below shows the high levels of radiation was found at ;  
<http://www.theaustralian.news.com.au/story/0,25197,23647808-30417,00.html>

### Conclusion:

The excerpts below show that the site is located in the South Rim at Grand Canyon National Park and he are has been fenced to protect park visitors from any potential exposure to radiation or other mine waste contaminants. The article below shows that the level of radiation at the mine could be as many as 450 times over the background levels (background is the normal level of radiation for in an area).

### Details:

#### A SITE HISTORY...

The Orphan Mine Site is located on and below the South Rim at Grand Canyon National Park. The Site is approximately two miles northwest of the South Rim Village, between Maricopa Point and the Powell Memorial. The Park's Rim Trail, which traverses approximately twelve miles of the South Rim of the canyon, detours around the Orphan Mine property.

### AND NOW...

Currently, mine wastes are present at the upper and lower mine areas as well as on the steep slope down the canyon along the path of the old tram structure (the middle mine area). The upper mine area is fenced with both a chain link metal fence and a temporary outer fence to protect park visitors from any potential exposure to radiation or other mine waste contaminants. In addition, signs have been posted in the Horn Creek drainage warning the public not to drink the water in Horn Creek due to potentially hazardous levels of radioisotopes. The lower and middle mine areas are inaccessible to park visitors. The most notable feature of the lower mine area is a large "glory hole" which is visible from Maricopa Point.

## Anger at Grand Canyon mine plan

- Font Size: [Decrease](#) [Increase](#)
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May 05, 2008

**A BRITISH mining company has caused uproar with plans to extract uranium from the Grand Canyon - prompting one official to ask how Britons would react "if an American company went to drill at Stonehenge".**

The Grand Canyon is not only one of the world's most famous natural landmarks, attracting five million visitors a year and offering a home to bald eagles, condors, bighorn sheep and exotic fish. It also happens to contain vast reserves of uranium ore – suddenly in huge demand, thanks to renewed interest in nuclear power as part of the search for "green" fuel.

But while demand for uranium has risen, supply has fallen as mines have closed in Canada and West Africa. As a result, the price has soared – and that has sparked a rush to find new deposits.

The Mayfair company VANE Minerals is at the forefront of this scramble, planning to drill at up to 39 spots on seven sites within the Kaibab National Forest, which borders both the north and south rims of the Grand Canyon, in north-central Arizona. A further thousand claims are thought to be pending from other companies – up from just 10 in 2003.

National Park officials, Indian tribal leaders and even some scientists are doing everything they can to stop the exploration, going so far as to call a congressional "field hearing" in Flagstaff, Arizona. "The Grand Canyon is something we depend on for visitors, for tourism, it's one of the wonders of the world, and here we are as the federal Government allowing the distinct possibility of uranium mining," Raul Grijalva, a congressman for the state, said.

Environmentalists point out that uranium is both a toxic heavy metal and a source of radiation. As a result it could kill local wildlife and poison the water in the Colorado River Aqueduct, which provides drinking water to Los Angeles and much of southern California.

Tribal leaders also complain that they have previously been forced to clean up after bankrupt mining concerns, while radiological assessments at one past exploration site – the Orphan Mine – have shown gamma-radiation at more than 450 times the background level after uranium was brought closer to the surface

Yet with fears rising over global warming, many argue that the dangers of continuing to burn coal for electricity far outweigh the potential dangers of uranium mining. And while solar, tidal and wind technologies show promise, they are nowhere near as reliable.

Kris Hefton, chief operating officer of VANE Minerals, has tried to reassure environmentalists by arguing that his industry is far more safety-conscious than it was.

"I'm not talking about the industry of 50 years ago that impacted the Navajo Nation," he told the congressional hearing. "We ask you to judge our industry on its current performance rather than on past, unrelated events."

The company reportedly believes that the deposits in the Grand Canyon are of a higher grade than elsewhere in the US, because they are in geological formations known as "breccia pipes". This means the mine could be profitable even if the uranium price falls.

VANE Minerals' exploration permits were initially approved by the Forest Service, which cited laws created during the Wild West era to allow mining on public land. The permits were granted with minimal conditions, such as bore areas being close to existing roads, but were immediately challenged by environmentalists in the US District Court, where a federal judge issued a temporary restraining order.

In an interview over the weekend with the Los Angeles Times, Taylor McKinnon, a public lands advocate for the Centre for Biological Diversity – one of the parties that sued for the restraining order – raised questions over the safety of the exploration, such as whether floodwater could pass through the bore hole and contaminate the water supply. "We don't know because there wasn't an analysis," he said.

Mr McKinnon added that VANE did not understand the importance of the Grand Canyon to Americans. "What if an American company went to drill at Stonehenge?" he asked.

A full hearing of the case is expected to be held this summer.

I.NPS.GRCA.21 Contamination levels at Orphan

*The Times*

**Methodology:**

Obtained pertinent documents and extracted the relevant information.

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                      John Illson                      06/02/2008 02:43 50 PM

**Linkage Information**

**History**

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**Confidentiality**                      Standard

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Submission:	Submitted	Sean Pettersen	11/13/2007 04:02:19 PM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:18 36 PM
Level 2 Approval:	Approved	John Illson	01/10/2008 09:06 27 AM

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**History**

<b>Status</b>	Approved	<b>Request Review</b>
<b>In Progress Edit</b>	Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Guest_Theresa Gumataotao/DEN/OIG/DOI	
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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

I.NPS.JOTR.08 JOTR- Funding Requests

Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



**Methodology:**

N/A

Submission:	Submitted	Sean Pettersen	07/06/2007 12:35 53 PM
Level 1 Approval:	Approved	William McMullen	07/10/2007 11:07:17 AM
Level 2 Approval:	Approved	John Illson	01/10/2008 09:08:12 AM

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**History**

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<b>In Progress Edit</b>	Guest_Theresa Gumataotao/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI	
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### Assignment Workpaper

Prepared by: Guest\_Theresa Gumataotao 05/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.JOTR.18 **Subsection**  
**Program Name** NPS (Site Visits)  
**Subject** Joshua Tree - Annual Recreation Visits

**Origination Doclink** 

**Purpose:**  
To illustrate the annual number of recorded visitors who recreated in Joshua Tree National Park from 2000 - 2006

**Scope:**  
Visitation statistics Calendar Year 2000-2006

**Source:**  
NPS Public Visitation Statistics website - <http://www2.nature.nps.gov/stats/>

**Conclusion:**  
Joshua Tree reported the following number of recreational visitors in:

- 2000 - 1,233,935
- 2001 - 1,280,917
- 2002 - 1,178,376
- 2003 - 1,283,346
- 2004 - 1,243,659
- 2005 - 1,375,111
- 2006 - 1,256,421

**Details:**

See a history of Joshua Tree's annual recreation visits attached.  Visitation Reports - Joshua Tree.pdf

**Methodology:**  
N/A

Submission:	Submitted	Sean Pettersen	07/10/2007 03:31:15 PM
Level 1 Approval:	Approved	William McMullen	07/27/2007 11:52 34 AM
Level 2 Approval:	Approved	John Illson	01/10/2008 09:08 33 AM

**Linkage Information**

**History**

**Status** Approved **Request Review**

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**Record of Discussion**

Prepared by: Guest\_Theresa Gumataotao 06/21/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.JOTR.19 **Subsection** Joshua Tree site Visit  
**Program Name** NPS (Site Visits)  
**Subject** Meeting with Luke Sabala - JOTR Scientist and AML Lead

**Origination Doctlink** [REDACTED]

**Participants**

Name	Title	Office Location	Phone No.	Email Address
Luke Sabala	NPS Scientist	Joshua Tree National Park 74485 National Park Drive Twentynine Palms, CA. 92277-3597	760-367-5502	
Sean Pettersen	Auditor	Central Region Audits - 134 Union Blvd. Lakewood, CO.	303-236-9133	Sean_Pettersen@doioig.gov
Greta Bloomfield	Auditor	Central Region Audits - 134 Union Blvd. Lakewood, CO.	303-236-9133	Greta_Bloomfield@doioig.gov
Theresa Gumataotao	OJT (on the job training) - Auditor	Central Region Audits- 134 Union Blvd. Lakewood, CO.	303-236-9158	Guest_Theresa Gumataotao@doioig.gov

**Location** Joshua Tree National Park - Administration Offices

**Date/Time**

06/04/2007 09 00 AM

**Purpose:**

To determine if Joshua Tree National Park protects public health and safety at abandoned mine sites. Specifically, does the Park identify, inventory, and prioritize high priority AML sites and is there adequate program funding to protect public health and safety.

**Scope:**

AML Program - Joshua Tree National Park

**Conclusion:**

Joshua Tree National Park is protecting public health and safety at AML sites. The Park has an inventory of AML sites and has identified the top priority sites for mitigation. The most accessible sites within the Park have been mitigated to some degree and there are plans to mitigate other high priority sites. Although the park has mitigated many of the high priority sites, there are still sites that need to be mitigated and funding has been the biggest obstacle to getting all the high priority sites mitigated.

Luke prefers the use of steel bat gates, cable nets, and steel cupolas, since sites mitigated with these efforts can be re-opened in the event that any investigative or historical work needs to be done. Luke has the capabilities to mass produce prefabricated bat gate and cupola materials. This production capability enables a large number of sites to be bat gated in a short amount of time. The current method has proven to be very secure and the patina gives a historic aged look, which allows the mine sites with bat gates and cupolas to blend more appropriately with the historic landscape and not lose their "flavor." It is the auditor's opinion that staffing and materials could be expanded at Joshua Tree National Park for the production site to be utilized by other parks and public agencies. We believe this approach is a good model that could be expanded at Joshua Tree National Park and adopted by other bureaus.

**Summary:**

**Inventory**

The inventory for Joshua Tree includes 283 significant openings at 120 sites. The sites have been GPSed, including 140 adits, 100 shafts, and 28 gravel pits. The rest are prospects. The Park also has 21 mill sites.

The Park uses a volunteer [REDACTED], to inventory the Parks mine sites [REDACTED] has also been responsible for "field truthing" the Parks existing inventory, however, he does not prioritize sites for mitigation. [REDACTED] receives a stipend of \$2,500 per year for the service he provides

**Priority sites.**

According to Luke, the Park has created an inventory of "high priority sites" beginning in the late 1990's. Chris Holbeck, former AML lead for the park, trail-blazed the park, created the initial inventory, and from there prioritized and mitigated many "most dangerous areas." See I.NPS.JOTR.01 Joshua Tree - NPS AML Inventory & High Priority Sites [REDACTED] for a listing of the Park's high priority sites.

The Park's priorities are Desert Queen and Golden Bell Mines. According to NPS, 90% of all mines at these sites have been mitigated. We visited Desert Queen and observed a host of mine openings, most of which had been mitigated. The Desert Queen site is well marked on Park maps and there are signs along the road directing visitors to the site. There was evidence that regardless if the mitigation efforts, visitors still manage to get into the mines. One openings was sealed with three different methods, a steel grate, steel cables, and finally a bat gate. All three of these were compromised, even the bat gate had been vandalized to create a small opening to enter the mine. There was evidence in this area that visitors were camping. We saw only one warning sign in the area, but it had been removed from its original area and thrown to the bottom of the waste rock pile. See Pictures.



Sign directing visitors to an AML site.



Breached mine closure



Fire ring out side mine adit



Mitigated mine shaft at the Desert Queen Mine

The two largest unmitigated sites are situated on the top of a steep hill at the Golden Bells Mines. The two sites do not received large visitation but NPS has already made plans to mitigate the area. The main shaft is wide open and extremely dangerous. The shaft was barely noticeable until we were right at the edges. Funding is in place, materials to perform the work have been received, but a little more planning must go into the completion of the project and additional support equipment such as a helicopter is necessary to complete the mitigation work.



**Dangerous mine opening scheduled to be mitigated** The dangerous mine shaft cannot be seen from this direction

#### **Mitigation.**

Most of the sites with severe physical hazards are no longer easily accessible. Much of the Park has been designated as wilderness, meaning that vehicles are not allowed to drive on old access roads. Roads were never closed because of the dangers posed by hazardous mines, however mitigation work has been affected. As a consequence, all materials needed for any mitigation work must be transported by helicopter. Materials include steel rods, connectors, and cable nets along with the appropriate tools used to install these pieces. The park also owns a PUF (polyurethane foam) machine, which is used for mitigation. This machine was used extensively when it was first introduced, but has since been more of a nuisance to transport and store since it is quite large. The machine is encased in a mobile steel frame which also houses a small generator. The generator and the metal frame have increased the size and weight of the machine so the machine is now rarely used (Note: Joshua Tree is willing to share this piece of equipment with other Parks, bureaus, and federal agencies, if someone could retrofit the machine to make it more easily transportable, which Luke says should be possible).

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**Site / Inspection Follow-up.** Follow-up at AML sites is not regularly done. According to Luke, once a site is mitigated they don't make plans to re-visit unless they become aware of vandalism or need to visit/mitigate other sites within the same area. Further, there are no existing policies or procedures within the park or the bureau, for site inspection, documentation and followup.

#### **Injuries and Fatalities.**

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### **Promising Practices**

#### **Desert Management Group:**

The Desert Management Group (<http://www.dmg.gov>) is a multi-agency managers' group representing public agencies in the desert region. DMG represents USFS, FWS, NPS, BLM, DOD etc... The DMG has several working groups, one which deals with "hazardous materials" Luke stated AML group exists within the larger group and Joshua Tree's NPS group recently did a presentation to the bureaus since everyone shares this problem. Luke stated they need to train others, since small AML staff cannot do everything by themselves. The group has discussed key changes to improve the program. Among their ideas include uniformity in methods used for prioritizing, taking inventory, and performing mitigation, especially in areas related to surface water, ground water and collateral duty safety officers.

#### **Sharing Resources:**

Luke also mentioned that he personally thinks Mojave has more high priority sites left to be mitigated, than Joshua Tree, and that resource sharing should occur to ensure the highest priority sites are mitigated. Specifically, it makes more sense to Luke that the highest priority sites in the entire Desert Region are mitigated through shared resources (funding, staff and materials from NPS, BLM, DOD, State of CA etc..) first, before less priority

AML sites are mitigated.

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/10/2008 09:04 53 AM

**Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 01/10/2008 03:28:27 PM**

The following information was copied from the rich text field(s) above into this field by Sean Pettersen/DEN/OIG/DOI on Thu 01/10/2008 03:28 PM. For original text, refer to the field(s) above.

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Above is the opening that had been sealed 3 times with 3 different methods. All of which were vandalized. This closure is a bat gate and was erected to allow bats to come and go from the mine shaft.



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Fire ring out side mine adit



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<b>Status</b>	Approved	<b>Request Review</b>
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**PARK-WIDE INSPECTION OF INACTIVE  
HISTORICAL MILLS**

**at  
Joshua Tree National Park  
Riverside and San Bernardino Counties, California**

Prepared For

**U.S. Department of the Army  
United States Army, Corps of Engineers**

Los Angeles District  
Los Angeles, California 95370

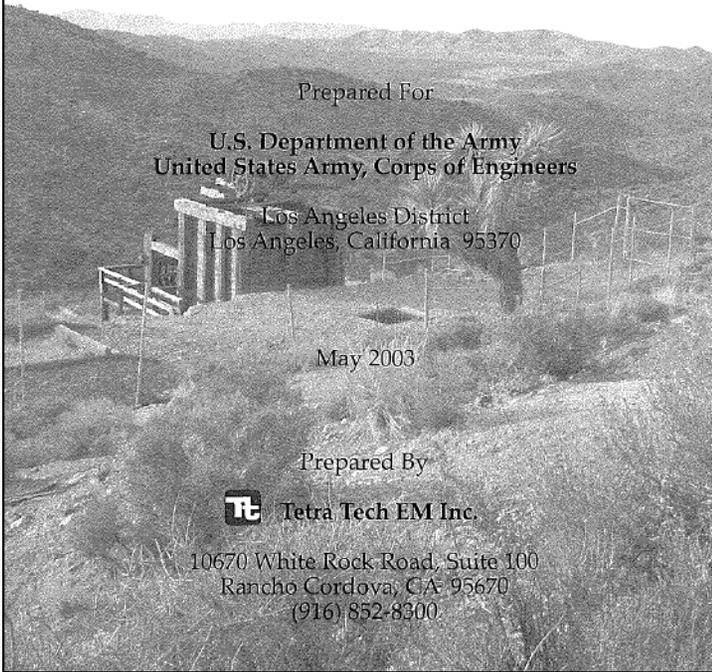
May 2003

Prepared By



**Tetra Tech EM Inc.**

10670 White Rock Road, Suite 100  
Rancho Cordova, CA 95670  
(916) 852-8300



**5.0 SUMMARY AND RECOMMENDATIONS**

Tetra Tech collected and analyzed 111 tailings samples and 28 background soil samples from the 14 inactive historical mill sites at JOTR. **At the request of NPS, laboratory analytical results were compared to human health and ecological benchmarks established by BLM and EPA.** The comparison indicates that metals concentrations, primarily arsenic, copper, lead, and mercury, exceeded benchmarks in each tailings pile sampled, each pile of dispersed or eroded tailings material sampled, and each tank and vat containing tailings material that was sampled. **However, most exceedences were similar in magnitude to the benchmarks, and would not likely result in significant adverse effects.** Though most exceedences were similar in magnitude to ecological benchmarks, the concentration of at least one metal in any tailings sample exceeded the benchmark by at least one order of magnitude at 12 of the 14 mill sites. Only metals concentrations that were an order of magnitude greater than benchmarks are thought to result in significant adverse effects. Therefore, metals concentrations in tailings material at all but the Mission and Last Chance mills may result in significant adverse ecological effects. Five mill sites contained tailings material with metals concentrations exceeding human health benchmarks by an order of magnitude, including:

**Methodology:**

Scanned and input document information into details

Submission: Submitted Greta Bloomfield 01/16/2008 10:07:42 AM  
 Level 1 Approval:  
 Level 2 Approval: Approved John Illson 01/17/2008 11:23 57 AM

**Linkage Information**

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## Assignment Workpaper

Prepared by: Sean Pettersen 04/24/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.MOJA.01 **Subsection**  
**Program Name** NPS (Site Visits)  
**Subject** Mojave National Preserve

**Origination Doctlink** ■

### Purpose:

To determine what Mojave National Preserve has done at AML sites to protect the public from dangers posed by abandoned mine features.

### Scope:

AML site mitigation at Mojave National Preserve.

### Source:

Information was obtained during site visits and a telephone conversation. The information was provided by:

Ted Weasma, Geologist, Mojave National Preserve, 760.252.6106  
Robert U. Bryson, Ph.D., Chief of Resource Management, Mojave National Preserve, 760-252-6145

Site visits were conducted by Sean Pettersen and Greta Bloomfield, DOI-OIG

### Conclusion:

There has been minimal mitigation performed at AML sites within the Preserve. Although there were several dangerous mine shafts mitigated with cupolas or fences installed, there were many dangerous mine openings easily accessible to the public (see site visit information below).

The Preserve recently received \$600,000 for AML site mitigation. The Preserve has developed a plan to use the \$600,000.

### Details:

#### Background

Mojave National Preserve lands belonged to the Bureau of Land Management until 1994, when 14 million acres were turned into a Preserve. According to NPS' website, a Preserve differs from a Park in that hunting is still allowed within the boundaries.

According to <http://ipl.unm.edu/cwl/fedbook/cadesert.html>:

## CALIFORNIA DESERT PROTECTION ACT OF 1994

**Mojave National Preserve.** Congress made various findings about the need to protect the Mojave Desert. The Act establishes the Mojave National Preserve, consisting of approximately 1,419,800 acres, and abolishes the East Mojave National Scenic Area, which was designated in 1981. The Secretary is required to administer the preserve in accordance with National Park System laws, and must permit hunting, fishing and trapping as allowed by federal and state laws, with certain exceptions. Mining claims are governed by the National Park System laws, and grazing is permitted to continue at no more than the current level. The Secretary must submit a comprehensive management plan for the preserve to Congress by November, 1997. The Act requires the Secretary to establish a Mojave National Preserve Advisory Commission, for a ten-year period, to advise on the development and implementation of the plan. §§ 410aaa-41 through 410aaa-59.

#### AML Priorities

The Preserve prioritizes its sites using bands 1,2,3. Band 1 priorities are the projects being funded the soonest, however both bands 1 & 2 are the same level of severity, safety-wise. During our visit to the Preserve NPS personnel provided a copy of the prioritized list of sites. (priorities can be seen in the inventory I.NPS.MOJA.02 Mojave AML Inventory ■).

#### Inventory

The Preserve has an inventory of 636 known AML sites (this list was provided to them by the Bureau of Mines when the Preserve was created). Most of the sites were identified by the Bureau of Mines however about 50

were identified by NPS. 274 of the 636 (less than half) sites were inspected by NPS between 1999 and 2003, using GRD funding (I.NPS.MOJA.02 Mojave AML Inventory [REDACTED]). However, because the Preserve has identified 17,458 mining claims that were registered since the 1860s, there could be many abandoned mines that have yet to be identified.

The inventory effort ended in 2003, because no further funding was available to the Preserve for AML projects. According to Ted Weasma, "the inventory effort generally ended in 2003 but the Hackberry fire gave us funds to access damage and safety hazards associated with the mines in the burned area. So some inventory occurred in 2005 and 2006."

On June 22nd, 2005, the Preserve encountered three wildfires on Hackberry Mountain, that burned together to form the Hackberry Complex fire. Several other fires occurred the same day throughout the Preserve, that were also considered within the Hackberry Complex. Several old wooden mining structures were damaged in the fire. After the fires, unprecedented rainfall in the same areas caused abundant flooding as well as erosion. This resulted in further risks to AML structures within the complex. The inventorying conducted as a result of the fire, rainfall and erosion is the only inventorying that has been conducted since general inventory activities were conducted between 1999 and 2003.

#### Fatalities and Injuries

There are no known fatalities or injuries associated with AML at Mojave National Preserve.

#### Mitigation

Because of a lack of funding, very little mitigation has occurred in the Preserve's 14 year history. One bat gate and two cupolas have been built by the State of California and some mine features within the Hackberry Fire Complex have been fenced off and signed. Erecting fences and signs in this area were only possible

The Preserve has not diverted or closed any roads or trails to limit public access to AML sites, other than those roads and trails that were closed alongside designated Wilderness areas. Park officials told us there are dangerous mine shafts that visitors could drive their vehicles into; some as big as twenty feet across.

The Park has requested specific funding for mitigating high risk sites (project data sheets in PMIS) however, that funding has not been provided by NPS. There is also a small amount of money (\$40,000) from the Geologic Resources Division that was used to inventory sites.



Mojave AML history.PDF (see last two pages for a list of all mitigation performed within the preserve as well as a history of funding requests).

#### Funding is increasing but Barriers Exist

The Preserve is has received \$600,000 for AML mitigation as a result of Senator Feinstein's request. In 2008, Congress appropriated approximately \$2 million to address abandoned mine hazards in California, and \$600,000 was allocated to Mojave (see plan to spend this money I.NPS.MOJA.04 AML Mitigation Plan [REDACTED]). Mojave developed a plan to use these funds to mitigate high priority sites. However there are barriers to timely and effective AML mitigation. Historically, funding has not existed but now that there is money, there is not the skilled manpower to lead and conduct the mitigation. The area's most skilled AML person is Luke Sabala with Joshua Tree National Park, but his AML duties represent 20% of his time. Bob Bryson with Mojave noted that the biggest bottleneck to mitigation right now is the lack of skilled labor, however they hope to do more with contractors.

Mojave provided us two project statements for AML safety projects that will receive FY2008 funding as a result of Senator Feinstein's efforts (PMIS #110109 and #110801 (I.NPS.MOJA.03 Mojave AML Funding Requests [REDACTED])). These two statements reflect work to be done at several mines in the Seventeen-Mile Point Mining District and in the popular and more accessible Standard Mining District. Also, Mojave provided a third PMIS statement (#110168) that covers additional safety needs in the Paymaster mining area of Seventeen-Mile Point. Mojave is hopeful that by careful coordination with the State Department of Conservation's AML Unit and partnering with neighboring Park units they will be able to utilize state match funds and economies of scale to accomplish at least some of the tasks identified in the unfunded Paymaster proposal (I.NPS.MOJA.03 Mojave AML Funding Requests [REDACTED]).

#### Desert Managers Group

The Desert Managers Group (DMG) is a consortium of public agencies including the State of California, Department of Defense, Forest Service, BLM and NPS. DMG includes a Hazmat Working Group that is working on AML efforts. The DMG's next Hazmat Working Group meeting is Tuesday, April 1<sup>st</sup> in Barstow. Through their collaboration, DMG is working on several initiatives to progress with AML mitigation:

- DMG is working with the State Historic Preservation Office (SHPO) to finalize the Programmatic Agreement (PA) that will allow AML treatments without recordation of the entire site area. Only the feature being treated will require documentation and that documentation will be minimal. After the PA is finalized, a historic mining archaeologist will train individuals on PA use and the training will be sponsored by the DMG.

- NEPA templates are being created to help streamline the process.

- The California Dept of Conservation's AML unit will receive new funding at the beginning of their fiscal year (July 2008). The State will match funding for Federal AML projects and will assist with contracting out the AML project work (including design) through Joint IDIQ (indefinite delivery and indefinite quantity). In doing Joint IDIQ, funds can be obligated quickly for State matching.

- Joint IDIG. Indefinite delivery and indefinite quantity. They are doing joint IDIQ with intention to obligate funds quickly with intention to secure state matching funds and use those funds for AML mitigation, including procuring contractors to do the work.

- The California Dept of Conservation is also in process of creating a web presence for AML mitigation. The State will create an "AML Clearinghouse" which will be a forum-based website where AML mitigation

information can be shared, including contractor and materials information.

### Volunteers

We asked Mojave if DMG is considering the use of volunteers, similar to what Nevada is doing. Bob Bryson said that the work that needs to be done, would be delayed too much through a volunteer effort. With no full-time AML person to oversee the program and oversee the volunteers, Bryson said the mitigation efforts would take too long and it would be better to look for skilled contractors.

### Collateral Duty

Collateral duty: Ted Weisma is the AML coordinator within the Park and at the moment 90% of his time is devoted to AML, though normally 20% of his time is allocated to AML work. The current high percentage is a direct result of funding available.

### Site visits:

We visited Mojave National Preserve in April 2008 to determine whether NPS was protecting the public from dangers posed by abandoned mines.

The first site we visited was the Gold Cycle site. The first mine feature we came across was a deep shaft in the middle of the road. The shaft was wide enough that a car could drive into it. We also noted a ladder inside the shaft that appeared to be relatively new. The top of the ladder a few feet from the lip of the shaft and a visitor would have to climb to before being able to use the ladder. In this same area, there were several mine features that had been mitigated. There were two cupolas over two shafts and one shaft had a fence around it. The mitigation was performed by the State of California.



Dangerous mine shaft in the middle of the road. The ladder was inside this shaft. OIG photo

NPS personnel took us to what they consider "the most dangerous" shaft in the Preserve. The Johnny Shaft site sits at the end of road and, like the Gold Cycle site, the shaft was wide enough that a car could drive into it. The shaft was approximately 400 feet deep. There was no fence or signs at the site warning the public of the danger.



Dangerous shaft at the Johnny site. OIG Photo.

Another site we visited was the Oro Fino site which contains what Preserve officials consider "the most dangerous" adit within the Preserve. We drove to a very short distance to the adit and only had to walk for about a minute to reach the opening. According to a recent PMIS statement, "vehicle access is available to a point near enough for the public to easily walk to the adit and other dangerous site features and structures which have significant safety problems". According to NPS, the entrance to the mine is collapsing, the roof is caving in, and dangerous shafts inside the mine create the risk of people falling in. At one of the dangerous features at this site, there was an old dilapidated ladder leading into a mine shaft. There were no signs or fences at any of the dangerous mine features at this site.



Collapsing mine entrance at the Oro Fino site. OIG photo

We visited several more sites during our site visit, none of which had been mitigated and there were no signs or fences at any of the sites.

**Methodology:**

Information was gathered during site visit in April 2008 and telephone conversations

Submission:

Level 1 Approval:

Level 2 Approval:    Approved                      John Illson                      06/02/2008 02:44:18 PM

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### Assignment Workpaper

Prepared by: Sean Pettersen 04/24/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section I.NPS.MOJA.02 Subsection  
Program Name NPS (Site Visits)  
Subject Mojave AML Inventory

Origination Doctlink [REDACTED]

#### Purpose:

To determine how many AML sites Mojave National Preserve has on its inventory and determine if the known sites have been prioritized.

#### Scope:

NPS AML Inventory

#### Source:

Inventory and information provided by Ted Weasma, Geologist, Mojave National Preserve, 760.252.6106



Mojave AML Inventory.xls

#### Conclusion:

The Preserve has an inventory of 636 known AML sites (there are 636 sites in the attached inventory). Most of the sites were identified by the Bureau of Mines (Before the land was transferred from BLM to NPS)... (his was the inventory available when the preserve was created... over 600 sites) however about 50 were identified by NPS. 274 of the 636 (less than half)  $274/636 = 43\%$  verified by Greta Bloomfield 5/14/08 sites were inspected by NPS between 1999 and 2003, using GRD funding (I.NPS.MOJA.01 Mojave National Preserve [REDACTED]).

Mojave has continued to develop and refine (by inspecting and prioritizing the sites) an extensive and detailed targeted inventory of its most dangerous sites. Most of the inventory occurred between 1999 and 2003 but some more was performed in 2005-2006. Column "W" of the attached spreadsheet shows the priority of each of the sites that have been field truth.

#### Details:

The inventory effort ended in 2003, because no further funding was available to the Preserve for AML projects. According to Ted Weasma, "the inventory effort generally ended in 2003 but the Hackberry fire gave us funds to access damage and safety hazards associated with the mines in the burned area. So some inventory occurred in 2005 and 2006."

The Preserve prioritizes its sites using bands 1,2,3. Band 1 priorities are the projects being funded the soonest, however both bands 1 & 2 are the same level of severity, safety-wise. During our visit to the Preserve NPS personnel provided a copy of the prioritized list of sites.

#### Methodology:

Obtained inventory from the preserved and analyzed pertinent data fields.

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:44 36 PM

#### Linkage Information

#### History

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## Assignment Workpaper

Prepared by: Sean Pettersen 04/24/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** I.NPS.MOJA.03 **Subsection**  
**Program Name** NPS (Site Visits)  
**Subject** Mojave AML Funding Requests

**Origination Doctlink** 

### Purpose:

To determine whether Mojave National Preserve has made attempts to secure funding to mitigate dangers at AML sites.

### Scope:

AML Funding

### Source:

PMIS statement were provided by Ted Weasma, Mojave National Preserve, 760.252.6106



PMIS 136358.pdf PMIS 110109.pdf PMIS 110168.pdf PMIS 110801.pdf

### Conclusion:

According to Ted Weasma, Mojave has submitted several AML projects to the PMIS system since the since the Preserve was created, but none of the requests were funded by NPS. The requests were sent the Pacific West Region. Two of the projects that were denied for funding by NPS will be funded with monies recently received as result of Senator Feinstein's efforts.

### Details:

PMIS 136358 created 02/27/07 was not funded

PMIS 110109 created 09/29/04 was not funded

PMIS 110168 created 10/04/05 was not funded

PMIS 118801 created 11/04/04 was not funded

Two of the project statements for AML safety projects that will receive FY2008 funding as a result of Senator Feinstein's efforts (PMIS #110109 and #110801). These two statements reflect work to be done at several mines in the Seventeen-Mile Point Mining District and in the popular and more accessible Standard Mining District. Also, Mojave provided a third PMIS statement (#110168) that covers additional safety needs in the Paymaster mining area of Seventeen-Mile Point. Mojave is hopeful that by careful coordination with the State Department of Conservation's AML Unit and partnering with neighboring Park units they will be able to utilize state match funds and economies of scale to accomplish at least some of the tasks identified in the unfunded Paymaster proposal.

### Methodology:

Obtain and reviewed PMIS statements related to AML mitigation projects and discussed funding with Preserve personnel.

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:44 56 PM

[Linkage Information](#)

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**Status** Approved **Request Review**

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**Confidentiality** Standard

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 04/27/2007

Assignment Number: C-IN-MOA-0004-2007  
 Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section: J.  
 Assignment Program Name: BLM (Overall)

**Objective**

Describe relevant facets of BLM's AML program.

**Background**

**Assignment Steps**

<b>J – Bureau of Land Management (Overall)</b>			
<b>Audit Step</b>	<b>Staff</b>	<b>Justification for Step Addition or Removal</b>	<b>Work Paper Reference</b>
1 Document BLM AML program (policy, procedures, budget, authorities)		Added this step to adequately describe BLM's AML program.	G.BLM.01 BLM AML Background
2 Document injuries or fatalities at abandoned mine sites on BLM land		Added this step, in addition to work done in Survey, to describe health and safety issues related to AML sites.	K.BLM.Virginia City.03 AML deaths K.BLM.American Flat.01 Safety Issues K.BLM.Arizona.06 Site Visits K.BLM.04 Fatality at the Goat Basin Mine
3. Obtain inventories from BLM and Parks and determine how the data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.			J.BLM.01 CO BLM State Office Inventory SGC J.BLM.02 BLM AMM Data - Site Totals SGC J.BLM.03 BLM NV - Winnemucca Field Office SGC J.BLM.04 BLM NV - Elko Field Office SGC J.BLM.04.01 Response to OIG Questionnaire J.BLM.05 BLM NV - Las Vegas Field Office SGC J.BLM.06 BLM NV - Carson City Field Office SGC J.BLM.06.01 Response to OIG Questionnaire J.BLM.07 BLM NV - Battle Mountain Field Office SGC J.BLM.08 BLM NV - Ely Field Office SGC J.BLM.09 BLM NV State Office SGC J.BLM.11 State of NV - Division of Minerals SGC J.BLM.12 BLM NV MOU with State of NV SGC J.BLM.17 BLM AMM System Problems SGC J.BLM.18 BLM AZ - State Office SGC J.BLM.18.01 Responses to OIG Questionnaire
4. Determine how BLM ensures that identified AML sites with safety issues are included on an inventory (e.g. is there a process for field personnel to report AML safety hazards?)			J.BLM.13 BLM AML Program Policy Handbook
5. Determine if the BLM has a specific AML policy for staff and visitor safety.			J.BLM.13 BLM AML Program Policy Handbook
6. Obtain BLM criteria for prioritizing AML sites.			J.BLM.13 BLM AML Program Policy Handbook J.BLM.20 AML Strategic Plan
7. Does BLM adequately inform the public about abandoned mine hazards at the visitor centers, in literature, or on the websites?			J.BLM.13 BLM AML Program Policy Handbook J.BLM.14 Website Safety Information J.BLM.15 AML Safety Literature
		Funding of BLM AML program is covered under Step 1. Specific issues related to Clean Water Act are not relevant to direction audit has	

\_\_\_\_\_ evolved. \_\_\_\_\_

**Conclusion**

**Overall Conclusion**

BLM HQ AML program has no line authority over state and field office BLM staff to ensure AML program activities are accomplished and is therefore rendered ineffective [auditor opinion]. AML funding of \$8.5 to \$10 million per year J.BLM.30 Funding History for AML for the last 7 years, compares unfavorably to the needs identified in the Strategic Plan (only 200 sites) of \$130 million. These is no AML budget line item or subactivity to support the program. B.BLM.02 BLM AML Funding Many field office staff perform AML duties on a collateral basis J.BLM.31 Time Charged to AML Program at 5% time or less and many have not been trained in basic program functions such as use of the AMM database to report the identification and mitigation of AML sites. J.BLM.29 AML Staff Qualifications Staff have been encouraged not to report sites and have criticized or threatened if they do report AML sites C.BLM.CAStoffice.02 CA Program Oversight B.02.02 Discussions with Peter Graves K.BLM.Arizona.06 Site Visits C.BLM.CAStoffice.04 BLM Inventory - Don't Ask Don't Tell. During our site visits K. BLM (Site Visits), we identified numerous dangerous historic AML features (open shafts, dilapidated structures, contaminated mine tailings) that had not been mitigated either temporarily with signs and fences or permanently. Based on these observations and findings, we conclude that BLM's AML program has been ineffective for many years because dangerous sites have not been mitigated, the program has been undermined by BLM management attitudes and it has been neglected and marginalized because of lack of budget visibility and dedicated funding and staffing at levels sufficient to meet the needs [Auditor Conclusion]

To help resolve these issues, we believe that the Director BLM should issue a clear policy statement that  
 a.. Supports the AML program and its goals.

b Forbids retaliation against employees for identifying or reporting AML sites.

c Requires field office management and staff to comply with all AML policies and procedures.

During our site visits to AZ, CA and NV (Audit section K), we discussed the successful use of full-time, zoned AML staff in Arizona, particularly in the Phoenix District Office. BLM officials in AZ thought the use of dedicated, experienced, full-time staff who could oversee AML activities at numerous field offices was a more effective approach than using a number of staff with AML as a collateral duty allocated minimal time. K.BLM.Arizona.03 AZ Zoned AML Management [Auditor Opinion] We believe the use of dedicated, experienced, trained, full-time AML staff at the appropriate state, district or field office level could be a way to more effectively use limited AML funds to accomplish, at least, minimal, temporary mitigation (evaluations, signs, fences) of sites with both safety and environmental hazards. In our opinion, such minimal mitigation precautions could likely prevent additional injuries and deaths from AML hazards.

**J.BLM.19 Organizational Structure**

- Only BLM senior managers (Director, Deputy Director, Assistant Directors, State Directors, Assistant State Directors, Field Managers) have line authority within BLM.
- The HQ BLM AML program lead has no line authority over his program since he is not one of the managers listed above.
- BLM operates in a very decentralized manner by design.
- In 2007, BLM announced a reorganization plan that would move to a three-tier structure at the field level, e.g., State Offices, District Offices, Field Offices.
- The reorganization is to be implemented over 2 years.

**A.03.02 Initial Discussion with George Stone**

The key points from the conversation related to our audit are:

- There is no coordination or direction at the Department level for AML. The Department is generally not involved with safety mitigation at AML sites with the exception that DOI NEPA policy dictates what happens at a mitigation site.
- There are no regulations, policy, or Department Manual section for hardrock AML mitigation.
- According to Mr. Stone, the AML program is relatively small and the program is not a line item in the budget.. There are four sources of funding, divided among 11 State Offices. The sources of funding are:

Source of Funding	Total Amount	Portion Related to AML
Soil, Water and Air Management	\$35 million	\$8.5 million
Hazard Management and Resource Protection (Hazardous Materials)	\$16 million	\$1.5-2 million (\$400k set aside for large physical safety projects e.g. > \$50K each; state offices compete for these \$)
Central Hazmat Fund (CHF)	\$ 3 million	\$2.5 million
Southern Nevada Public Lands Management Act (SNPLMA)	??	\$.5 million (Nevada Only)
Total (approximately)		\$13.5 million

- The cells highlighted in yellow represent funding allocated to AML from BLM budget activities. The total annual allocation is about \$10 million (\$8.5 + \$1.5). (Math Verified - John Illson 7/19/07) These funds are those that are directly controlled by BLM HQ to support AML initiatives.
- According to Mr. Stone, only \$2.5-\$3 million is available to mitigate physical safety hazards at AML sites. The emphasis of the AML program is water quality and that's where a majority of the dollars are spent. State Offices compete for the funding. Reference AML National Strategic Plan and State Office Plans at www.blm.gov/aml.
- Accidents, injuries and fatalities drive prioritization of AML sites wrt physical safety. BLM however does not track these data as far as Stone knows.
- Dollars provided for site mitigation were to be used as leverage to form partnerships with States and private entities to cleanup watersheds. According to Mr. Stone, Colorado and Utah are doing very well at forming these partnerships, Montana has done well working with the State, and California has done "so-so". State Offices should be sitting with partners to cleanup key watersheds. Documentation for partnership agreements should be at the State Offices (ie. Who are the partners and how the decision was made to select sites). Stone thinks the degree of success in leveraging with partners is a good audit topic.
- Between the AML program and the CHF, BLM knows where the major sites are.
- In BLM, AML duties are collatera ; training is uncertain, effect of EPA's "All Appropriate Inquiry" rule uncertain (rule relates to requirements that must be followed to qualify for some protection from CERCLA responsibility for cleanup of hazardous sites).
- Quote relating to not inventorying all known sites, "So what? We certainly have enough to do already." George Stone.
- Stone does think the fact that feds "invite" visitors via recreation areas, trails, fees, etc increases the need to mitigate physical safety issues in these areas. Encroachment is also driving increased risks due to physical safety hazards.
- BLM's inventory consists of 11,500 sites with 45,000 mine features. There are a significant number of sites where a mine feature is labeled "other" and Mr. Stone doesn't know what these are.
- Scope Limitation: Mr. Stone does not believe that we should include Hazmat sites in the scope of this audit since our office has recently issued a report addressing Hazmat sites.

**J.BLM.02 BLM AMM Data - AMM Deficiencies**

Because of the deficiencies noted in AMM below, we recommend that BLM:

Validate existing data, develop procedures for ongoing data collection and ensure that data in the AMM is complete, accurate, and consistent.

**AMM system is incomplete**

- BLM field office AML staff are not entering known AML sites into the AMM database
- Some BLM staff are not trained to use the AMM database and have not entered any sites into the AMM database.
- BLM AML staff are collateral duty and have limited time and resources to enter sites into the AMM database.
- BLM state strategic plans have AML sites listed which have not been entered into the AMM database.
- BLM staff are not entering all information fields on AML sites into the AMM database to provide the necessary information to prioritize sites for mitigation.
- BLM field office staff are keeping local lists of AML sites that are not listed in the AMM database.
- Thousands of additional AML sites were identified through the Saginaw Hill Project which are not listed in the AMM database.
- The State of Nevada and California have thousands of additional AML sites identified on BLM land which have not been listed in the AMM database.

**AMM system is inadequate to manage the AML program**

- The AMM database does not have a priority ranking system in place to determine the highest priority AML sites requiring mitigation.
- The AMM database is not used by BLM State Office to prioritize AML sites for mitigation and remediation.
- The AMM database is not used by BLM HQ to prioritize funding for mitigation and remediation of AML sites.
- The AMM database does not have complete site characterization information to determine mitigation or remediation action required.
- The AMM database includes a significant amount of sites that were brought over from the old Bureau of Mines data and Mass Mills data which provide very little information regarding the AML sites.
- Many sites listed in the AMM database have never been verified by BLM field staff to identify mitigation or remediation required at the site.
- The AMM database does not have any identification of active mining claimants.

**Sites have been mitigated in California, for example, that have not been entered into AMM.**

- BLM reported a number of sites as mitigated since 2004 in their response to the Rand Mining District Flash Report, but these sites were not reported as mitigated in AMM and were not even listed in AMM

The CA BLM Strategic plan states that "Current estimates regarding the total number of abandoned mines in California is roughly 50,000. An estimated 13,000 abandoned mines exist on BLM-administered public lands, of which 1,000 may impact water quality and over 3,000 contain hazardous mine openings. BLM California currently has an inventory of 520 known abandoned mine sites on BLM-administered public lands. This inventory includes 60 mines that may impact water resources within 17 priority watersheds; over 120 sites likely pose physical safety hazards. To date, 8 impaired water quality sites have been remediated. Approximately 88 sites with physical safety hazards have been remediated, to date (located on page 33 of attached CA AML Strategic Plan)." The AMM database has only 407 sites listed indicating that CA has an additional 113 sites that have been identified as impacting water quality which are not listed on the AMM database.

**C.BLM.HQ.01 BLM HQ Meeting with George Stone**

1. BLM does not have a repository to collect data for injuries and fatalities that occurred on BLM AML sites.
2. BLM has no requirements in place to ensure they have a complete and accurate inventory of all known AML sites on BLM land.
3. BLM has no requirements for BLM state offices to prioritize sites for cleanup, nor does the BLM HQ office prioritize lists for cleanup on AML physical safety sites.
4. Post-FLPMA mining sites are not entered into AMM. BLM money is not going to be used to fix these sites. These sites are being left without anyone to mitigate the safety hazards at the site.
5. No definition of an abandoned mine. Specifically, there are no abandoned mine definitions for sites that were abandoned before 3809 legislation was enacted.
6. Quarries are not included as a part of the AML program. However, no one is dealing with mitigating abandoned quarry sites.

**C.BLM.CA.Stoffice.04 BLM Inventory - Don't Ask Don't Tell**

There are two main issues with the AML program that have inhibited the inventory of AML sites. First, there is a culture of don't ask, don't tell. This means that AML staff are discouraged and in some cases told not to report a site. Second, almost half of the hazmat budget for BLM CA is taken for the State Director's contingency funds. Out of the \$1.4 million in hazmat funding, \$600,000 goes into the contingency fund and only \$300,000 is actually spent on projects. These two issues have been the leading reason that sites have not been inventoried and remediated.

**B.BLM.02 BLM AML Funding**

BLM has no dedicated source of funding for the AML program. Two funding sources are being used to help fund AML cleanup; water quality and hazmat funding. AML sites that have a water quality component can be mitigated using water quality funding (BLM 1010 budget subactivity). A portion of the hazmat funding (BLM 1640 subactivity) was set aside for the AML program. And a Special Cleanup Fund was established using hazmat funding to ensure high risk sites are mitigated. AML projects can compete for funding from the Special Cleanup Fund, but they must be ranked a high priority by a special committee that allocates the funding.

**B.CASTOffice.02 CA AML Collateral Duty Positions**

The main problem with the AML program is that the field offices have individuals with AML as a collateral duty. There are no full time AML people in the state of CA other than one person at the state office. A specialized team approach or a full time AML staff approach would be more helpful than the collateral duty method being used by the BLM currently. Everyone agrees with the notion that there needs to be more of a district level approach with full time personnel in each district for the AML program.

**J.BLM.16 07/20/07 ROD Chris Ross BLM Nevada**

Chris concurred that the physical and environmental hazards are a big problem in Nevada. Chris stated that the environmental hazards are difficult to document, versus a physical hazard such as falling down a hole. Chris stated that getting cancer 30 years from now and not knowing if it was from an environmental contamination or from smoking a pack a day, doesn't exactly help with pinpointing the cause and the valuating the potential risks. So as a result, he said BLM needs something really dramatic, in order to get attention. Chris used Castleton for example and that it's a huge problem and is known, but will take \$10 million to mitigate and BLM's current funding is just a drop in the bucket compared to the cost to fix this one site.

**J.BLM.12 BLM NV MOU with State of NV**

- The Nevada Division of Minerals (NDOM) and BLM signed a Memorandum of Understanding (MOU) in 1994 regarding abandoned mine lands.
- NDOM estimates there may be 50,000 hazardous mine openings on BLM land in Nevada.
- NDOM has ranked over 11,186 hazardous mine openings in the state and secured (usually by fencing) 8,631 openings.

- In FY2005, NDOM secured 245 openings on BLM land and ranked another 220 openings.
- NDOM issues a form letter to claimants advising them that hazards exist on their claims and informing them of their responsibilities as claimants to address the hazards.
- The letter includes a Hazard Inventory Sheet prepared by NDOM that describes field work performed to locate and rank mine hazards (pages 2-5 of attachment "Example of Claimant Letter.PDF").

#### J.BLM.20 AML Strategic Plan

The AML Strategic Plan is a comprehensive document describing BLM's AML program and its elements. The Plan covers the period from FY03 to FY06 and sets the stage for the development of succeeding plans. Key points are:

- Funding for AML mitigation is provided by a number of different budget sources (1010, 1640, 2640).
- More than 63 million people live in the West, over 22 million are within 25 miles of public land and recreational use of public lands is increasing all leading to increased risks to the public from AML physical safety and environmental hazards.
- BLM's objectives are to identify, prioritize, and remediate sites, report progress and conduct outreach.
- BLM's current inventory is not complete but includes over 11,000 AML sites.
- BLM has established a priority scheme for ranking the environmental and physical safety risks of AML sites.
- BLM uses a peer review process that is evolving.
- AML program and BLM's Solid Minerals program need to develop policy regarding mining claimants..
- AML sites can present financial liability issues for the Department.
- Best practices are an important element of the program.
- Funding identified as needed for mitigation of the Randsburg area in the Strategic Plan is less than that recently estimated as needed by the State Director.
- **[Auditor Conclusion]** The BLM AML Strategic Plan provides a framework for adequate identification, prioritization and funding of AML environmental and safety concerns. While the Plan may understate total funding of large projects such as Randsburg (costs were not well known when the Plan was published in 2006), the Plan provides a good basis for budget justifications and for the establishment of an AML budget line item.
- **[Auditor Conclusion]** While the Plan acknowledges problems with the AML inventory, it does provide a prioritized listing of project needs as identified by the States that can be used as an initial high-priority inventory and that can be augmented in the AMM as additional sites are identified and characterized.

#### J.BLM.22 AML Strategic Plan Budget Needs

The BLM AML Strategic Plan outlines the following funding needs for water quality (environmental) and physical safety AML projects identified in the State plans included in the Strategic Plan.

- Over \$130 million is needed to mitigate the safety and environmental hazards identified in the Plan, although the Plan understates likely needed costs for mitigation of the Randsburg site by estimating only \$12 million when the CA State Director has estimated \$170 million for mitigation in the Rand Mining District.
- \$113,614,000 is needed for identified environmental projects. Average project cost is \$1,136,000.
- \$16,491,000 is needed for physical safety projects. Average project cost is \$174,000. Projects typically include a number of features (such as shafts or adits) that must be mitigated).
- Most environmental project funding is for sites in Utah, California and Nevada.
- Most physical safety project funding is for sites in Utah, Nevada and Arizona.
- **[Auditor Conclusion]** Mitigation of environmental hazards, on average, is significantly more costly than mitigation of physical safety hazards.
- Given that the program receives about \$8,500,000 per year from the soil, air and water subactivity and perhaps \$1.5 million from haz materials subactivity, the program typically receives less than \$10 million per year, has been chronically and drastically underfunded and could not begin to meet the needs (\$130 million) identified for all of the projects in the AML Strategic Plan. The lack of a budget subactivity for AML lessens the visibility of the program and leads to funding uncertainty. Significant progress in mitigating AML sites cannot be made unless a more substantial, sustained commitment of resources is made to the program within an established AML budget subactivity. **[Auditor Opinion]**.

#### J.BLM.21 BLM/USFS AML 10 Year Report

- The report provides an excellent summary of 10 years of effort on the part of BLM and the USFS, as well as states, local governments and partners, in addressing AML hazards on public lands.
- Between 2000 and mid-2007, BLM had mitigated physical safety hazards at more than 3,000 sites.
- Between 2000 and FY2003, BLM had restored water quality at 281 sites.

#### J.BLM.23 Discussion with Roger Haskins

- Validity exams could be helpful to BLM in resolving claimant responsibility for hazards whether the result is a valid or invalid claim.
- BLM needs a policy with regard to contacting claimants about hazards.
- BLM needs to ensure federal investments in cleanups are not jeopardized by future mining claimant activities.

#### J.BLM.25 Surface Management under Mining Laws

43 CFR 3809 describes how mining is to occur on public lands. The regulation defines the purpose of preventing unnecessary or undue degradation of public lands from mining. It defines terms such as casual use and reclamation and classifies mining operations as casual use, notice-level operations and plan-level operations. Casual use causes no or negligible disturbance to public lands, notice-level operations are exploratory in nature and disturb 5 acres or less while plan-level operations are operations that cause more disturbance than casual use or notice-level operations. For plan-level operations, a plan must be submitted and approved by BLM before operations commence. The plan must include a reclamation plan that shows how disturbances created by mining will be mitigated in accordance with specific performance standards. An operator that conducts operations under a notice or plan must submit a financial guarantee that covers the cost of reclamation as if BLM were to hire a third party to conduct reclamation actions.

#### J.BLM.26 Use and Occupancy under Mining Laws

Federal regulations allow occupancy on public lands for specific purposes related to mining. Occupancy must:

- Be reasonably calculated to lead to the extraction and beneficiation of minerals and exist for:
  - (a) Protecting exposed, concentrated or otherwise accessible valuable minerals from theft or loss;
  - (b) Protecting from theft or loss appropriate, operable equipment which is regularly used, is not readily portable, and cannot be protected by means other than occupancy;
  - (c) Protecting the public from appropriate, operable equipment which is regularly used, is not readily portable, and if left unattended, creates a hazard to public safety;
  - (d) Protecting the public from surface uses, workings, or improvements which, if left unattended, create a hazard to public safety; or
  - (e) Being located in an area so isolated or lacking in physical access as to require the mining claimant, operator, or workers to remain on site in order to work a full shift of a usual and customary length. A full shift is ordinarily 8 hours and does not include travel time to the site from a community or area in which housing may be obtained.

#### J.BLM.27 Trespass under FLPMA

- Federal regulations developed after FLPMA (Rights of Way under the Federal Land Policy Management Act) define trespass as using, occupying, or developing the public lands or their resources without a required authorization or in a way that is beyond the scope and terms and conditions of your authorization.
- Trespass is prohibited
- Trespass can be willful whereby it is consciously done even if the trespasser believes it is legal or
- Non-willful if the trespass is inadvertent or by mistake.

**J.BLM.28 BLM CDD AML 5-Year Plan**

The CDD 5-Year Plan notes:

- there are about 20,000 AML sites in the CDD
- about 8,000 sites are on BLM land
- 400 of these 8,000 sites may impact water quality
- 2,000 of these 8,000 sites contain hazardous mine openings
- BLM CA has only 720 known abandoned mines on their inventory
- the inventory includes 6 mines that may impact water quality in 7 watersheds
- no water quality sites have been remediated
- 300 sites with safety hazards have been temporarily or permanently mitigated.

**J.BLM.29 AML Staff Qualifications**

- AML field staff not in a zoned position or dedicated to a specific project spend only about 18% of their time on AML duties.
- These staff have varied relevant training for their AML duties.
- These staff have limited AML experience and rarely use the AMM.
- These staff have limited knowledge of AML program documents (Policy, Strategic Plan, Handbook) and little experience in reporting program accomplishments. One staff member considers the program documents to be "junk."
- Most of the staff have submitted AML projects for funding and have managed \$25,000 or more in AML funding for projects.
- 9 of the 17 field staff (yellow highlights below in table) had relatively little experience (less than 10 sites) inventorying, characterizing or remediating environmental or safety sites.
- BLM had no minimum training qualifications for AML staff and that most collateral field staff spent little time on AML duties including posting signs and fencing sites. Ideally, training of AML staff would include locating, reporting, characterizing, and mitigating AML sites. In addition, training in cost estimating and program management would be useful as would training in complex environmental laws and regulations.
- [Auditor opinion] Part of the problem in prioritizing projects for funding K.BLM.Rip Van Winkle.01 Site Visit is that staff have little familiarity with AML program policy and guidance.
- [Auditor opinion] The collateralized field staff who spend less than 1 day per week on AML duties marginalizes the program, minimizes interest in the program, neglects the needs of the program and contributes to lack of accurate program information as well as poor program effectiveness.
- Collateralized field staff do not have consistent training relevant to their AML duties which also limits the program's effectiveness. For example, the fact that many staff have not had training in characterization of AML sites has likely limited the assessment and recording of AML sites and has contributed to BLM's ignorance of environmental hazards at AML sites.
- [Auditor Opinion] Successful performance of AML duties requires specific training to manage both physical safety and environmental hazards.
- [Auditor opinion] AML field staff should be located at District offices and be responsible for the field offices under the District. AML staff should be full-time (assuming AML issues are significant in the District) and should have relevant educational and training qualifications to discharge their AML duties.

**J.BLM.30 Funding History for AML**

- From 2000 to 2006, funding for AML from the 1010 subactivity varied between \$9.5 million and \$10 million.
- In 2007 and 2008, funding decreased to about \$8.4 million.
- [Auditor Opinion] Decreases in annual funding for the AML program, such as seen in 2007 and 2008, could jeopardize efforts to temporarily mitigate sites (evaluate sites, post signs, fence sites) and would impact negatively efforts to more permanently mitigate sites.

Questionnaires or phone calls were sent or made to the field offices in California, Nevada and Arizona, specifically to the AML coordinators in those field offices in order to obtain answers to relevant questions. Results are shown below.

**Field Offices**

**Elko Field Office: J.BLM.04 BLM NV - Elko Field Office**

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory completed for AML sites.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database because BLM does not keep its own list of AML sites.

**J.BLM.04.01 Response to OIG Questionnaire**

- Elko considers Rip van Winkle as highest priority site K.BLM.Rip Van Winkle.01 Site Visit
- No reported deaths or injuries on Elko lands
- State has mitigated 9,024 out of 11,625 mine openings on all NV lands as of 6/5/07.

**J.BLM.03 BLM NV - Winnemucca Field Office**

Winnemucca Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory done a number of years ago - but no current inventory has been completed.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database because BLM does not keep its own list of AML sites.

**J.BLM.05 BLM NV - Las Vegas Field Office**

Las Vegas Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory completed for AML sites. Although Edward thinks there are about 340 high priority sites close to populated and recreation areas.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database because BLM does not keep its own list of AML sites.

**J.BLM.06 BLM NV - Carson City Field Office**

Carson City Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory completed for AML sites. Only a list with known larger AML sites is kept and sent to the State Office.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database.

**J.BLM.06.01 Response to OIG Questionnaire**

- List of priority Nevada AML Environmental sites developed in conjunction with State and other agencies in NV provided:
  - American Flat was listed as an unranked site in 1999 and in 2006
- There have been injuries at mill sites in Carson City Field Office including American Flat and one death at American Flat.
- American Flat is still accessible to the public. **K.BLM.American Flat.01 American Flat Mill Safety Issues**
- The Carson City Field Office has mitigated several large sites that had environmental hazards over the past 10 years; sites with safety hazards are addressed by Nevada Division of Minerals.

**J.BLM.07 BLM NV - Battle Mountain Field Office**

Battle Mountain Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory completed for AML sites.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list. Inspectors will GPS sites they find while completing their normal work duties.
- \*No AML sites are being entered into the AMM database.

**J.BLM.08 BLM NV - Ely Field Office**

Ely Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory completed for AML sites. Only a list with known larger AML sites is kept and sent to the State Office.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database. In fact, Lynn had not even heard of the AMM database.

**J.BLM.09 BLM NV State Office**

BLM NV Issues:

1. BLM NV does not inventory its own sites, but rather relies on the State of NV to inventory its sites through \$50,000 of annual funding provided by BLM.
2. BLM NV does not have its sites in the AMM database because they have been unable to upload the State information into the AMM database. There are more than 2000 sites that need to be added to the AMM database from NV.
3. BLM applies for funding from the Army Corps of Engineers for site characterization and then coordinates with a group of State and Federal agencies called NAMLIT which meets to determine how the money should be spent

**J.BLM.18 BLM AZ - State Office**

BLM AZ Issues:

1. BLM AZ does not have an updated inventory of its AML sites, but rather relies on old data from the Bureau of Mines and the AZ State Mine Inspector. This information has not been updated since the mid 1990s.
2. BLM AZ does not have all of its sites in the AMM database because they do not have sufficient staff to enter the information into the AMM database.
3. BLM does not have an active inventory process in place to identify AML sites, BLM only identifies sites when AML staff happen to be in the field and find sites.
4. All sites pulled from the Bureau of Mines data and the Mills data have not been field verified by BLM staff in AZ.

**C.BLM.02 BLM CA - Needles Field Office**

Needles Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory done a number of years ago with very limited information.
- \*No active inventory process is in place to update AML sites.
- \*No AML sites are being entered into the AMM database because no one in the office is trained on using their system.

**C.BLM.03 BLM CA - Hollister Field Office**

Hollister Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory has approximately 40 total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*All of the sites have been entered into the AMM database.

**C.BLM.04 BLM CA - Ridgecrest Field Office**

Ridgecrest Field Office:

- \*6 AML incidents including; falls, injuries, fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*Inventory has approximately 20,000 to 30,000 total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*Most sites have not been entered into the AMM database.

**C.BLM.05 BLM CA - Folsom Field Office**

Folsom Field Office:

- \*1 injury has occurred at a BLM AML sites that was identified by BLM.

- \*No Inventory of total AML sites.
- \*No active inventory process is in place to update AML sites.
- \*Most sites have not been entered into the AMM database.

**C.BLM.06 BLM CA - Palm Springs Field Office**

Palm Springs Field Office:

- \*1 injury at BLM AML site called Steel Peak in which a man fell down a 20 ft shaft and was injured. However, this field office does not have a process to identify and track injuries and fatalities.
- \*No complete inventory of AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database because the Cheryl does not know how to use AMM and enter sites.

**C.BLM.07 BLM CA - Barstow Field Office**

Barstow Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No inventory of AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**C.BLM.08 BLM CA - Redding Field Office**

Redding Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No formal inventory of AML sites. However, Ron did help complete the Saginaw project to list possible high priority AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**C.BLM.09 BLM CA - Bishop Field Office**

Bishop Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No full inventory of AML sites, but the office does have a list of 255 AML sites needing to be closed from information provided by the Bureau of Mines.
- \*No active inventory process is in place to update AML sites.
- \*Some sites have been entered into the AMM database.

**C.BLM.10 BLM CA - Eagle Lake Field Office**

Eagle Lake Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No AML sites in this field office area.
- \*No active inventory process because there are no AML sites.
- \*No sites have been entered into the AMM database because there are no AML sites.

**C.BLM.11 BLM CA - Alturas Field Office**

Alturas Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No full inventory of AML sites, but the office did perform a check of AML sites 5 years ago and identified some smaller AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**C.BLM.12 BLM CA - Arcata Field Office**

Arcata Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM.
- \*No full inventory of AML sites, because there are only prospecting holes, no large AML sites.
- \*No active inventory process is in place to update AML sites.
- \*No sites have been entered into the AMM database.

**C.BLM.Cedar City FO.01 BLM AML Inventory- Cedar City FO**

- Not all abandoned mine inventory information collected by field offices is being transmitted to State BLM offices
- Not all abandoned mine inventory information collected by field offices is being input to BLM's national AML inventory (AMM).
- Hence, the national BLM AML program is not aware of all of the potential physical safety hazards existing at abandoned mines on BLM lands and cannot most effectively plan or allocate budgets.

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Submission: Submitted William McMullen 07/18/2008 09:25:40 AM

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Level 2 Approval: Approved John Illson 07/21/2008 03:28:12 PM

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**Record of Discussion**

Prepared by: Stephanie Christian 05/15/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.01 **Subsection:** Audit J.1  
**Program Name:** BLM (Overall)  
**Subject:** CO BLM State Office Inventory

**Origination Doctlink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
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Ken Smith	BLM's National Science and Technology Center	Lakewood, CO	303-236-0206	
Robert Robinson	Reclamation Specialist	Lakewood, CO	303-239-3642	

**Location:** BLM CO State Office

**Date/Time:**

05/15/2007 01:00 PM

**Purpose**

To determine how the BLM CO AML inventory data was compiled (e.g. ongoing process, land survey) and what the process is for updating the inventory data.

**Scope**

BLM CO AML Inventory

**Conclusion**

The BLM CO AML inventory effort started in the early 1990s using MAS/MILS data and USGS quad maps. These were used as the guides and then sites were visited and field verified. Once staff went to the sites, they filled out inventory forms and entered the information into the BLM CO AML inventory list. Originally there were around 2100 sites and as the years go by there are an additional 100-150 sites found and added to the inventory each year. Rob did indicate that the BLM CO AML inventory has not all been entered into the overall BLM AMM inventory. Therefore the AMM inventory does not have a complete listing of all CO AML sites. In addition to the BLM AML inventory, the State of Colorado also has an inventory they created in the early 1980s. The state provides the primary funding for closing/mitigating/remediating AML sites on all CO land, public and private using money from the SMACRA allocations.

BLM also provided maps that clearly indicate the problem of accurately identifying ownership of lands in that many existing BLM parcels are the remnants between mining claims and these remnants have never been surveyed nor have GPS coordinates ever been determined for remnant boundaries. Hence, it is difficult to accurately determine whether a mine feature is on BLM land and should be included in an AML inventory. While remediation of mining features around Central City is being managed by EPA, other areas not designated as Superfund sites in Colorado present similar ownership/inventory difficulties.

**Summary**

The BLM CO AML inventory effort started in the early 1990s using MAS/MILS data and USGS quad maps. These were used as the guides and then sites were visited and field verified. Once staff went to the sites, they filled out inventory forms and entered the information into the BLM CO AML inventory list. Originally there were around 2100 sites and as the years go by there are an additional 100-150 sites found and added to the inventory each year. According to Rob, an AML site is one mining area which contains at least 1 feature at the site. Some people grouped features and listed them all as one site to expedite the data entry process. Rob did indicate that the BLM CO AML inventory has not all been entered into the overall BLM AMM inventory. Therefore the AMM inventory does not have a complete listing of all CO AML sites.

According to Ken and Rob, BLM CO's inventory includes sites from all programs. This inventory specifically includes AML sites from the salable, leasable, oil, gas and hard rock program areas. The BLM CO office does not limit their AML inventory to only specific commodities, they include all commodities in their inventory. The inventory process is difficult for BLM because of the scattered nature of BLM property. A lot of BLM property has been patented and become private property, but there are many small pieces scattered between private patented lands. This makes inventorying and determining if AML sites are on BLM property very difficult. The only truly accurate way to determine BLM property is to have a survey team go out and survey the land and determine BLM property, however, this has not been done for the majority of BLM property.

In addition to the BLM AML inventory, the State of Colorado also has an inventory they created in the early 1980s. This inventory is in paper hard copy only, as the data was kept on a computer which became obsolete before the information could be transferred to another system. The state uses their SMACRA funding to both inventory and close AML sites. Their inventory is primarily made up of coal sites, but does include some non-coal sites. The state provides the primary funding for closing/mitigating/remediating AML sites on all CO land, public and private using money from the SMACRA allocations. BLM receives only \$50,000 to \$75,000 per year to fix AML sites, so most sites being mitigated are being done by the state through SMACRA funding.

Ken and Rob also showed us several maps of the Central City CO area, a current EPA Superfund site. The maps clearly indicated the problem of accurately identifying ownership of lands in that many existing BLM parcels are the remnants between mining claims and these remnants have never been surveyed nor have GPS coordinates ever been determined for remnant boundaries. Hence, it is difficult to accurately determine whether a mine feature is on BLM land and should be included in an AML inventory. While remediation of mining features around Central City is being managed by EPA, other areas not designated as Superfund sites in Colorado present similar ownership/inventory difficulties.

An example of a map of the Central City area is shown below: Central City is just off of the top of the map. BLM lands are highlighted in gray and illustrate the fragmented nature of public land ownership in this area.



Map of land around Central City.pdf

Submission:	Submitted	Stephanie Christian	05/16/2007 10:42:45 AM
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**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Stephanie Christian 05/18/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.02

Subsection: Audit Step 1

Program Name: BLM (Overall)

Subject: BLM AMM Data - AMM Deficiencies

Origination Doctlink: 

### Purpose

To obtain inventories from BLM determine how the data was compiled and any deficiencies

### Scope

BLM AMM Database

### Source

Cheryl Laudenbach  
LR2000 Mining Claims User Support Specialist  
Protection and Response Information System  
(PRIS) User Support Specialist  
Land and Resources Projects Office, WO-330D  
Lakewood, Colorado  
Voice: 303-236-1955  
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Site Status and who entered.xls



Cheryl Laudenbach - Data Sheet.PDF

### Conclusion

Because of the deficiencies noted in AMM below, we recommend that BLM:

■ Validate existing data, develop procedures for ongoing data collection and ensure that data in the AMM is complete, accurate, and consistent. To be used effectively, the AMM must include data necessary for budget justification and project monitoring, tracking, and management at the national level (Conclusion drawn based on the AMM deficiencies listed below SGC).

### AMM Deficiencies: ■

#### AMM system is incomplete

- BLM field office AML staff are not entering known AML sites into the AMM database.
- Some BLM staff are not trained to use the AMM database and have not entered any sites into the AMM database.
- BLM AML staff are collateral duty and have limited time and resources to enter sites into the AMM database.
- BLM state strategic plans have AML sites listed which have not been entered into the AMM database.
- BLM staff are not entering all information fields on AML sites into the AMM database to provide the necessary information to prioritize sites for mitigation.
- BLM field office staff are keeping local lists of AML sites that are not listed in the AMM database.
- Thousands of additional AML sites were identified through the Saginaw Hill Project which are not listed in the AMM database.
- The State of Nevada and California have thousands of additional AML sites identified on BLM land which have not been listed in the AMM database.

#### AMM system is inadequate and inconsistent to manage the AML program

- The AMM database does not have a priority ranking system in place to determine the highest priority AML sites requiring mitigation.
- The AMM database is not used by BLM State Office to prioritize AML sites for mitigation and remediation.
- The AMM database is not used by BLM HQ to prioritize funding for mitigation and remediation of AML sites.
- The AMM database does not have complete site characterization information to determine mitigation or remediation action required.
- The AMM database includes a significant amount of sites that were brought over from the old Bureau of Mines data and Mass Mills data which provide very little information regarding the AML sites.

- Many sites listed in the AMM database have never been verified by BLM field staff to identify mitigation or remediation required at the site.
- The AMM database does not have any identification of active mining claimants.

**Sites have been mitigated in California, for example, that have not been entered into AMM.**

- BLM reported a number of sites as mitigated since 2004 in their response to the Rand Mining District Flash Report, but these sites were not reported as mitigated in AMM and were not even listed in AMM

Details

## AMM Deficiencies:

### AMM system is incomplete:

#### AMM system is incomplete:

- BLM field office AML staff are not entering known AML sites into the AMM database.

Summary: Numerous staff members at the field and state office levels have stated that they are not entering AML sites into the AML database. BLM staff do not enter complete or consistent site data into the AMM database needed to locate, evaluate, monitor and track AML hazards

J.BLM.03 BLM NV - Winnemucca Field Office

J.BLM.04 BLM NV - Elko Field Office

J.BLM.05 BLM NV - Las Vegas Field Office

J.BLM.06 BLM NV - Carson City Field Office

J.BLM.07 BLM NV - Battle Mountain Field Office

J.BLM.08 BLM NV - Ely Field Office

C.BLM.05 BLM CA - Folsom Field Office

C.BLM.07 BLM CA - Barstow Field Office

C.BLM.08 BLM CA - Redding Field Office

C.BLM.09 BLM CA - Bishop Field Office

C.BLM.11 BLM CA - Alturas Field Office

C.BLM.12 BLM CA - Arcata Field Office

J.BLM.18 BLM AZ - State Office

- Some BLM staff are not trained to use the AMM database and have not entered any sites into the AMM database.

Summary: Numerous staff members at the field and state office levels have stated that they have not been trained to use the AMM database and have not been entering AML sites into the AML database.

C.BLM.02 BLM CA - Needles Field Office

C.BLM.06 BLM CA - Palm Springs Field Office

- BLM AML staff are collateral duty and have limited time and resources to enter sites into the AMM database.

Summary: According to the NV AML program lead, NV field offices are not entering sites into the AMM database because there are overburdened with other duties. Therefore, Chris stated that he is the only person in the State that enters sites into the AMM database. Unfortunately, because of the problems with the upload of the State information, Chris stated that only a few sites are in the AMM, but thousands more need to be added.

J.BLM.09 BLM NV State Office

According to one CA, field office AML lead, he does not enter sites into the AMM because there are far too many sites to be entered. Therefore, he stated that most sites have not been entered into the AMM database.

C.BLM.04 BLM CA - Ridgecrest Field Office

According to the AZ AML program lead, AZ AML staff are not entering sites into the AMM database because there are not sufficient staff to enter all AML sites.

J.BLM.18 BLM AZ - State Office

- BLM state strategic plans have AML sites listed which have not been entered into the AMM database.

Summary:

The CA BLM Strategic plan states that "Current estimates regarding the total number of abandoned mines in California is roughly 50,000. An estimated 13,000 abandoned mines exist on BLM-administered public lands, of which 1,000 may impact water quality and over 3,000 contain hazardous mine openings. BLM California currently has an inventory of 520 known abandoned mine sites on BLM-administered public lands. This inventory includes 60 mines that may impact water resources within 17 priority watersheds; over 120 sites likely pose physical safety hazards. To date, 8 impaired water quality sites have been remediated. Approximately 88 sites with physical safety hazards have been remediated, to date (located on page 33 of attached CA AML Strategic Plan)." The AMM database has only 407 sites listed indicating that CA has an additional 113 sites that have been identified as impacting water quality which are not listed on the AMM

database

CA Strategic Plan can be found on the BLM website: [http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/aml/aml\\_strategic\\_plan\\_Par\\_38279\\_File\\_dat/CaliforniaAMLStrategicPlan.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/aml/aml_strategic_plan_Par_38279_File_dat/CaliforniaAMLStrategicPlan.pdf)



CaliforniaAMLStrategicPlan.pdf

The NV BLM Strategic plan states that "BLM Nevada currently has an inventory of 166,000 known abandoned hardrock mines on public lands. This inventory includes 13 mines that may impact water resources within 7 priority watersheds; over 50,000 sites likely pose physical safety hazards. To date, 5 water quality projects (Veta Grande, Atronics, Stewart Mill, Golden Butte, Easy Jr.) have been completed. Several others are scheduled for completion in 2006. About 200 sites with physical safety hazards have been remediated, primarily by backfilling, with some gated and foamed (located on page 67 of attached NV AML Strategic Plan)." The AMM database has only 2322 sites listed indicating that NV has thousands of additional sites that have been identified which are not listed on the AMM database.

NV Strategic Plan can be found on the BLM website:

[http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/aml/aml\\_strategic\\_plan\\_Par\\_28672\\_File\\_dat/NevadaAMLStrategicPlan.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/aml/aml_strategic_plan_Par_28672_File_dat/NevadaAMLStrategicPlan.pdf)



NevadaAMLStrategicPlan.pdf

The AZ BLM Strategic plan states that "Arizona currently has an inventory of 1,953 known abandoned hardrock mines on BLM-administered public lands. This inventory includes 38 mines that may impact water resources, and 961 sites that likely pose significant physical safety hazards. Arizona's inventory covers the entire state; however, it currently is a patchwork from data from the U.S. Bureau of Mines MILS system (least accurate), data collected for the Arizona BLM via an assistance agreement with the Office of the Arizona State Mine Inspector (1992 - 1998, moderate accuracy), and from our own field data (most accurate). Only about 20% of BLM administered public lands in Arizona have been covered with moderate accuracy (or better) surveys (located on page 25 of attached NV AML Strategic Plan)." The AMM database has only 1869 sites listed indicating that AZ has an additional 84 known sites that have been identified which are not listed on the AMM database.

AZ Strategic Plan can be found on the BLM website:

[http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/aml/aml\\_strategic\\_plan\\_Par\\_45827\\_File\\_dat/ArizonaAMLStrategicPlan.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/aml/aml_strategic_plan_Par_45827_File_dat/ArizonaAMLStrategicPlan.pdf)



ArizonaAMLStrategicPlan.pdf

- **BLM staff are not entering all information fields on AML sites into the AMM database to provide the necessary information to prioritize sites for mitigation.**

Summary: [J.BLM.17 BLM AMM System Problems](#)

- **BLM field office staff are keeping local lists of AML sites that are not listed in the AMM database.**

Summary: According to one CA, field office AML lead, he identified that there are approximately 20,000 - 30,000 mine shafts and openings on BLM property in the Ridgecrest Field Office area. Most of these are not on an inventory, but the general areas where mining occurred are well known. Lynn stated that he does not enter sites into the AMM because there are far too many sites to be entered. Therefore, he stated that most sites have not been entered into the AMM database.

[C.BLM.04 BLM CA - Ridgecrest Field Office](#)

According to the AZ AML lead, field offices keep information regarding all of the specifics on their AML sites, however, many of these sites have not been entered in to the AMM database.

[J.BLM.18 BLM AZ - State Office](#)

- **Thousands of additional AML sites were identified through the Saginaw Hill Project which are not listed in the AMM database.**

Summary:

In response to IM No. 2005-231, Identification of Hazardous Sites Near PPLs, more than 2,000 potential AML-related safety hazards were reported to be within 1 mile of a PPL. In order to most efficiently and effectively use available funding the BLM must identify the most urgent AML-related safety hazard sites.



21 Saginaw Hill Inventory & Mitigation IM 2007-\_\_\_ Summa (1).doc

- **The State of Nevada and California have thousands of additional AML sites identified on BLM land which have not been listed in the AMM database.**

Summary: BLM NV does not have its sites in the AMM database because they have been unable to upload the State information into the AMM database. There are more than 2000 sites that need to be added to the AMM database from the State of NV inventory.

[J.BLM.09 BLM NV State Office](#)

BLM CA has only 1% of its AML sites entered into the AMM database. There are 400 AML sites currently entered in the AMM for CA and approximately another 39,500 sites that have yet to be inventoried and placed in the AMM database. This means that there are thousands of additional AML sites in CA which are not listed in the AMM database.

**AMM system in inadequate to manage the AML program:**

**AMM system in inadequate and inconsistent to manage the AML program:**

- The AMM database does not have a priority ranking system in place to determine the highest priority AML sites requiring mitigation.

Summary: J.BLM.17 BLM AMM System Problems

- The AMM database is not used by BLM State Office to prioritize AML sites for mitigation and remediation.

Summary:

The NV state office works with a group called NAMLIT to determine funding for sites. The NV BLM State Office does not even have all of their sites in AMM, therefore, it is not being used as a prioritization system for site mitigation and remediation.

J.BLM.09 BLM NV State Office

The CA state office indicated that they do not have line authority over the field office and the field offices are not inputting sites into the AMM database. Until the field offices place the AML sites into the AMM database, it can not be used to identify sites for mitigation and remediation.

C.BLM.CA\$tooffice.03 CA Targeted Inventory

J.BLM.17 BLM AMM System Problems

- The AMM database is not used by BLM HQ to prioritize funding for mitigation and remediation of AML sites.

Summary: BLM HQ uses a variety of rational to determine AML funding to the states, but he AMM database is currently not being utilized to prioritize funding for mitigation and remediation of AML sites.

A.03.02 Initial Discussion with George Stone

J.BLM.17 BLM AMM System Problems

- The AMM database does not have complete site characterization information to determine mitigation or remediation action required.

Summary: The BLM inventory data is considered to be soft because BLM is currently reviewing and updating its data. The majority of the sites were reported during initial inventory efforts from various sources, but have not been assessed on the ground by BLM.

Attached is the website documenting the lack of field verification of the inventory by BLM.

Website: [http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/abandoned\\_mine\\_site.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/abandoned_mine_site.html) (1 of 2)/8/17/2007 1:54:14 PM



BLM AML Inventory Summary - Not field verified.pdf

J.BLM.17 BLM AMM System Problems

- The AMM database includes a significant amount of sites that were brought over from the old Bureau of Mines data and Mass Mills data which provide very little information regarding the AML sites.

Summary: The BLM inventory data is considered to be soft because BLM is currently reviewing and updating its data. The majority of the sites were reported during initial inventory efforts from various sources, but have not been assessed on the ground by BLM.

Attached is the website documenting the lack of field verification of the inventory by BLM.

Website: [http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/abandoned\\_mine\\_site.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/abandoned_mine_site.html) (1 of 2)/8/17/2007 1:54:14 PM



BLM AML Inventory Summary - Not field verified.pdf

The BLM Inventory data contains data from the old Bureau of Mines data and the old Mass Mills data which is over 10 years old according to USGS website at <http://tin.er.usgs.gov/metadata/mrds.faq.html#how.1> - the abandoned mine data used in the BLM AMM database was pulled in 1996 (over 10 years ago) from Mas Mills database.

**What does this data set describe?**

*Title:* Mineral Resources Data System

*Abstract:*

Mineral resource occurrence data covering the world, most thoroughly within the U.S. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS.

The MRDS is a large and complex relational database developed over several decades by hundreds of researchers and reporters. This product is a digest in which the fields chosen are those most likely to contain valid information.

**1. How were the data generated, processed, and modified?**

Date: 1996 (process 1 of 2)

Conversion of MRDS and MAS/MILS for use as a combined minerals database within the Oracle relational database management system proceeded under the general supervision of Bruce Lipin of USGS.

Review of many database fields resulted in significant simplification, harmonization among records within these databases and between the databases, and elimination of duplicate records.

The resulting relational database is currently maintained by [REDACTED] under the supervision of Paul Schruben.

Person who carried out this activity:

Paul G Schruben  
USGS ER GD  
12201 Sunrise Valley Drive  
Reston, VA 20192-0002  
USA

703-648-6142 (voice)  
703-648-6383 (FAX)  
pschrube@usgs.gov

Data sources used in this process:

- DDS-52

Data sources produced in this process:

- Internal RDBMS

**J.BLM.17 BLM AMM System Problems** [REDACTED]

- Many sites listed in the AMM database have never been verified by BLM field staff to identify mitigation or remediation required at the site.

Summary:

Summary: The BLM inventory data is considered to be soft because BLM is currently reviewing and updating its data. The majority of the sites were reported during initial inventory efforts from various sources, but have not been assessed on the ground by BLM.

Attached is the website documenting the lack of field verification of the inventory by BLM.

Website: [http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/abandoned\\_mine\\_site.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/abandoned_mine_site.html) (1 of 2)/8/17/2007 1:54:14 PM



BLM AML Inventory Summary - Not field verified.pdf

**J.BLM.17 BLM AMM System Problems** [REDACTED]

The BLM AZ inventory data contains a significant amount of sites brought over from the Bureau of Mines data and Mass Mills, but these sites have never been assessed on the ground by BLM.

**J.BLM.18 BLM AZ - State Office** [REDACTED]

- The AMM database does not have any identification of active mining claimants.

Summary: According to the AMM Database Lead - the AMM database does not have any identification of active mining claimants for AML sites.

**J.BLM.17 BLM AMM System Problems** [REDACTED]

**Overall AMM Data Broken Down by State:**

Overall AMM Data Broken Down by State:

Information can be found on BLM website:

[http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/abandoned\\_mine\\_site.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/abandoned_mine_site.html)

Table 1. Known Abandoned Mine Land Sites	[REDACTED]
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As of June 1, 2007

State	No Action Req'd	Completed	In Progress	Planned	Undetermined	Total Known Sites
AK	104	27	25		8	164
AZ	258	23	9	75	1,502	1,867
CA		4	15	2	385	406
CO	116	388	55	25	2,311	2,895
ID	16	28	26	8	526	604
MT	75	43	48	11	749	926
NM	11	34	10		546	601
NV	35	358	35	333	1,681	2,442
OR		9	4		30	43
SD			1		1	2
UT		2	78		405	485
WA	1	13	14		40	68
WY			9		925	934
<b>Total</b>	<b>616</b>	<b>929</b>	<b>329</b>	<b>454</b>	<b>9,109</b>	<b>11,437</b>

**Examples of AMM deficiencies by state:**

Examples of AMM deficiencies by state:

**California AMM Data:**

**California AMM Data:**

Total sites: 407 sites listed in the AMM database

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

J BLM 02 BLM AMM Data - AMM Deficiencies

Admin State Cd	Admin Office Txt	Site Id	Site Name	Status Txt	Created By	Created Date	Modify By	Modified Date
CA	ALTURAS FO	2309	GOOSE LAKE	Undetermined	JEOLSON	07/18/2001	JEOLSON	05/30/2002
CA	ALTURAS FO	2308	RED HAWK	Undetermined	JEOLSON	07/18/2001	JEOLSON	07/18/2001
CA	BAKERSFIELD FO	2242	AVENAL CANYON	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2372	BRIGHT SPOT DISCOVERY ADI	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2373	BRIGHT SPOT SHAFT #2	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2355	BUENA VISTA DAM TAIL NGS	Planned	conversi	10/01/1999	JOLSON	05/19/2006
CA	BAKERSFIELD FO	2234	CANYON MINE	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2365	CAUTION ADIT	Undetermined	AFALCON	06/21/2004	AFALCON	06/21/2004
CA	BAKERSFIELD FO	2360	CELL PHONE	Undetermined	AFALCON	09/22/2003	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2170	CHRISTMAS TREE PROSPECT	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2243	DAWSON	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2171	FIDG E GROUP	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2361	GUIDRY MILLSITE	Undetermined	AFALCON	09/22/2003	AFALCON	09/22/2003
CA	BAKERSFIELD FO	2375	HIGH GRADE #1, ADIT #2	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2374	HIGH GRADE #1, ADIT #3	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2377	HIGH GRADE NO. 1, DISCOVE	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2376	HIGH GRADE NO. 1, SHAFT #	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2370	HIGH GRADE NO. 3 SHOP TUN	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2362	HOMESTAKE ADIT	Undetermined	AFALCON	06/21/2004	AFALCON	06/21/2004
CA	BAKERSFIELD FO	2379	INDEPENDENT I & II, ADIT	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2380	INDEPENDENT I & II, ADIT	Undetermined	AFALCON	09/21/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2378	INDEPENDENT I & II, SHAFT	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2179	KERV N PROSPECT	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2164	KEYES M NE	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2371	KEYES M NE ADIT #4	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	11191	KINGS MINE	Undetermined	JOLSON	07/20/2005	JOLSON	07/20/2005
CA	BAKERSFIELD FO	2381	LIVING MEMORIAL ADIT	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2358	MATTRESS ADIT	Undetermined	AFALCON	09/22/2003	AFALCON	09/16/2004
CA	BAKERSFIELD FO	2162	NEPHI PROSPECT	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2175	ONOLITE PROSPECT	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2359	OPPORTUNITY #3A	Undetermined	AFALCON	09/22/2003	AFALCON	09/16/2004
CA	BAKERSFIELD FO	2366	OPPORTUNITY 3M, ADIT	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2367	OPPORTUNITY 3N, ADIT	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2389	POISON SWITCH SHAFT 4	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2368	PYGMY OWL ADIT A	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2369	PYGMY OWL ADIT B	Undetermined	AFALCON	09/21/2004	AFALCON	09/21/2004
CA	BAKERSFIELD FO	2383	QUARTZ MOUNTAIN-1, SHAFT	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2384	QUARTZ MOUNTAIN-2, MAIN A	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2385	QUARTZ MOUNTAIN-3, PROSPE	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2386	QUARTZ MOUNTAIN-4, DECLIN	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2387	QUARTZ MOUNTAIN-7, ADIT 1	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2388	QUARTZ MOUNTAIN-8, AIR SH	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2172	RADIATION PROSPECT	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2353	RINCONADA	Completed	JEOLSON	05/29/2002	JOLSON	07/21/2005
CA	BAKERSFIELD FO	2390	RINCONADA MINE CREEK	In Progress	AFALCON	09/21/2004	JOLSON	07/21/2005
CA	BAKERSFIELD FO	2356	SHOCK'S ADIT	Undetermined	AFALCON	09/22/2003	AFALCON	09/22/2003
CA	BAKERSFIELD FO	2382	SJRG SOUTH SHAFT #1	Undetermined	AFALCON	09/22/2004	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2363	SLEEPY EYE 2-ADIT	Undetermined	AFALCON	06/21/2004	AFALCON	06/21/2004
CA	BAKERSFIELD FO	2176	SONNY BOY PROSPECT	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	2182	STUDHORSE CANYON M NE	Undetermined	conversi	10/01/1999	DATACONV	08/18/2004
CA	BAKERSFIELD FO	11922	TEST	In Progress	JOLSON	06/28/2006	DLAWLER	05/09/2007
CA	BAKERSFIELD FO	2357	TWO TREES SHAFT	Undetermined	AFALCON	09/22/2003	AFALCON	09/22/2004
CA	BAKERSFIELD FO	2364	UNNAMED ADIT	Undetermined	AFALCON	06/21/2004	AFALCON	06/21/2004
CA	BARSTOW FO	2140	CA000000072	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	BARSTOW FO	2141	CA000000073	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	BARSTOW FO	2161	CA000000093	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	BARSTOW FO	2143	SUNSET	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EAGLE LAKE FO	2444	BIRCHV LLE MINE-TUNNELS	Undetermined	DLAWLER	10/02/2002	DLAWLER	10/02/2002
CA	EAGLE LAKE FO	2400	STEWART HYDRAULIC M NE	Undetermined	JEOLSON	10/03/2000	JEOLSON	10/03/2000
CA	EL CENTRO FO	2113	BEN HUR?	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2104	CA000000025	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2105	CA000000026	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2106	CA000000027	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2107	CA000000028	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2109	CA000000030	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2110	CA000000031	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2111	CA000000032	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2112	CA000000034	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005

CA	BARSTOW FO	2143	SONRSE	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EAGLE LAKE FO	2444	BIRCHV LLE MINE-TUNNELS	Undetermined	DLAWLER	10/02/2002	DLAWLER	10/02/2002
CA	EAGLE LAKE FO	2400	STEARNS	Undetermined	JOLSON	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2113	BEN HUR?	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2104	CA000000025	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2105	CA000000026	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2106	CA000000027	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2107	CA000000028	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2109	CA000000030	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2110	CA000000031	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2111	CA000000032	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2112	CA000000034	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2116	CA000000038	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2117	CA000000042	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2118	CA000000043	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005
CA	EL CENTRO FO	2119	CA000000044	Undetermined	conversi	10/01/1999	JOLSON	09/08/2005

The CA BLM Strategic plan states that "Current estimates regarding the total number of abandoned mines in California is roughly 50,000. An estimated 13,000 abandoned mines exist on BLM-administered public lands, of which 1,000 may impact water quality and over 3,000 contain hazardous mine openings. BLM California currently has an inventory of 520 known abandoned mine sites on BLM-administered public lands. This inventory includes 60 mines that may impact water resources within 17 priority watersheds; over 120 sites likely pose physical safety hazards. To date, 8 impaired water quality sites have been remediated. Approximately 88 sites with physical safety hazards have been remediated, to date (located on page 33 of attached CA AML Strategic Plan)." The AMM database has only 407 sites listed indicating that CA has an additional 113 sites that have been identified as impacting water quality which are not listed on the AMM database.

CA Strategic Plan can be found on the BLM website: [http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_REALTY\\_AND\\_RESOURCE\\_PROTECTION\\_aml/aml\\_strategic\\_plan\\_Par\\_38279\\_File\\_dat/CaliforniaAMLStrategicPlan.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_aml/aml_strategic_plan_Par_38279_File_dat/CaliforniaAMLStrategicPlan.pdf)



CaliforniaAMLStrategicPlan.pdf

█ Sites have been mitigated in California, for example, that have not been entered into AMM.

In response to our Rand Mining District Flash Report, **\*Reporting Management's Response to Draft Report** █ BLM noted "In 2004, approximately 30 hazards were backfilled, plugged, gated, or covered with cupolas. During 2006 and 2007, two hazards were covered with cupolas, 42 deep mine shafts were fenced, and 80 hazards were backfilled." The table above shows the sites in CA on the AMM and there are no sites listed for the Ridgecrest Field Office (Rand Mining District), much less any sites listed as being mitigated. More specifically, the list of mitigated sites in AMM **F.BLM.03 BLM AMM Data - Mitigated Sites** █ does not include any sites for the Ridgecrest Field Office. Thus, there are sites that have been mitigated by BLM field offices that are not being reported as mitigated on the AMM.

**Nevada AMM Data:**

**Arizona AMM Data:**

**Methodology**  
N/A

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Level 1 Approval:  
Level 2 Approval: Approved John Illson 06/02/2008 01:59:23 PM

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## Assignment Workpaper

Prepared by: William McMullen 10/26/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.04.01

Subsection:

Program Name: BLM (Overall)

Subject: Response to OIG Questionnaire

Origination Doctlink: 

### Purpose

Document BLM Elko Field Office response to OIG questionnaire.

### Scope

BLM AML program.

### Source

Response to questionnaire provided by BLM Elko and attached:



Elko Response.PDF

Attachment to Elko response showing inventory of sites:



Attachment to Elko Response.PDF

Nevada Division of Mines summary of state AML program found at [http://minerals.state.nv.us/forms/aml/AMLProgFactSht\\_LH.pdf](http://minerals.state.nv.us/forms/aml/AMLProgFactSht_LH.pdf) and attached:



AMLProgFactSht\_LH.pdf

### Conclusion

- Elko considers Rip van Winkle as highest priority site **K.BLM.Rip Van Winkle.01 Site Visit** 
- No reported deaths or injuries on Elko lands
- State has mitigated 9,024 out of 11,625 mine openings on all NV lands as of 6/5/07.

### Details

Highest priority sites in Elko Field Office are Rip van Winkle, Spruce Mountain, Tuscarora and Contact. OIG visited the first three sites. There have been no deaths or injuries at AML sites in Elko Field Office according to BLM.

See also **J.BLM.04 BLM NV - Elko Field Office**  for more information from Elko Field Office.

BLM funds efforts by the State Division of Minerals (NDOM) to take actions to mitigate safety hazards at abandoned mines in NV including those on BLM land

STATE OF NEVADA  
COMMISSION ON MINERAL RESOURCES  
**DIVISION OF MINERALS**  
400 W. King Street, Suite 100  
Carson City, Nevada 89703  
(775) 684-7040 • Fax (775) 684-7052  
<http://minerals.state.nv.us/>

### ABANDONED MINE LANDS PROGRAM FACT SHEET

as of June 5, 2007

1. The Nevada Abandoned Mine Lands Program was initiated by the Nevada Legislature and is administered by the Nevada Division of Minerals under NRS 513.
2. It is estimated approximately 200,000 abandoned mine "features" exist in Nevada from historical mining operations. Approximately 50,000 may present physical safety hazards.
3. The program has two major tasks:
  - a. Abatement of Hazardous Conditions - The Division identifies and ranks the

hazardous condition and conducts ownership research at the county courthouse. If a landowner or mining claimant is identified, the Division notifies them of their responsibility to secure the hazard and simultaneously notifies the county. If the securing is not accomplished in the time frame established by regulation, the Division notifies the county if enforcement action is necessary. If no landowner or claimant exists, the Division fences the hazard as soon as possible based on the hazard's rank and posts warning signs.

b. Public Awareness - The Division educates the public about the dangers in and around abandoned mines. The motto "Stay Out and Stay Alive" is stressed at school presentations, on billboards, through public service announcements, and at other events.

4. The program is funded by fees paid by the minerals industry and grants from the Bureau of Land Management. Two Division personnel are primarily assigned to the abandoned mine lands program.

5. Since 1987, and as of June 5, 2007, the Division has identified and ranked 11,625 hazardous mine openings throughout the state. Landowners, claimants, counties, and the Division have secured 9,024 of these openings. Priority attention is given to hazards near populated areas.

6. For more information about abandoned mines contact the Division of Minerals.

**Methodology**

N/A.

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Level 1 Approval:

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**Record of Discussion**

Prepared by: Stephanie Christian 06/08/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.06 **Subsection:** Step 1  
**Program Name:** BLM (Overall)  
**Subject:** BLM NV - Carson City Field Office

**Origination Doctlink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Carla James	AML lead	BLM Carson City Field Office	775-885-6131	

**Location:** Telephone Conversation

**Date/Time:**

06/08/2007 12:30 PM

**Purpose**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope**

BLM NV Field Offices

**Conclusion**

Carson City Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM
- \*No inventory completed for AML sites. Only a list with known larger AML sites is kept and sent to the State Office.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database.

**Summary**

According to Carla James, BLM AML Lead for the Carson City Field Office, there is no BLM list of AML sites in the Carson City Field Office area. BLM does not inventory sites on BLM property, rather BLM relies on the State of NV to inventory sites. BLM obtains a list from the State of NV on AML sites they locate on BLM property. BLM does not have an active inventory process in place to identify and record AML sites. Again, BLM relies on the State of NV to conduct an ongoing inventory process and provide a list of sites on BLM property to BLM. Carla has no list of any injuries or fatalities at BLM AML sites in her area, but BLM does not identify or track these events. Rather, BLM obtains a list created by the State of NV on all accidents and injuries at AML sites in the state. However, this list does not identify the sites ownership, so BLM has no way of knowing which incidents occurred on BLM property. Carla also indicated that she does not enter any sites into the AMM database because BLM does not keep its own list of AML sites.

Carla identified three potential areas for site visits including:

- Virginia City - Large mining areas with physical and environmental safety issues including numerous AML sites that need to be addressed. Some of the AML sites are currently being addressed.
- Ruhenstroth - Area right outside a residential area and it is a designated OHV area with large physical safety issues with numerous AML sites that need to be addressed.
- American Flats - Old cyanide Mill with physical and environmental safety issues including numerous AML sites that need to be addressed.

Submission: Submitted Stephanie Christian 06/20/2007 09:53:15 AM  
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## Assignment Workpaper

Prepared by: William McMullen 10/26/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.06.01

Subsection:

Program Name: BLM (Overall)

Subject: Response to OIG Questionnaire

Origination Doctlink: 

### Purpose

Document BLM Carson City Field Office response to OIG questionnaire.

### Scope

BLM AML program.

### Source

Response to questionnaire provided by BLM Carson City and attached



Carson City Response.PDF

List of prioritized sites provided by Field Office and attached (priority ranking was: H = high, M = moderate, L = low, NC = not considered, O = other sites currently unranked):



List of Prioritized Sites.PDF

### Conclusion

- List of priority Nevada AML Environmental sites developed in conjunction with State and other agencies in NV provided
  - American Flat was listed as an unranked site in 1999 and in 2006
- There have been injuries at mill sites in Carson City Field Office including American Flat and one death at American Flat
- American Flat is still accessible to the public. [K.BLM.American Flat.01 American Flat Mill Safety Issues](#) 
- The Carson City Field Office has mitigated several large sites that had environmental hazards over the past 10 years; sites with safety hazards are addressed by Nevada Division of Minerals

### Details

BLM coordinates with the State of NV and other agencies to identify and prioritize AML sites. A death and injuries have occurred at American Flat mill and BLM installed a fence in 2000. The site was unranked on the prioritized list as of 2006.

See also [J.BLM.06 BLM NV - Carson City Field Office](#)  for more information from Field Office.

With regard to mitigation of sites:

3. Please provide an inventory of all known abandoned mines that have been mitigated and details on the mitigation performed over the past 10 years at your BLM office. Mitigation includes temporary and permanent closures, fences and signs posted at the site.

Fact sheets of mitigated AML mine sites performed over the past 10 years is attached, but the following is a short summary.

[Yeta Grande](#) – Several contracts amounting to about \$1.5 million

[Nylene](#) – contracted removal of hazardous materials and debris (\$28,543)

[Gooseberry Mine/Mill](#) – Contracted removal of chemicals and toxic mill wastes (\$161,000)

[Trento Lane](#) – Lazy Boy mill site closure work (\$15,000)

[Perry Canyon](#) – Characterization and reclamation of waste material (\$100,000)

[Mullen Pass](#) – Contracted removal of debris from mill site claims (\$32,000)

[Seneca Gold](#) – Removal of debris (\$15,000)

[HOM Mill and Tailings Impoundment](#) – PRP under CERCLA spent approximately \$800,000 for mill facility removal and reclamation

Numerous mine hazardous on BLM managed lands have been mitigated with backfilling, fences, and posting of signs by the Nevada Division of Minerals AML Program.

All of the above AML sites have extensive files for IG perusal.

As mentioned, safety hazards are addressed by NDOM. See [J.BLM.04.01 Response to OIG Questionnaire](#) ■

**Methodology**

N/A

Submission:	Submitted	William McMullen	01/11/2008 09:12:12 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/11/2008 11:29:32 AM

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**History**

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**Record of Discussion**

Prepared by: Stephanie Christian 06/14/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.08 **Subsection:** Step 1  
**Program Name:** BLM (Overall)  
**Subject:** BLM NV - Ely Field Office

**Origination Doclink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Lynn Bjorkland	AML lead	BLM Ely Field Office	775-289-1893	

**Location:** Telephone Conversation

**Date/Time:**

06/11/2007 11:15 AM

**Purpose**

To determine how BLM field offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope**

BLM NV Field Offices

**Conclusion**

Ely Field Office:

- \*No injuries or fatalities at BLM AML sites that have been identified or tracked by BLM
- \*No inventory completed for AML sites. Only a list with known larger AML sites is kept and sent to the State Office.
- \*No active inventory process is in place to update AML sites, the State of NV is the only one that keeps a list.
- \*No AML sites are being entered into the AMM database. In fact, Lynn had not even heard of the AMM database.

**Summary**

Ely F.O.

Lynn Bjorklund Geologist Collateral duties include Active Mines, Planning, NEPA, other

According to Lynn Bjorklund BLM AML Lead for the Ely Field Office, there is no BLM list of AML sites in the Ely Field Office area. BLM does not inventory sites on BLM property, rather BLM relies on the State of NV to inventory sites. BLM obtains a list from the State of NV on AML sites they locate on BLM property. BLM does not have an active inventory process in place to identify and record AML sites. Again, BLM relies on the State of NV to conduct an ongoing inventory process and provide a list of sites on BLM property to BLM. Lynn has no list of any injuries or fatalities at BLM AML sites in her area, but BLM does not identify or track these events. Rather, BLM obtains a list created by the State of NV on all accidents and injuries at AML sites in the state. However, this list does not identify the sites ownership, so BLM has no way of knowing which incidents occurred on BLM property. Lynn also indicated that she does not enter any sites into the AMM database because BLM does not keep its own list of AML sites.

Lynn did identify a large problem in her field office area with the cleanup of post FLPMA sites. There have been 6-7 large post FLPMA sites with both physical and environmental problems that had either no bond or insufficient bond for BLM to remediate the site. BLM had to pay for the remediation of those sites due to insufficient or nonexistent bonding as required of post FLPMA sites under the 3809 program. BLM used some hazmat and water quality funding to remediate these sites and the State Office had to identify the remaining funding to remediate these sites.

Submission: Submitted Stephanie Christian 06/15/2007 05:17:53 PM  
 Level 1 Approval: Approved William McMullen 06/19/2007 07:55:04 AM  
 Level 2 Approval: Approved John Illson 01/10/2008 10:38:55 AM

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**Record of Discussion**

Prepared by: Stephanie Christian 06/14/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.09 **Subsection:** Step 1  
**Program Name:** BLM (Overall)  
**Subject:** BLM NV State Office

**Origination Doclink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Chris Ross	AML State Office lead	BLM State Office	775-861-6571	

**Location:** Telephone Conversation

**Date/Time:**

06/12/2007 09:00 AM

**Purpose**

To determine how BLM State offices inventory AML sites, updating the inventory data, update AMM, and track injuries and fatalities.

**Scope**

BLM NV State Office

**Conclusion**

BLM NV Issues:

1. BLM NV does not inventory its own sites, but rather relies on the State of NV to inventory its sites through \$50,000 of annual funding provided by BLM.
2. BLM NV does not have its sites in the AMM database because they have been unable to upload the State information into the AMM database There are more than 2000 sites that need to be added to the AMM database from NV.
3. BLM applies for funding from the Army Corps of Engineers for site characterization and then coordinates with a group of State and Federal agencies called NAMLIT which meets to determine how the money should be spent

**Summary**

The BLM NV State Office is set up with an AML coordinator, Chris Ross and a Hazmat Coordinator, Bob Kelso. BLM NV has a cooperative agreement with the State of NV to coordinate their AML program. BLM NV gives the State of NV funding to inventory BLM AML sites and to help in the mitigation/remediation of AML sites. According to Chris, BLM provides approximately \$50,000 annually in funding to the State of NV for the AML work they do for BLM. BLM does not complete its own inventory, but rather relies on the State inventory for the BLM AML inventory. The State provides a copy of the inventory they complete each year to BLM. However, Chris indicated that BLM has been unable to upload the State information into the BLM AMM database. The problem has been coordinating the State information with the BLM information to allow the information to be uploaded into the AMM database BLM NV and the AMM team are coordinating to upload the information the State provides on the AML sites in NV into the AMM database. Chris estimates the upload from the State into the AMM database would add more than 2000 NV AML sites into the AMM database. Chris also stated that none of his field offices will enter sites into the AMM database because they are overburdened with other duties. Therefore, Chris stated that he is the only person in the State that enters sites into the AMM database. Unfortunately, because of the problems with the upload of the State information, Chris stated that only a few sites are in the AMM, but thousands more need to be added.

Chris also indicated that there is a group called NAMLIT which incorporates all of the interested AML parties in NV including FWS, NPS, Forest Service, State EPA, BLM, Universities, NV Division of Minerals and other interested parties. This group determines the ranking for the dangerous AML and hazmat areas and allocates funding provided by the CORPS of Engineers The CORPS of Engineers provides funding for site characterization of AML and Hazmat sites through application. Once the RAMS money has been allocated, the NAMLIT group gets together to determine how the money should be spent in the State of NV.

Submission: Submitted Stephanie Christian 06/22/2007 10:21:38 AM

Level 1 Approval: Approved William McMullen 06/22/2007 01:00:24 PM

Level 2 Approval: Approved John Illson 06/25/2007 11:00:40 AM

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### Assignment Workpaper

Prepared by: Stephanie Christian 06/22/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.10 **Subsection:**  
**Program Name:** BLM (Overall)  
**Subject:** BLM Hazmat/Water Quality Funding Provided to the States

**Origination Doctlink:** 

**Purpose**  
To determine the funding level provided by BLM HQ to each State.

**Scope**  
BLM Hazmat/Water Quality Funding Provided to the States.

**Source**  
Data provided via e-mail on 6/21/07:



FY2006 & FY2007 1010 & 1640 AWP All States Funds 5-26-07.xls

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#### Conclusion

#### Details

#### Methodology

**Submission:**  
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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

J BLM.10 BLM Hazmat/Water Quality Funding Provided to the States

McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Stephanie Christian 07/11/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.11 **Subsection:** Step 1  
**Program Name:** BLM (Overall)  
**Subject:** State of NV - Division of Minerals

**Origination Doclink:** ■

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Doug Driesner	Deputy Administrator	State of NV	775-684-7046	

**Location:** Telephone Conversation

**Date/Time:**

07/09/2007 02:45 PM

**Purpose**

To determine how the State of NV conducts inventories for BLM and what the process is for updating the inventory data.

**Scope**

State of NV Inventory

**Conclusion**

According to Doug, the State of NV - Division of Minerals assists BLM in the permanent closures of approximately 40-50 AML sites per year. BLM must conduct the historical and wildlife background and then the Division of Minerals asks for assistance from local mining companies to use trucks and equipment to assist in the closure of sites. BLM has provided funding to the State of NV - Division of Minerals for their assistance in inventorying and mitigating/remediating AML sites. This funding is approximately \$50,000 per year.

The Division of Minerals also conducts an inventory of all AML sites in NV for the public good. This is an overall mission for the organization to protect the public and notify them of the AML dangers. The inventory work is done over the summer with college interns that go out into high risk areas or areas where inventory work has not been done to identify sites. The interns are given topo maps to locate sites and once they locate a site, they give it an ID number, take pictures, mark it, determine if wildlife is evident and they also help fence sites to secure them. The Division of Minerals also gets calls from the public on AML sites, which is then passed along to the interns for documentation and information gathering.

The Division of Minerals has also created a list of injuries and fatalities that are publicized in the newspaper and other media sources. Once a AML incident is found, the information regarding that site is put into the list of injuries and fatalities. The Division of Minerals also tries to identify the ownership once they identify the location the injury or fatality. This information is kept of the State of NV website for the public to use.

**Summary**

According to Doug, the Division of Minerals for the State of NV is set up with a Commission on Resources, which is a 7 member board that meets quarterly to put together regulations and oversee the Division of Minerals. There is an Administrator, a deputy administrator, an AML Chief, and support staff. The Division of Minerals was created in 1983 to promote responsible mining. This group does a lot of education and in 1987 they added the AML program. The AML program started for public safety and to help ensure responsible mining. This division also regulates/oversees oil and geothermal activities. The reclamation bond pool is also administered through this program.

The Division of Minerals for the State of NV is funded using an oil royalty fee and a yearly filing fee for all mining claims in the State of NV on public land. The yearly fee is \$6.50 per claim, which the State collects and uses for this program.

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**History**

**Status:** Approved **Request Review:**

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**Confidentiality:** Standard

**Add Document Readers:**

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**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Stephanie Christian 07/11/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.12

Subsection:

Program Name: BLM (Overall)

Subject: BLM NV MOU with State of NV

Origination Doctlink: 

### Purpose

### Scope

### Source

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Abandoned Mine Program Lead  
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Example of Claimant Letter.PDF MOU with State of NV.PDF MOU Update Document 6-19-06.PDF

### Conclusion

- The Nevada Division of Minerals (NDOM) and BLM signed a Memorandum of Understanding (MOU) in 1994 regarding abandoned mine lands.
- NDOM estimates there may be 50,000 hazardous mine openings on BLM land in Nevada.
- NDOM has ranked over 11,186 hazardous mine openings in the state and secured (usually by fencing) 8,631 openings.
- In FY2005, NDOM secured 245 openings on BLM land and ranked another 220 openings.
- NDOM issues a form letter to claimants advising them that hazards exist on their claims and informing them of their responsibilities as claimants to address the hazards
- The letter includes a Hazard Inventory Sheet prepared by NDOM that describes field work performed to locate and rank mine hazards (pages 2-5 of attachment "Example of Claimant Letter.PDF").

### Details

The Nevada Division of Minerals (NDOM) uses a letter to inform claimants of possible hazards on their claims and their responsibilities.

The Division of Minerals' Abandoned Mine Lands Program is continuing its legislatively mandated program to discover dangerous conditions that resulted from mining practices which took place at mines that are no longer operating.

*claims*

Our research indicates that 3 of these dangerous condition(s) is/are located on mining claims that appear(s) to be controlled by you. It is the responsibility of the claimant to secure these dangerous conditions so that no one can accidentally be exposed to danger. Securing can be accomplished by fencing, barricading, or backfilling the hazardous mine opening. For securings on federal lands involving mechanized equipment, surface disturbance, or explosives, it is necessary to contact the appropriate federal agency for approval. If you choose backfilling or solid barricading it is also necessary to contact the Nevada Division of Wildlife and Nevada Division of Historic Preservation prior to securing. Hazard warning signs are available at this office. The Division of Minerals has a free listing of contractors who perform securing work.

If you are aware of other hazardous conditions located on this or other claims you control, these should be secured as well.

If you believe these hazards do not exist on your claims, if you no longer control the claims, or if you have any questions, please write or call this office within the next 60 days. You are requested to provide this office with a statement of compliance plus photographs or other evidence of securing these and other mine openings with the time frame given in NAC 513.380, or a statement that a wildlife or historical preservation survey is in progress. If you fail to comply, we are required to report these hazards to the appropriate county commission per NRS 5130.094. Enclosed are copies of the hazard inventory sheet(s), a map showing the location of the hazard(s), a copy of NRS 513.094 and NAC 513.

Thank you for your cooperation, and if you have any question please contact Mike Visher at 775-684-7044 or me at 775-684-7042

The letter includes a Hazard Inventory Sheet prepared by NDOM that describes field work performed to locate and rank mine hazards(pages 2-5 of attachment "Example of Claimant Letter.PDF").

BLM Nevada and Nevada Division of Minerals signed a Memorandum of Understanding(MOU) in 1994 regarding abandoned mine lands.

**I. PURPOSE**

The purpose of this CA is to establish and maintain coordination between the NDOM and the BLM and their respective individual responsibilities pertaining to the securing of mine safety hazards on BLM administered lands in the State of Nevada.

This CA, pursuant to Section 307 of the Federal Land Policy and Management Act of 1976, authorizes the NDOM to fence mine safety hazards and, when requested by the BLM, to coordinate the disposal or destruction of explosives discovered at orphaned mine sites located on BLM administered lands in Nevada. The CA also describes procedures to be followed in securing safety hazards on BLM administered lands which are under mining claim location or mineral material authorization.

The Nevada Division of Minerals provides BLM with quarterly reports on the status of activities under the MOU. The report dated June 15, 2006 noted that there could be as many as 50,000 hazardous mine openings on BLM land in Nevada and that, to date, 11,186 of these openings were assessed by NDOM. Of these, 8,631 openings were secured (usually by fencing). The report also notes that in FY2005, NDOM secured 245 hazardous mine openings on BLM and identified 220 additional openings. The State requested that the cooperation with BLM continue and that \$60,000 be provided from BLM to NDOM for efforts in FY2007.

**Methodology**

Reviewed source documents.

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:46:17 PM

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**Confidentiality:** Standard

**Add Document Readers:**

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## Assignment Workpaper

Prepared by: William McMullen 07/11/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.13

Subsection: Audit Steps J.2, J.3, J.4 & J.5

Program Name: BLM (Overall)

Subject: BLM AML Program Policy Handbook

Origination Doctlink: 

### Purpose

Document BLM AML Program Policy Handbook's statements about public and employee safety and AML site prioritization.

### Scope

BLM AML Program.

### Source

BLM AML Program Policy Handbook dated 3/20/07 found at [http://www.blm.gov/style/medialib/blm/wo/M\\_NERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/aml.Par.11569.File.dat/BLMAMLHandbookH-3720.pdf](http://www.blm.gov/style/medialib/blm/wo/M_NERALS__REALTY__AND_RESOURCE_PROTECTION_/aml.Par.11569.File.dat/BLMAMLHandbookH-3720.pdf) and attached:



BLMAMLHandbookH-3720.pdf

BLM Manual 1112-Safety found at <http://www.blm.gov/nhp/efoia/wo/manual/1112.pdf> and attached:



BLM safety manual 1112.pdf

### Conclusion

 BLM AML Program Policy Handbook, dated 3/20/2007, was prepared and finalized by the BLM National AML Program Coordinator and provides policies and procedures on inventory of AML sites, protection of employee and public health and safety and prioritization of sites with environmental and safety hazards.

### Details

pages 85 - 87 Appendix B define acronyms relevant to the program.

		TMDL	Total Maximum Daily Load
		UMTRA	Uranium Mill Tailings Radiation Control Act of 1978
		USACE	U.S. Army Corps of Engineers
		USC	United States Code
		USDA	U.S. Department of Agriculture
		USFS	U.S. Forest Service
		USGS	U.S. Geological Survey
		WGA	Western Governors Association

Appendix B – ACRONYMS		MOU	Memorandum of Understanding
AA	Assistance Agreement	MSHA	Mine Safety and Health Administration
ACHP	Advisory Council on Historic Preservation	MSL	Mine-Scarred Lands
AMD	Abandoned Mine Discharge	NAAML	National Association of Abandoned Mined Land Programs
AML	Abandoned Mine Land	NCP	National Contingency Plan
ARAR	Applicable or Relevant and Appropriate Requirements	NEPA	National Environmental Policy Act
BCI	Bat Conservation International	NFHAP	National Fish Habitat Action Plan
BLM	Bureau of Land Management	NGO	Non-Governmental Organization
BPS	Budget Planning System	NHPA	National Historic Preservation Act
CA	Cooperative Agreement	NLCS	National Landscape Conservation System
CASQA	California Stormwater Quality Association	NMA	National Mining Association
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	NOHVCC	National Off-Highway Vehicle Conservation Council
CFR	Code of Federal Regulations	nPA	national Programmatic Agreement
CHF	Central Hazardous Materials Fund	NPS	National Park Service
CWA	Clean Water Act	NRC	National Response Center
CX	Categorical Exclusion	NRCS	Natural Resources Conservation Service
DOD	U.S. Department of Defense	NRDAR	Natural Resource Damage Assessment and Restoration
DOE	U.S. Department of Energy	NSTC	National Science and Technology Center
DOI	U.S. Department of the Interior	NTC	National Training Center
DOL	U.S. Department of Labor	OAR	[EPA] Office of Air and Radiation
EA	Environmental Assessment	OEPC	Office of Environmental Policy and Compliance
EDL	Environmental Disposal Liability	OHV	Off-Highway Vehicle
EE/CA	Engineering Evaluation Cost Analysis	OMB	Office of Management and Budget
EIS	Environmental Impact Statement	OSHA	Occupational Safety and Health Administration
EO	Executive Order	OSMRE	Office of Surface Mining Reclamation and Enforcement (a.k.a. Office of Surface Mining – OSM)
EPA	U.S. Environmental Protection Agency	OSWER	[EPA] Office of Solid Waste and Emergency Response
ESA	Endangered Species Act	PA	Preliminary Assessment
FLPMA	Federal Land Policy and Management Act	PA/SI	Preliminary Assessment Site Investigation
FMD	Federal Mining Dialogue	PL	Public Law
FRTR	Federal Remediation Technologies Roundtable	PPE	Personal Protective Equipment
FY	Fiscal Year	PRP	Potentially Responsible Party
GIS	Geographic Information System	RAMS	Restoration of Abandoned Mine Sites
GPRA	Government Performance and Results Act	RCRA	Resource Conservation and Recovery Act
GPS	Global Positioning System	RI	Remedial Investigation
HASP	Health and Safety Plan	RI/FS	Remedial Investigation/Feasibility Study
HAZWOPER	Hazardous Waste Operations and Emergency Response Standard	ROD	Record of Decision
I-A	Intra-agency Agreement	SAP	Sampling and Analysis Plan
IA	Interagency Agreement	SCF	Special Clean-up Fund
		SI	Site Investigation
		SMCRA	Surface Mining Control and Reclamation Act

The Glossary defines "hardrock" as follows (page 83):

**Hardrock:**

This term is used here strictly in the context of the AML program and has traditionally been used by the BLM and other agencies to apply to non-coal mining environments where environmental risks such as acid-mine drainage, heavy metal contamination, and threats to water quality and the environment are of concern. Hardrock minerals in this context, generally include, but are not limited to gold, silver, copper, lead, zinc, magnesium, nickel, molybdenum, tungsten, uranium, and select other minerals where priority AML problems may occur. Most hardrock minerals are locatable under the Mining Law of 1872. Non-hardrock minerals include coal (which is addressed by the Office of Surface Mining and State coal reclamation programs) and some common variety mineral materials, such as sand and gravel.

The Glossary defines Abandoned Mine Land as follows (page 82):

**Abandoned Mine**

An abandoned hardrock mine on or affecting public lands administered by the BLM, at which exploration, development, mining, reclamation, maintenance, and inspection of facilities and equipment, and other operations ceased as of January 1, 1981 (the effective date of the BLM's Surface Management regulations codified at 43 CFR 3809) with no evidence demonstrating that the miner intends to resume mining. For many abandoned mines, no current claimant of record or viable potentially responsible party exists. Abandoned mines generally include a range of mining impacts, or features that may pose a threat to water quality, public safety, and/or the environment.

Page 38 of BLM AML Program Policy Handbook encourages employees to use the inventory system.

**Inventory Policy**

Page 11 of the BLM AML Program Policy Handbook states BLM's safety policy and provides links to important safety-related sites. See also [B.BLM.01 BLM Policy for AML Physical Safety Hazards](#), a BLM Instruction Memorandum titled "Mitigating and Remediating Physical Safety Hazards at Abandoned Mine Land Sites." Attachment BLM safety manual 1112 also describes duties of BLM officials with regard to employee and public safety. Per the handbook, "BLM holds paramount the safety, health, and welfare of its employees, volunteers, contractors, and the visiting public. It strives to eliminate or minimize physical or environmental conditions that are causing, or have the potential to cause harm, to persons, property, or the environment."

**Safety Policy**

Pages 47-49 of the BLM AML Program Policy Handbook provide information on how AML sites are prioritized from an environmental and safety perspective. For environmental (water quality) hazards, BLM assesses sites based on the following factors:

1. state government priority
2. partnerships
3. cost avoidance/cost recovery
4. impairment of water quality standards
5. water quality violations
6. threat to public health or safety
7. threat to the environment
8. continuing/expediting an existing on-the-ground project
9. location
10. cost efficient

For safety issues, sites are prioritized based on the following factors:

1. death or injury has occurred
2. visitation/high use
3. accessibility
4. location
5. cost efficient

#### Site Prioritization

BLM participates in MSHA's "Stay Out- Stay Alive" program to help educate the public on the dangers of abandoned mines. Pages 13-14 of the BLM AML Program Policy Handbook describe this program.

#### Public Information

page 45 of the manual notes that AML funds cannot be used to mitigate sites with occupancy trespass [J.BLM.27 Trespass under FLPMA](#) as shown in the tab below. This limitation is in effect a regulatory requirement for AML field staff. At these sites, the Handbook notes that BLM law enforcement may have to become involved. Terry Neumann, BLM Carson City, noted to use that trespass is prevalent in the West [K.BLM.VirginiaCity.01 Trespass Issues](#). We conclude from this that trespass hinders BLM's efforts to mitigate sites because of the regulatory (limitations on funding) and legal delays (involvement of law enforcement) associated with evicting trespassers and the physical removal of homes and commercial facilities [Auditor opinion]

#### Impacts of Trespass

Conversely, AML funding cannot be provided for remedating sites that:

- ◆ Are not on or affecting land administered by the BLM;
- ◆ Have a notice or plan of operation (i.e., are post-FLPMA);
- ◆ Have occupancy or trespass issues (may involve the BLM's law enforcement); or
- ◆ Have a mining claimant or PRP that is able and willing to clean up the site (see the BLM's CERCLA *Response Handbook* (H-1703-1) or BLM Manual Section 3809, Surface Management for details).

The handbook describes mitigation of sites with safety and/or environmental hazards. For environmental hazards, techniques to mitigate the hazards are found on pages 69-73. Selections are shown below regarding surface controls to reduce wind erosion (dust) or containing the migration of contaminants (capping):

#### Mitigation

page 70:

- **Surface controls reduce contaminant migration by curtailing water and wind erosion** of the contaminated material and reducing the potential for infiltration of surface-water runoff. Because surface controls alone do not reduce the risks of direct exposure to the contaminated materials, they are commonly combined with source control technologies where there is concern of risks due to direct exposure. The process options that are commonly used as surface controls include consolidation and erosion mitigation (e.g., run-on and run-off controls, revegetation, and grading).

page 72:

> **Containment is used as an on-site source control measure, and for solid material, involves capping the material in place.** Capping the material and implementing appropriate erosion controls, eliminates direct exposure to the contaminated materials, reduces surface water infiltration, and creates a surface for vegetation. Regrading to reduce side slopes is often required to reduce erosion. The cover material should be less permeable than the natural subsoils beneath the contained waste. Cover designs at mines include natural-rock covers, soil covers, composite natural covers consisting of a low-permeability soil/clay layer overlain with native soil/rock, and geotextile covers with natural-rock or native soil cap.

The construction of structures/features to control off-site migration of materials is another containment option. This approach includes those designed to capture sediment while allowing water to pass through the feature (e.g., structural silt fences), water retention features (e.g., sedimentation ponds) in combination with constructed channels to direct flow to the feature, and retaining structures (constructed walls or earthen berms).

**Methodology**

Reviewed source document.

Submission: Submitted William McMullen 05/05/2008 03:12:36 PM  
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**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 07/11/2007

**Assignment Number:** C-IN-MOA-0004-2007

**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.14

**Subsection:** Audit Step J.17

**Program Name:** BLM (Overall)

**Subject:** Website Safety Information

**Origination Doctlink:** ■

### Purpose

Document BLM efforts on the web to educate the public about the hazards of abandoned mines.

### Scope

BLM AML Program.

### Source

BLM's AML website has a section of safety found at [http://www.blm.gov/wo/st/en/prog/more/Abandoned\\_Mine\\_Lands/Safety\\_Education.html](http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands/Safety_Education.html).

### Conclusion

The BLM AML program website includes relevant information and links to educate the public about the hazards of abandoned mines.

### Details

The BLM AML website safety section opening page is shown below.

The link to "Types of Safety Hazards" describes the hazards of open shafts, unstable rock or decayed support, deadly gases and lack of oxygen, explosives and toxic chemicals, horizontal and vertical openings, and highwalls and open pits.

The link page also includes a safety brochure (pdf) that can be accessed.

The link to "Stay Out-Stay Alive" describes this Mine Safety and Health Administration (MSHA) program and provides a poster that can be accessed.

The link to "Educational Resources" provides access to an Abandoned Mine Land Safety Skit and a link to MSHA's homepage for kids.

The screenshot shows the BLM National website. At the top, it says 'U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT'. Below this is a navigation bar with 'Search BLM' and 'Go' buttons. The main content area is titled 'Safety and Education' and includes a sub-header 'Types of Safety Hazards | Stay Out-Stay Alive | Educational Resources'. The text discusses the history of mining in the West and the challenges of managing abandoned mines. A sidebar on the right lists various resources related to Abandoned Mine Lands (AML), such as 'About AML', 'Abandoned Mine Site Inventory', and 'Frequently Asked Questions'. At the bottom of the page, there is a footer with links to 'USA.gov', 'No Fear Act', 'DOI', 'Disclaimer', 'About BLM', 'Notices', 'Get Adobe Reader', 'Privacy Policy', 'FOIA', 'Kids Policy', 'Contact Us', 'Accessibility', 'Site Map', and 'Home'.

**Methodology**

Reviewed BLM AML website.

Submission:	Submitted	William McMullen	01/11/2008 09:13:01 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/11/2008 11:31:50 AM

**Linkage Information**

**History**

**Status:** Approved **Request Review:**  
**In Progress Edit:** William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Greta Bloomfield 07/20/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.16 **Subsection:** Step 1  
**Program Name:** BLM (Overall)  
**Subject:** 07/20/07 ROD Chris Ross BLM Nevada

**Origination Doctlink:** [REDACTED]

**Participants:**

Name	Title	Office Location
Chris Ross	AML Coordinator	BLM State Office, Reno, NV
John Illson	Auditor	134 Union Blvd Lakewood 80228
Greta Bloomfield	Evaluator	134 Union Blvd Lakewood 80228

**Location:** Via Teleconference

**Date/Time:**

07/20/2007 09:00 AM

**Purpose**

To review the inventories sent by Chris regarding environmental hazards.

**Scope**

BLM Nevada's environmental hazards related to AML

**Conclusion**

Chris Ross said Castleton would be a good example of an environmental hazard, but that it will take at least \$10 million to mitigate. Chris stated that Nevada is doing a good job of identifying and prioritizing physical hazards, due to volunteer help.

Chris feels assured that they are adequately identifying the environmental sites and are very timely in identifying new sites that are being reported. For example, Chris noted that a mine in a remote location outside of Winnemucca and 30 miles from humans, has contributed to the death of cattle. This mine is the Birthday Mine. Chris stated they just found out 2 days ago about the mine, but are documenting everything and getting the situation into their records.

Chris stated that with Virginia City, the cadastral survey people state that its next to impossible to determine what mine sites and related hazards are on BLM property. He stated that there are three sets of land records and none of them match up. In addition, Chris stated the official plat doesn't even match up with the streets. This has caused a lot of vague processes for capturing property tax from land owners.

Chris stated American Flats has been an issue as well.

Chris noted that in Virginia City, land ownership is a real problem and he doesn't feel Virginia City has a lot of potential for us, because of the land ownership and what is there (waste rock versus tailings) and that Virginia City doesn't have a watershed issue, like other areas such as Leadville, Colorado.

**Summary**

We teleconferenced with Chris, the AML coordinator at Nevada State Office. We discussed the Power point presentations that Chris fedexed to us and told him we were having problems printing them so we would not be able to go over them during the call. Chris said he would go over them with us during our site visit.

John went over the physical and environmental situations with BLM in California, especially Randsburg and expressed the detail of concern regarding known and unknown sites that could be another Randsburg.

Chris concurred that the physical and environmental hazards are a big problem in Nevada. Chris stated that the environmental hazards are difficult to document, versus a physical hazard such as falling down a hole. Chris stated that getting cancer 30 years from now and not knowing if it was from an environmental contamination or from smoking a pack a day, doesn't exactly help with pinpointing the cause and the valuating the potential risks. So as a result, he said BLM needs something really dramatic, in order to get attention. Chris used Castleton for example and that it's a huge problem and is known, but will take \$10 million to mitigate and BLM's current funding is just a drop in the bucket compared to the cost to fix this one site.

John asked Chris if he could put a figure out there, how much money would BLM Nevada need to fix the problems. Chris replied that they put together their annual estimates and then Washington gets out the flyswatter and says "let's be reasonable." Chris stated that they are getting additional funding for Clark County and Lincoln County funding will be approved and that Elko is also a top priority. It is the auditor's conclusion that this question was not answered.

Chris stated that with physical hazards, BLM is doing a good job with identifying and prioritizing, because of the contributions by the good Samaritans, volunteers who participate in the inventorying process. With environmental hazards, Chris said CERCLA type concerns of ownership and liability come up on the table and its must more difficult to get participation with identifying such sites.

John mentioned that I would be doing the best practices for the audit and that Nevada seems to have a good amount of partnerships. Chris noted he has 5 inches of paper on his desk about best practices and that he would share information with us as we saw fit.

John asked if there are any Randsburgs in Nevada.

Chris noted that Castleton is large, but hasn't been ignored.

John noted that we are trying to help and that it sounds like BLM needs to come up with tens of millions of dollars to address these things on a short to basis. John asked if Virginia City can help, and noted that the team has heard a few things about Virginia City...and maybe it's waste rock maybe its tailings, but what the team is looking for are large sites that BLM does not have the funding for, and large sites that have not been identified.

John noted that Randsburg was not fully realized until someone from the State Office brought the situation forward.

John also noted that with less resources, we are concerned about Nevada's ability to identify potential sites like the sites at Randsburg.

Chris noted that the team may disagree, but Chris feels assured that they are adequately identifying the environmental sites and are very timely in identifying new sites that are being reported. For example, Chris noted that a mine in a remote location outside of Winnemucca and 30 miles from humans, has contributed to the death of cattle. This mine is the Birthday Mine. Chris stated they just found out 2 days ago about the mine, but are documenting everything and getting the situation into their records.

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Submission:	Submitted	Greta Bloomfield	01/11/2008 03:58:10 PM
Level 1 Approval:	Approved	William McMullen	01/22/2008 11:26:29 AM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:50:43 PM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 05/02/2008 12 44 59 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Fri 05/02/2008 12:44 PM. For original text, refer to the field(s) above.

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**History**

**Status:** Approved **Request Review:**

**In Progress Edit:** Greta Bloomfield/DEN/OIG/DOI, John Illson/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: Stephanie Christian 08/28/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.17 **Subsection:** Step 1  
**Program Name:** BLM (Overall)  
**Subject:** BLM AMM System Problems

**Origination Doclink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Stephanie Christian	Evaluator	134 Union Blvd, Lakewood, CO 80228	303-236-9112	Stephanie_Christian@doioig.gov
Cheryl Laudenbach	LR2000 Mining Claims User Support Specialist Protection and Response Information System (PRIS) User Support Specialist	Land and Resources Projects Office, WO-330D Lakewood, Colorado	Voice: 303-236-1955 Fax: 303-236-6691	Cheryl.Laudenbach@BLM/DOI@BLM

**Location:** Telephone Conversation

**Date/Time:**

08/28/2007 02:30 PM

**Purpose**

To obtain inventories from BLM determine how the data was compiled and any deficiencies

**Scope**

BLM AMM Database

**Conclusion**

**AMM Deficiencies:**

**AMM system is incomplete**

- BLM staff are not entering all information fields on AML sites into the AMM database to provide the necessary information to prioritize sites for mitigation

**AMM system is inadequate to manage the AML program**

- The AMM database does not have a priority ranking system in place to determine the highest priority AML sites requiring mitigation
- The AMM database is not used by BLM State Office to prioritize AML sites for mitigation and remediation
- The AMM database is not used by BLM HQ to prioritize funding for mitigation and remediation of AML sites
- The AMM database does not have complete site characterization information to determine mitigation or remediation action required
- The AMM database includes a significant amount of sites that were brought over from the old Bureau of Mines data and Mass Mills data which provide very little information regarding the AML sites
- Many sites listed in the AMM database have never been verified by BLM field staff to identify mitigation or remediation required at the site
- The AMM database does not have any identification of active mining claimants

**Summary**

I called Cheryl to follow-up on problems identified with the AMM database. According to Cheryl, there are thousands of sites with the status of undetermined in the AMM database. Cheryl stated that the sites with a status of undetermined were brought over from the old Bureau of Mines data and Mass Mills data. Cheryl indicated that these sites have very little information provided regarding the AML site. She said most sites transferred from the Bureau of Mines and Mass Mills have only the latitude and longitude listed in the AMM database and most have never been field verified by BLM staff to identify mitigation or remediation required at the site. Cheryl stated that these sites were simply imported from the old system and converted to the AMM database, but no one from BLM has visited the site to determine the specific physical and environmental hazards present at the site. Cheryl also stated that even for the sites that have a status of planned or in progress in the AMM database, BLM staff have not entered all of the information fields on the AML sites into the AMM database. The lack of complete site information will not allow for the prioritization of sites for mitigation using the AMM database.

I then asked Cheryl about the capabilities of the AMM system. I asked Cheryl if the AMM system has a priority ranking system in place to determine the highest priority AML sites requiring mitigation. Cheryl indicated that the AMM database does not have any priority ranking system in place. I then asked if the AMM database has a prioritization process in place for the funding of AML sites. Cheryl indicated that the AMM system does not have any prioritization process in place for the funding of AML sites. I then asked Cheryl if the AMM database lists the mining claimants for all AML sites. Cheryl stated that the mining claimants are not listed for the AML sites in the AMM database.

Submission: Submitted Stephanie Christian 08/28/2007 05:53:36 PM

J BLM.17 BLM AMM System Problems

Level 1 Approval: Approved William McMullen 11/16/2007 04:12:09 PM  
Level 2 Approval: Approved John Illson 01/11/2008 11:33:31 AM

[Linkage Information](#)

**History**

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## Assignment Workpaper

Prepared by: William McMullen 10/22/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.19

Subsection:

Program Name: BLM (Overall)

Subject: Organizational Structure

Origination Doctlink: ■

### Purpose

Document BLM organizational line management structure.

### Scope

BLM structure and authorities.

### Source

BLM Manual 1201 "Organization Management" found at <http://www.blm.gov/nhp/efoia/wo/manual/1201.pdf> and attached:



BLM Manual 1201 Organization.pdf

Reorganization memo found at <http://www.publicland.org/blmreORG.htm> and attached:



BLM Reorganization.pdf

### Conclusion

- Only BLM senior managers (Director, Deputy Director, Assistant Directors, State Directors, Assistant State Directors, Field Managers) have line authority within BLM.
- The HQ BLM AML national program coordinator has no line authority over his program since he is not one of the managers listed above and has little ability to implement needed changes without line authority. [Auditor Opinion] ■
- ■ BLM operates in a very decentralized manner by design with line authority passing from the Director to State Directors to Field Office Managers.
- In 2007, BLM announced a reorganization plan that would move to a three-tier structure at the field level, e.g., State Offices, District Offices, Field Offices.
- The reorganization is to be implemented over 2 years.

### Details

.13 Operating Management Practices. It is the practice of the BLM to operate its organizational units in the most efficient and effective manner possible. Within an organization's delegated authorities there are certain practices, which must be adhered to, in managing and directing activities. These operating management practices are as follows:

A. Decentralization. The BLM's practice is to place functions, resources, and personnel, considering such factors as workload, funding, access, efficiency, and legal requirements, at the lowest possible level in the organization and to place authority, responsibility, and accountability at the level where the work is performed. The only exception would be in the consolidation of support functions since the centralization of this function would enable cost savings and increased efficiencies.

F. Line and Staff. The BLM's organization and management processes follow a line-staff concept. The managers of the three basic organizational levels exercise line management. These are the Director, Deputy Director(s) and ADs (includes the OFA Director) at the WO level; State Director and ASD at the SO level; Field Manager (includes National Conservation Area Manager or National Monument Manager) at the Field level. All other managers are staff managers.

Some states use a District Structure as well whereby a District Office with line authority is established under a State Office but above Field Offices

.5 Exempted Structure. The official organization of the BLM is a two-tiered structure. In Idaho, California, and Oregon, however, there is an additional tier between the SO and the FO, formally named the District Office. This office structure has officially been approved by Headquarters for these three areas.

.51 District Office Manager. The District Manager is the line official who formulates policy and renders decisions within the limits of his/her delegated authority, directs activities within the District, and provides support to subordinate Field Offices. The District Manager is directly responsible to the State Director.

.52 District Office. District Offices, in States where a modified two-tier structure is approved, consist of a District Manager, Associate District Manager (not all Districts will have one), Assistant District Managers, and support staff. District offices are responsible for administering BLM programs in two or more FOs. The District Offices are structured to guide and assist the Field Offices under them in accomplishing mission activities. The FOs within Districts do not have the same roles as those in the official two-tiered structure. The FOs under a District do not develop and administer programs, this function is given to the District Office. The role of the District Office broadly falls into the following five major areas:

A. Policy and Program Direction - District-wide policy setting; interpretation of State policy; facilitation and implementation of that policy; and providing decisionmaking authority.

B. Facilitation and Coordination - Coordinate program objectives to achieve mission goals; coordinate State and Field projects across Field Office boundary and agency lines (where interagency offices or agreements exist); provide scarce skills and operational support, when needed, at the Field level; and provide centralized support services.

C. Communication - Principal point of contact with regional and local offices of State agencies, county governments, other BLM offices, and other agencies or organizations as needed. In addition, provide early warning to WO and SO on sensitive issues.

D. Monitoring - Ensure that the BLM mission is met and to identify changing priorities and needs. Monitoring means maintain an awareness.

E. Business Management - District-wide guidance and coordination of the BLM business management processes; gathering, reporting, and analysis of performance/cost data; and improving the efficiency and effectiveness of the organization.

The purpose of the reorganization as stated on page 1 of the attachment "BLM Reorganization.pdf":

"The West is rapidly changing, and we must adapt to remain responsive to the American people," Clarke said. "These changes will help ensure that we can serve an increasing number of publics, while operating more efficiently."

BLM's Director announced a reorganization plan that would implement a three-tier structure in the bureau, e.g., State Offices, District Offices and Field Offices (page 1 of attachment BLM Reorganization.pdf).

Director Clarke's *Managing for Excellence* initiative, which will be implemented over the next 2 years, includes: . Moving remaining two-tiered states to a three-tiered organization, consisting of State Offices, District Offices and Field Offices.

As shown on page 2 of the attachment, the purpose of the reorganization is to:

Create consistently structured State organizations that are made up of a State Office, District Offices and Field Offices. Currently, some State BLM organizations have just a State Office and Field Offices. The lack of District Offices in some States limits the BLM's ability to keep decisions as close to the ground as possible. This structure allows us to provide better and more consistent service to the public.

#### Methodology

Reviewed source document.

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## Assignment Workpaper

Prepared by: William McMullen 10/23/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.20  
Program Name: BLM (Overall)  
Subject: AML Strategic Plan

Subsection:

Origination Doctlink: 

**Purpose**  
Document AML Program Strategic Plan.

**Scope**  
BLM AML Program.

**Source**  
"The Cooperative Conservation Based Strategic Plan for the Abandoned Mine Lands Program" provided by George Stone, BLM AML Program Manager and attached.



BLMAMLSrategicPlan.pdf

### Conclusion

The AML Strategic Plan is a comprehensive document describing BLM's AML program and its elements. The Plan covers the period from FY03 to FY06 and sets the stage for the development of succeeding plans. The strategic plan includes more comprehensive site information that is available in the AMM system. The data in the strategic plan is more than AMM for short-term planning and project management. The plan's key points are:

- Funding for AML mitigation is provided by a number of different budget sources (1010, 1640, 2640).
- More than 63 million people live in the West, over 22 million are within 25 miles of public land and recreational use of public lands is increasing all leading to increased risks to the public from AML physical safety and environmental hazards.
- BLM's objectives are to identify, prioritize, and remediate sites, report progress and conduct outreach.
- BLM's current inventory is not complete but includes over 11,000 AML sites.
- BLM has established a priority scheme for ranking the environmental and physical safety risks of AML sites.
- BLM uses a peer review process that is evolving.
- AML program and BLM's Solid Minerals program need to develop policy regarding mining claimants.
- AML sites can present financial liability issues for the Department.
- Best practices are an important element of the program.
- Funding identified as needed for mitigation of the Randsburg area in the Strategic Plan is less than that recently estimated as needed by the State Director.
- [Auditor Conclusion] The BLM AML Strategic Plan provides a framework for adequate identification, prioritization and funding of AML environmental and safety concerns. While the Plan may understate total funding of large projects such as Randsburg (costs were not well known when the Plan was published in 2006), the Plan provides a good basis for budget justifications and for the establishment of an AML budget line item.
- [Auditor Conclusion] While the Plan acknowledges problems with the AML inventory, it does provide a prioritized listing of project needs as identified by the States that can be used as an initial high-priority inventory and that can be augmented in the AMM as additional sites are identified and characterized.

### Details

The BLM AML Strategic Plan was issued in March of 2006. It provides a summary of all relevant program activities (some of which are summarized below) as well as a summary of each of the relevant state programs. The Plan focuses on the physical safety and environmental (water quality impacts) of abandoned mine sites and establishes a mechanism for dealing with these sites. Success in this effort is recognized to depend on significant cooperation with state and local governments and industry, recreation and environmental interest group partners.

The State Plans included in the Strategic Plan cover work from FY2007 - FY2013. The California State Plan includes an estimate of \$12 million (page 34 of the BLM AML StrategicPlan.pdf) for the Kelly Mine (Randsburg). This is significantly less than that recently projected as needed by the State Director for the Randsburg District (E.04.05 CA State Director Briefings ). The State Plans include prioritized safety and environmental sites that the states propose for action. As shown on page 10 of the Plan, the State Plans are a key part of the AML process:

#### 3.3.2.1. Development of Multi-Year Plans

State Offices are developing workplans for AML program activities to foster long-range planning. These multi-year plans will provide critical information needed for interagency program coordination, facilitating strategic plan support, and for budget projections. Initial plans are in place. Plan updates will occur as part of the AML project peer review process. State Offices are to invite their partners to participate in developing and revising their plans.

The Nevada State Plan includes \$5 million for mitigation of the Caselton tailings (page 68 of the BLM AML StrategicPlan.pdf).

The Strategic Plan explains BLM's AML program and provides guidance to BLM field managers on setting priorities as follows:

Introduction 

The Strategic Plan describes its applicability and timeframe as follows:

**Applicability and Timeframe**

The Strategic Plan describes the history of hard rock mining and notes the importance of the growing population in the West as a significant risk factor as follows:

**History and Demographics**

The Strategic Plan establishes several program objectives as follows:

**Program Objectives**

The Strategic Plan outlines the current inventory of AML sites and describes the goal for the AMM database as follows:

**Abandoned Mine Module Database**

The Strategic Plan identifies a prioritization scheme for physical safety and environmental hazards as follows:

**Prioritization**

The Strategic Plan discusses the importance of a peer review process as follows:

**Peer Review**

3 2 4 2 AML Project Peer Review Process

BLM will refine its AML project peer review process. Now that this process has been implemented for two fiscal years, lessons learned can be taken back to make the peer review process more useful. One area that needs to be factored into the process is State Office and Field Office performance. For FY 2008, the State Office multi-year plans will be able to provide a backdrop to gauge the status of long-term funding commitments and identify patterns and trends affecting future priorities and fund shifts among State Offices.

The Strategic Plan identifies the need for the AML program and BLMs Solid Minerals program to develop policy regarding mining claimants as follows:

**Mining Claimants**

3 1 1 3 Mining Claimants

The AML and Solid Minerals programs will develop policy on mining claimant responsibilities related to AML sites. This policy will help determine if the site falls within the parameters of the AML program or should be addressed through BLM's surface management program.

The Strategic Plan discusses the financial liability implications of AML sites as follows:

**Financial Liability**

The Strategic Plan identifies the value of best practices as follows:

**Best Practices**

**Methodology**

Reviewed source document

Submission: Submitted William McMullen 01/11/2008 09:35:59 AM

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## Assignment Workpaper

Prepared by: William McMullen 10/23/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.21

Subsection:

Program Name: BLM (Overall)

Subject: BLM/USFS AML 10 Year Report

Origination Doctlink: 

### Purpose

Document BLM/USFS 10 Year AML Report.

### Scope

BLM AML Program.

### Source

Report provided by George Stone, BLM and attached:



Final AML Report.pdf

### Conclusion

-  The report, published in September 2007 (page 2) provides an excellent summary of 10 years of effort on the part of BLM and the USFS, as well as states, local governments and partners, in addressing AML hazards on public lands.
- Between 2000 and mid-2007, BLM had mitigated physical safety hazards at more than 3,000 sites.
- Between 2000 and FY2003, BLM had restored water quality at 281 sites.
- This report illustrates the value of collaborative partnerships that can be used successfully by BLM.

### Details

The 10 Year Report includes the following sections:

Introduction..... 2

- The Impact of Abandoned Hardrock Mine Lands on America's Landscape..... 2
- The Challenge of Reclaiming Abandoned Mine Lands..... 3
- Benefits of Abandoned Mine Land Reclamation..... 3

Program History..... 4

- Early Efforts To Address AML Sites..... 4
- The BLM and the Forest Service Launch AML Programs in 1997..... 5

Pilot Success..... 8

- Animas River Watershed..... 8
- Boulder River Watershed..... 12
- Cottonwood Wash Watershed ..... 16

Progress Through Collaboration..... 20

- Forming Innovative Partnerships To Clean Up Private Lands..... 20
- Improving Public Safety and Water Quality by Collaborating With State Agencies ..... 21
- Partnering on Voluntary Cleanups..... 21
- Ensuring Continued Collaboration..... 22

Restoring the Environment..... 23

- Returning Life To Dead Lakes and Streams..... 23
- Using Innovative Cleanup Methods..... 24
- Restoring Watersheds and Protecting Endangered Species..... 25
- Continuing To Protect the Environment..... 25

Ensuring Public Health and Safety..... 26

- Protecting Human Uses of Water..... 26
- Making Recreation the Future of Former Mining Sites..... 26
- Addressing Mine Closures..... 27
- Protecting Public Health and Safety Into the Future..... 28

Improving Quality of Life..... 29

- Increasing Community Pride Through Reclamation Efforts..... 29
- Building Capacity To Further Environmental Progress..... 30
- Supporting a Local Economy Through Reclamation..... 30
- Helping Communities To Turn the Tide..... 31

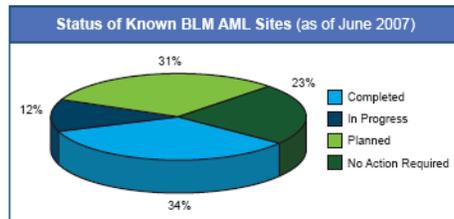
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- Enhancing Site Inventories and Prioritizing Reclamation Projects ..... 32
- Leveraging Resources and Results Through Cooperation and Partnership..... 32
- Transferring Technological Innovations To Ensure Effective and Efficient AML Site Cleanups..... 33
- Solving the Long-Term AML Problem Through Prevention and Sustainable Practices..... 33

**Page 5 of the report notes BLM accomplishments:**

Between 2000 and mid year FY 2007, the BLM:

- Inventoried 5,500 sites. In addition, took mitigation actions at safety hazards at many of these sites;
- Remediated physical safety hazards at more than 3,000 sites; and
- Restored water quality at 281 sites through FY 2003 and at more than 3,000 acres since FY 2004.



Pages 20-28 discuss the methods BLM and USFS are using to address the environmental and safety hazards of abandoned mines.

Safety hazards can be addressed with signs and fences or more permanent solutions such as backfilling, using foam closures or installing bat gates or grates. Environmental hazards can be addressed with signs and fences as well or more permanent solutions such as removing tailings, stabilizing structures, neutralizing acidic water, reprocessing sediments and tailings to recover contaminants, recontouring and reshaping piles, water run-off controls, and revegetating and stabilizing tailings to prevent erosion.

This report illustrates the value of collaborative partnerships that can be used successfully by BLM.

**Methodology**

Reviewed source document.

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 Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.22 Subsection:  
 Program Name: BLM (Overall)  
 Subject: AML Strategic Plan Budget Needs

Origination Doclink: [redacted]

**Purpose**  
 Document needed funding to address priority AML projects identified in the Strategic Plan.

**Scope**  
 BLM AML Program.

**Source**  
 BLM AML Strategic Plan J.BLM.20 AML Strategic Plan [redacted]  
 Email from Leslie Torrence dated 10/22/07 included in Details section.  
 Followup discussions with George Stone.

**Conclusion**  
 The BLM AML Strategic Plan outlines the following funding needs for water quality (environmental) and physical safety AML projects identified in the State plans included in the Strategic Plan.

- Over \$130 million is needed to mitigate the safety and environmental hazards identified in the Plan, although the Plan understates likely needed costs for mitigation of the Randsburg site by estimating only \$12 million when the CA State Director has estimated \$170 million for mitigation in the Rand Mining District.
- \$113,614,000 is needed for identified environmental projects. Average project cost is \$1,136,000.
- \$16,491,000 is needed for physical safety projects. Average project cost is \$174,000. Projects typically include a number of features (such as shafts or adits) that must be mitigated).
- Most environmental project funding is for sites in Utah, California and Nevada.
- Most physical safety project funding is for sites in Utah, Nevada and Arizona.
- [Auditor Conclusion] Mitigation of environmental hazards, on average, is significantly more costly than mitigation of physical safety hazards.
- [redacted] Given that the program receives about \$8,500,000 per year from the soil, air and water subactivity and perhaps \$1.5 million from haz materials subactivity, the program typically receives less than \$10 million per year, has been chronically and drastically underfunded and could not begin to meet the needs (\$130 million) identified for all of the projects in the AML Strategic Plan. The lack of a budget subactivity for AML lessens the visibility of the program and leads to funding uncertainty. Significant progress in mitigating AML sites cannot be made unless a more substantial, sustained commitment of resources is made to the program within an established AML budget subactivity. [Auditor Opinion].

**Details**  
 The data in the email attachment was summarized by state as follows. Percentages were calculated by WHM:

State	Water Quality	% of Total WQ	Physical Safety	% of Total PS	Total	Total
AZ	\$6,170	5.4%	\$1,758	10.7%	\$7,928	6.1%
CA	\$34,040	30.0%	\$1,050	6.4%	\$35,090	27.0%
CO	\$7,139	6.3%	\$0	0.0%	\$7,139	5.5%
ID	\$3,510	3.1%	\$705	4.3%	\$4,215	3.2%
MT	\$5,780	5.1%	\$538	3.3%	\$6,318	4.9%
NV	\$15,685	13.8%	\$2,152	13.0%	\$17,837	13.7%
NM	\$0	0.0%	\$470	2.9%	\$470	0.4%
OR	\$3,316	2.9%	\$250	1.5%	\$3,566	2.7%
UT	\$36,600	32.2%	\$8,465	51.3%	\$45,065	34.6%
WY	\$1,374	1.2%	\$1,103	6.7%	\$2,477	1.9%
	<b>\$113,614</b>	<b>100.0%</b>	<b>\$16,491</b>	<b>100.0%</b>	<b>\$130,106</b>	<b>100.0%</b>
% of Total	87.3%		12.7%			

NOTE The attachment to the email below shows a total cost of \$130,105. The table above was developed with fewer significant figures than the spreadsheet and the totals shown above are somewhat different due to rounding error. (Math verified by SGC on 1/23/08)

The Strategic Plan lists 95 sites with physical safety hazards (these sites typically have numerous features such as open adits and shafts) and 100 sites with environmental hazards (approx 200 total sites) identified by BLM state offices (see tables in tabs below). As the Table above shows, the total estimated cost of mitigating these sites is over \$130 million. Most funding needs identified in the Strategic Plan relate to Water Quality, e.g., environmental projects (87%). Only about 13% of identified funds are needed to mitigate physical safety hazards. Most environmental mitigation funding needs are in Utah, California and Nevada while physical safety funding needs are in Utah, Nevada and Arizona. These funding needs only include \$12 million for the Randsburg project which is less than the \$170 million estimated by the State Director E.04.05 CA State Director Briefings and so, likely, significantly understate the total funding needs of the AML program.

The AML program typically receives about \$8.5 million per year in funding from the subactivity for soil, air and water pollution, the primary funding source for the program. A.03.02 Initial Discussion with George Stone According to George, some funds, perhaps \$1.5 to \$2 million per year may be allocated from the hazardous materials subactivity but these funds, if available, are typically allocated late in the fiscal year after the Haz Mat program has dealt with significant haz mat issues.

Thus, the AML program can reliably plan on less than \$10 million per year. George noted that lack of a budget subactivity lessens the visibility of the program, leads to funding uncertainty and lessens the priority of the program. [Auditor Opinion] Based on our site visits K. BLM (Site Visits) where we observed numerous dangerous AML safety and environmental hazards that had not been mitigated, we conclude that lack of funding and insufficient resources are contributing to this inadequate mitigation.

Physical safety projects identified in the Strategic Plan are summarized below with costs shown in thousands: The average cost of mitigation of a physical safety hazard is about \$174,000. Physical hazards generally require the least funding to mitigate and the least expertise to identify and evaluate. As noted in the State pages of the Strategic Plan, these physical safety projects typically involve a number of features (such as shafts or adits) as identified in the Abandoned Mine Module database. We believe that, if within current funding levels of about \$8.5 million, the AML program could use these funds more effectively and efficiently to address temporary mitigation of safety and environmental sites by evaluating sites, posting signs and fencing sites. [Auditor Opinion] One approach to using funds more effectively would be to use fewer full-time dedicated AML staff at appropriate state and field offices K.BLM.Arizona.03 AZ Zoned AML Management instead of numerous collateral duty AML staff J.BLM.31 Time Charged to AML Program. However, recent decreases in funding could jeopardize mitigation of sites and use of full-time staff J.BLM.30 Funding History for AML.

Physical Safety Projects

Water quality (environmental) projects identified in the Strategic Plan are summarized below with costs shown in thousands. The average cost of mitigation of an environmental hazard is about \$1,136,000. Water quality site cleanup can cost hundreds of millions of dollars to remediate and require extensive expertise to identify, evaluate, and mitigate. Potential sites must be sampled to identify hazardous contamination. Mitigation can include temporary measures such as reducing air and water borne contamination through dust control with sprinklers and temporary covers. Additionally, temporary measures also include protecting the public by installing fencing and signs and taking appropriate steps to notify the public of the dangers. Permanent mitigation can include reprocessing of tailings to treat contaminants, removal of materials to safer locations or on-site disposal in a properly designed facility. Clean-up of all significant sites with environmental hazards may eventually cost billions of dollars.

Water Quality Projects

Hi Bill,

Attached is the spreadsheet of the numbers I captured from the Strategic Plan.



FY2007 1010 AML Cost Estimates from Strategic Plan 3-16-07.xls

If I can be of further assistance, please let me know.

Leslie Y. Torrence, Ph.D.  
Environmental Protection Specialist  
Division of Engineering and Environmental Services  
Phone: 202-557-3579  
FAX: 202-452-5046  
Email: Leslie\_Torrence@blm.gov  
William McMullen/DEN/OIG/DOI/OIG

William McMullen/DEN/OIG/DOI/OIG  
10/22/2007 02:50 PM

To: Leslie Torrence/WO/BLM/DOI@BLM  
cc: George M Stone/WO/BLM/DOI@BLM, John Illson/DEN/OIG/DOI/OIG  
Subject: AMLstrat plan needed funding

Leslie, I am having trouble using the Strategic Plan to arrive at the \$130 million figure you noted in our meeting as the cost of mitigation actions for the sites in the Plan. Can you provide documentation that shows how this was derived and the split between safety and environmental costs? We want to support the fact that the Plan has identified significantly more needs than your annual budget submissions contemplate; hence, the need for a dedicated line item. Thanks and I apologize if you have already provided this info, but I have so many docs that I doubt I could find it.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

Methodology

Analyzed spreadsheet provided as attachment to source email.

Submission: Submitted William McMullen 01/24/2008 08:38:47 AM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 04/28/2008 12:50:58 PM

Linkage Information

**History**

**Status:** Approved **Request Review:**  
**In Progress Edit:** Greta Bloomfield/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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from Explanation\_Mineral Examination.doc:

“Mineral Examination” is normally referred to as a validity examination, although some field personnel use the term to describe any form of mineral report. **Validity examinations determine compliance with the discovery and marketability requirements of the General Mining Law.** Since 1990, validity examinations are conducted by certified mineral examiners. Before 1990, any geologist or mining engineer could do one. The authority for this formal investigation (which has been done since the late 1890s) is 30 USC 22. The Secretary’s general authority to enforce this requirement (along with a number of related land actions was affirmed in Cameron v. United States, 252 US 450 (1920):

Followup emails with Haskins to clarify mineral exams:

**B. Definition of a Mineral Examiner.**

A mineral examiner is a federal employee who through education, training and experience has met the requirements as defined within Manual Section 3895 and received certification as a mineral examiner (CME), or review mineral examiner (CRME) by the Director of the Bureau of Land Management. The National Park Service uses our certification process to certify its mineral examiners. The U.S. Forest Service (USFS) also maintains a certification program for its mineral examiners. Employees certified by the USFS as a CME may conduct mineral examinations for BLM under an interagency MOU. **Only a BLM CRME may conduct final technical review of a mineral report if BLM is required to act upon the recommendations in the mineral report.**

**A mineral resource analysis is a general geological evaluation of a specified parcel of land involved in a Resource Management Plan, and may be prepared by any geologist or mining engineer. A mineral potential report is prepared for a land sale, exchange, or withdrawal that evaluates the land concerned for any mineral deposits that may be present, or maybe reasonably inferred for the geologic analysis. Resource analysis and mineral potential reports are produced under the requirements of FLPMA.**

---

**Roger Haskins/WO/BLM/DOI@BLM**

11/09/2007 09:24 AM

To William McMullen/DEN/OIG/DOI@OIG@DOI

cc George M Stone/WO/BLM/DOI@BLM, John Illson/DEN/OIG/DOI@OIG

Subject Re: mineral exams



Explanation\_Mineral Examination.doc

Roger A. Haskins CRME #003  
Senior Specialist for Mining Law Adjudication  
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1849 C Street NW  
Washington, DC 20240-0001  
Ph: (202)-452-0355 FAX (202)-653-7397  
William McMullen/DEN/OIG/DOI@OIG

---

**William McMullen/DEN/OIG/DOI@OIG**

11/05/2007 02:24 PM

To Roger Haskins/WO/BLM/DOI@BLM@DOI

cc John Illson/DEN/OIG/DOI@OIG, George M Stone/WO/BLM/DOI@BLM

Subject Re: mineral exams

I should have asked the simple question first. What is the difference between a Mineral Resource Analysis and a Mineral Exam, e.g., regulatory authority, scope, use, who conducts each, etc? Thanks

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

---

**Roger Haskins/WO/BLM/DOI@BLM**

11/05/2007 08:59 AM

To William McMullen/DEN/OIG/DOI@OIG@DOI

cc John Illson/DEN/OIG/DOI@OIG, Jeff Holdren/WO/BLM/DOI@BLM, George M Stone/WO/BLM/DOI@BLM

Subject Re: mineral exams

Jeff, please add anything you feel is necessary.



explanation\_wd\_minirpts\_oig.doc

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William McMullen/DEN/OIG/DOI@OIG

**William McMullen/DEN/OIG/DOI@OIG**  
10/31/2007 12:37 PM

To Roger Haskins/WO/BLM/DOI@BLM  
cc John Illson/DEN/OIG/DOI@OIG  
Subject mineral exams

Roger, I am trying to understand withdrawals better even though you did provide some very helpful information

43 CFR 2310.3-2 (Section 2300 is on withdrawals) specifies that supporting documentation for a withdrawal may include :

"A mineral resource analysis prepared by a qualified mining engineer, engineering geologist or geologist which shall include, but shall not be limited to, information on: General geology, known mineral deposits, past and present mineral production, mining claims, mineral leases, evaluation of future mineral potential and present and potential market demands."

- Is this what we have been calling a Mineral Exam or a Validity Exam?

Also, in your paper "The Mineral Examination (Validity) Process", you note that a Mineral Report (I assume this results from a Mineral Exam) should have input from the claimant as to "amount and quality of the ore in the ground, costs of mining and extraction, costs of transportation and refining, and sales receipts..."

- I don't see the requirement in the regulation for the provision of such information from an outside party such as a claimant, but it makes sense. Where is this requirement formalized (regulation, manual, etc) or can an examination that supports a withdrawal be done without information from a claimant?
- The regulation does note that a withdrawal application may require an assessment of the impacts on current land users. In cases where a claimant exists but a withdrawal is contemplated to conduct remediation efforts, would BLM do such an analysis and either find the claim invalid or reimburse the claimant for adverse impacts?
- In the case of closures under 43 CFR 8364.1, based on examples I have seen, it does not appear that a Mineral Exam is required. Is this true particularly if a claimant exists? Can BLM close land with claimants without doing an exam or developing all of the support information required pursuant to a withdrawal?

I hope these questions are somewhat clear and that you can provide some more illumination. Thanks much.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

Submission: Submitted William McMullen 01/11/2008 09:40:17 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/16/2008 08:28:48 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 07/23/2008 01 37 50 PM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Wed 07/23/2008 01:37 PM. For original text, refer to the field(s) above.

Purpose:  
Discuss AML claimant issues vis a vis 3809 regulations and responsibilities

Scope:  
BLM AML program

Conclusion:  
Validity exams could be helpful to BLM in resolving claimant responsibility for hazards whether the result is a valid or invalid claim.

- BLM needs a policy with regard to contacting claimants about hazards.
- BLM needs to ensure federal investments in cleanups are not jeopardized by future mining claimant activities

Summary:

We discussed a wide variety of issues related to claimants, 3809 regulations and BLM's AML program:

- Haskins noted that:
  - the 3809 program (minerals) does not assume responsibility for pre-FLPMA sites per a Solicitor's opinion (only post 1981 jurisdiction).
  - For safety hazards, the claimant, BLM or the state has responsibility and authority to mitigate.
  - BLM does have an approach that no material interference should occur with claimants.
  - Environmental issues pre-FLPMA are not 3809 but HazMat program.
  - There is no consistent BLM policy with regard to contacting claimants regarding hazards on pre-FLPMA sites or post-FLPMA sites where there is no Notice or Plan of Operations. **M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures**
  - Withdrawal of lands from mineral entry, even to protect mitigation measures, is a rare step only taken were serious health and safety concerns exist that jeopardize people. **L.g. Withdrawal, Segregation and Closure of Lands**
  - BLM or state can act, short-term, to mitigate immediate hazards such as installing sprinklers to reduce dust.
  - Solicitor has said the States need to be given the chance to act to protect health and safety under primacy.
  - Mineral validity exams could be useful (although time consuming, political and expensive). **J.BLM.24 Mineral Exam Process**
    - If claim is found to be valid, claimant would then have an equitable interest and could have more environmental responsibility.
    - If claim is found to be invalid, claim would be relinquished and BLM could mitigate site; land should then be withdrawn from future mineral entry.
- Bob Wilson noted that CHF was loathe to spend money to mitigate a site that could then be disturbed by a new claimant even if acting under a bond posted pursuant to 3809.
- Haskins agreed that BLM should use some mechanism to protect mitigative actions and federal investment from future disturbance
- In followup emails, Haskins noted:
  - Mineral validity exams are done pursuant to the General Mining Law to determine "compliance with the discovery and marketability requirements of the ...Law."
  - Mineral resource analysis are conducted pursuant to FLPMA to evaluate a specific parcel of land. **G.DOI.03 FLPMA**
  - A Mineral Report is done pursuant to FLPMA for a parcel prior to a sale, exchange or withdrawal.
  - Mineral reports must be technically reviewed by a Certified Mineral Examiner if the recommendations in the report must be acted upon by BLM

Extracts from emails:

from Explanation\_Mineral Examination.doc:

"Mineral Examination" is normally referred to as a validity examination, although some field personnel use the term to describe any form of mineral report. **Validity examinations determine compliance with the discovery and marketability requirements of the General Mining Law.** Since 1990, validity examinations are conducted by certified mineral examiners. Before 1990, any geologist or mining engineer could do one. The authority for this formal investigation (which has been done since the late 1890s) is 30 USC 22. The Secretary's general authority to enforce this requirement (along with a number of related land actions was affirmed in Cameron v. United States, 252 US 450 (1920):

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Roger Haskins/WO/BLM/DOI@BLM

11/09/2007 09:24 AM

To: William McMullen/DEN/OIG/DOI@OIG@DOI

cc: George M Stone/WO/BLM/DOI@BLM, John Ison/DEN/OIG/DOI@OIG

Subject: Re: mineral exams



Explanation\_Mineral Examination.doc

Roger A. Haskins CRME #003  
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William McMullen/DEN/OIG/DOI@OIG

J BLM 23 Discussion with Roger Haskins

**William McMullen/DEN/OIG/DOI@OIG**

11/05/2007 02:24 PM

To Roger Haskins/WO/BLM/DOI@BLM@DOI  
cc John Illson/DEN/OIG/DOI@OIG, George M Stone/WO/BLM/DOI@BLM  
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William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

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**Roger Haskins/WO/BLM/DOI@BLM**

11/05/2007 08:59 AM

To William McMullen/DEN/OIG/DOI@OIG@DOI  
cc John Illson/DEN/OIG/DOI@OIG, Jeff Holdren/WO/BLM/DOI@BLM, George M Stone/WO/BLM/DOI@BLM  
Subject Re: mineral exams

Jeff, please add anything you feel is necessary.



explanation\_wd\_minrpts\_oig.doc

Roger A. Haskins CRME #003  
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William McMullen/DEN/OIG/DOI@OIG

**William McMullen/DEN/OIG/DOI@OIG**

10/31/2007 12:37 PM

To Roger Haskins/WO/BLM/DOI@BLM  
cc John Illson/DEN/OIG/DOI@OIG  
Subject mineral exams

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William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

---

**History**

**Status:** Approved **Request Review:**  
**In Progress Edit:** William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**History**

**Status:** Approved **Request Review:**

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## Assignment Workpaper

Prepared by: William McMullen 11/19/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.25

Subsection:

Program Name: BLM (Overall)

Subject: Surface Management under Mining Laws

Origination Doctlink: 

### Purpose

Document regulations governing administration of current mining activity.

### Scope

BLM land management authorities.

### Source

43 CFR 3908 found at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=38e945ada1ba5645ac2a9f9fd602c10&rgn=div6&view=text&node=43:2.1.1.3.73.3&idno=43> and attached:



43 CFR 3809 Surface Management.pdf

### Conclusion

43 CFR 3809 describes how mining is to occur on public lands. The regulation defines the purpose of preventing unnecessary or undue degradation of public lands from mining. It defines terms such as casual use and reclamation and classifies mining operations as casual use, notice-level operations and plan-level operations. Casual use causes no or negligible disturbance to public lands, notice-level operations are exploratory in nature and disturb 5 acres or less while plan-level operations are operations that cause more disturbance than casual use or notice-level operations. For plan-level operations, a plan must be submitted and approved by BLM before operations commence. The plan must include a reclamation plan that shows how disturbances created by mining will be mitigated in accordance with specific performance standards. An operator that conducts operations under a notice or plan must submit a financial guarantee that covers the cost of reclamation as if BLM were to hire a third party to conduct reclamation actions. BLM has the authority to inspect mining operations and to take enforcement actions.

### Details

Page 1 of the source defines the purpose of 43 CFR 3809:

#### § 3809.1 What are the purposes of this subpart?

The purposes of this subpart are to:

(a) Prevent unnecessary or undue degradation of public lands by operations authorized by the mining laws. Anyone intending to develop mineral resources on the public lands must prevent unnecessary or undue degradation of the land and reclaim disturbed areas. This subpart establishes procedures and standards to ensure that operators and mining claimants meet this responsibility;

Page 2 defines casual use as:

**Casual use** means activities ordinarily resulting in no or negligible disturbance of the public lands or resources. For example—

(1) Casual use generally includes the collection of geochemical, rock, soil, or mineral specimens using hand tools; hand panning; or non-motorized sluicing. It may include use of small portable suction dredges. It also generally includes use of metal detectors, gold spears and other battery-operated devices for sensing the presence of minerals, and hand and battery-operated drywashers. Operators may use motorized vehicles for casual use activities provided the use is consistent with the regulations governing such use (part 8340 of this title), off-road vehicle use designations contained in BLM land-use plans, and the terms of temporary closures ordered by BLM.

(2) Casual use does not include use of mechanized earth-moving equipment, truck-mounted drilling equipment, motorized vehicles in areas when designated as closed to "off-road vehicles" as defined in §8340.0–5 of this title, chemicals, or explosives. It also does not include "occupancy" as defined in §3715.0–5 of this title or operations in areas where the cumulative effects of the activities result in more than negligible disturbance.

Page 3 defines reclamation as:

**Reclamation** means taking measures required by this subpart following disturbance of public lands caused by operations to meet applicable performance standards and achieve conditions required by BLM at the conclusion of operations. For a definition of "reclamation" applicable to operations conducted under the mining laws on Stock Raising Homestead Act lands, see part 3810, subpart 3814 of this title. Components of reclamation include, where applicable:

- (1) Isolation, control, or removal of acid-forming, toxic, or deleterious substances;
- (2) Regrading and reshaping to conform with adjacent landforms, facilitate revegetation, control drainage, and minimize erosion;
- (3) Rehabilitation of fisheries or wildlife habitat;
- (4) Placement of growth medium and establishment of self-sustaining revegetation;
- (5) Removal or stabilization of buildings, structures, or other support facilities;
- (6) Plugging of drill holes and closure of underground workings; and
- (7) Providing for post-mining monitoring, maintenance, or treatment.

Page 4 classifies mining operations:

**§ 3809.10 How does BLM classify operations?**

BLM classifies operations as—

- (a) **Casual use**, for which an operator need not notify BLM. (You must reclaim any casual-use disturbance that you create. If your operations do not qualify as casual use, you must submit a notice or plan of operations, whichever is applicable. See §§3809.11 and 3809.21.);
- (b) **Notice-level operations**, for which an operator must submit a notice (except for certain suctiondredging operations covered by §3809.31(b)); and
- (c) **Plan-level operations**, for which an operator must submit a **plan of operations and obtain BLM's approval**.

Page 4 defines notice-level operations as exploration that causes surface disturbance of 5 acres or less:

**§ 3809.21 When do I have to submit a notice?**

- (a) You must submit a complete **notice of your operations 15 calendar days before you commence exploration causing surface disturbance of 5 acres or less** of public lands on which reclamation has not been completed.

Mining operators must submit a plan of operations (page 4):

**§ 3809.11 When do I have to submit a plan of operations?**

- (a) **You must submit a plan of operations and obtain BLM's approval before beginning operations greater than casual use**, except as described in §3809.21. Also see §§3809.31 and 3809.400 through 3809.434.
- (b) You must submit a plan of operations for any bulk sampling in which you will remove 1,000 tons or more of presumed ore for testing.
- (c) You must submit a plan of operations for any operations causing surface disturbance greater than casual use

Pages 13-14 define what must be included in a plan of operations. A reclamation plan is one of the required elements:

**§ 3809.401 Where do I file my plan of operations and what information must I include with it?**

(3) **Reclamation Plan.** A plan for reclamation to meet the standards in §3809.420, with a description of the equipment, devices, or practices you propose to use including, where applicable, plans for—

- (i) Drill-hole plugging;
- (ii) Regrading and reshaping;
- (iii) Mine reclamation, including information on the feasibility of pit backfilling that details economic, environmental, and safety factors;
- (iv) Riparian mitigation;
- (v) Wildlife habitat rehabilitation;
- (vi) Topsoil handling;
- (vii) Revegetation;
- (viii) Isolation and control of acid-forming, toxic, or deleterious materials;
- (ix) Removal or stabilization of buildings, structures and support facilities; and
- (x) Post-closure management;

Pages 16-18 defines elements of performance required in a plan of operations:

**§ 3809.420 What performance standards apply to my notice or plan of operations?**

The following performance standards apply to your notice or plan of operations:

(4) **Mitigation.** You must take mitigation measures specified by BLM to protect public lands.

(5) **Concurrent reclamation.** You must initiate and complete reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that you will not disturb further

(b) **Specific standards**

(2) **Mining wastes.** All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws.

(3) **Reclamation.** (i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the Federal lands.

(ii) **Reclamation shall include**, but shall not be limited to:

- (A) Saving of topsoil for final application after reshaping of disturbed areas have been completed;
- (B) Measures to control erosion, landslides, and water runoff;
- (C) Measures to isolate, remove, or control toxic materials;
- (D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and
- (E) Rehabilitation of fisheries and wildlife habitat.

(iii) When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the authorized officer shall be notified so that an inspection of the area can be made.

(13) **Maintenance and public safety.** During all operations, the operator shall maintain his or her structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and state laws and regulations

Page 21 specifies that financial guarantees are required to operate under a notice or plan of operations. In general, **if you conduct operations under a notice or a plan of operations, you must provide BLM or the State a financial guarantee that meets the requirements of this subpart before starting operations operations.**

**§ 3809.505 How do the financial guarantee requirements of this subpart apply to my existing plan of operations?**

For each plan of operations approved before January 20, 2001, for which you or your predecessor in interest posted a financial guarantee under the regulations in force before that date, you must post a

financial guarantee according to the requirements of this subpart no later than November 20, 2001, at the local BLM office with jurisdiction over the lands involved. You do not need to post a new financial guarantee if your existing financial guarantee satisfies this subpart. If you are conducting operations under a plan of operations approved before January 20, 2001, but you have not provided a financial guarantee, you must post a financial guarantee under §3809.551 by September 13, 2001.

Page 22 specifies that a financial guarantee must cover the costs of reclamation:

**§ 3809.552 What must my individual financial guarantee cover?**

(a) If you conduct operations under a notice or a plan of operations and you provide an individual financial guarantee, it must cover the estimated cost as if BLM were to contract with a third party to reclaim your operations according to the reclamation plan, including construction and maintenance costs for any treatment facilities necessary to meet Federal and State environmental standards. The financial guarantee must also cover any interim stabilization and infrastructure maintenance costs needed to maintain the area of operations in compliance with applicable environmental requirements while third party contracts are developed and executed.

BLM's inspection and enforcement authority is outlined beginning on page 27 of the source document:

**Inspection and Enforcement**

**§ 3809.600 With what frequency will BLM inspect my operations?**

(a) At any time, BLM may inspect your operations, including all structures, equipment, workings, and uses located on the public lands. The inspection may include verification that your operations comply with this subpart. See §3715.7 of this title for special provisions governing inspection of the inside of structures used solely for residential purposes.

(b) At least 4 times each year, BLM will inspect your operations if you use cyanide or other leachate or where there is significant potential for acid drainage.

**§ 3809.601 What types of enforcement action may BLM take if I do not meet the requirements of this subpart?**

BLM may issue various types of enforcement orders, including the following:

**Methodology**

Reviewed source document.

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## Assignment Workpaper

Prepared by: William McMullen 11/19/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.26

Subsection:

Program Name: BLM (Overall)

Subject: Use and Occupancy under Mining Laws

Origination Doctlink: 

### Purpose

Document regulations concerning use and occupancy of land relevant to mining activities.

### Scope

BLM land management authorities.

### Source

43 CFR 3715 found at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=38e945ada1ba5645ac2a9f9fd602c10&rgn=div6&view=text&node=43:2.1.1.3.69.5&idno=43> and attached:



43 CFR 3715 Use and Occupancy under the Mining Laws.pdf

### Conclusion

Federal regulations allow occupancy on public lands for specific purposes related to mining. Occupancy must:

- Be reasonably calculated to lead to the extraction and beneficiation of minerals and exist for
- (a) Protecting exposed, concentrated or otherwise accessible valuable minerals from theft or loss;
- (b) Protecting from theft or loss appropriate, operable equipment which is regularly used, is not readily portable, and cannot be protected by means other than occupancy;
- (c) Protecting the public from appropriate, operable equipment which is regularly used, is not readily portable, and if left unattended, creates a hazard to public safety;
- (d) Protecting the public from surface uses, workings, or improvements which, if left unattended, create a hazard to public safety; or
- (e) Being located in an area so isolated or lacking in physical access as to require the mining claimant, operator, or workers to remain on site in order to work a full shift of a usual and customary length. A full shift is ordinarily 8 hours and does not include travel time to the site from a community or area in which housing may be obtained.

### Details

The purpose of use and occupancy regulations is found on page 1 as:

#### § 3715.0-1 What are the purpose and the scope of this subpart?

(a) *Purpose.* The purpose of this subpart is to manage the use and occupancy of the public lands for the development of locatable mineral deposits by limiting such use or occupancy to that which is reasonably incident. The Bureau of Land Management (BLM) will prevent abuse of the public lands while recognizing valid rights and uses under the Mining Law of 1872 (30 U.S.C. 22 *et seq.* ) and related laws governing the public lands, regardless of when those rights were created. BLM will take appropriate action to eliminate invalid uses, including unauthorized residential occupancy of the public lands.

(b) *Scope.* This subpart applies to public lands BLM administers. They do not apply to state or private lands in which the mineral estate has been reserved to the United States. They do not apply to Federal lands administered by other Federal agencies, even though those lands may be subject to the operation of the mining laws.

(c) This subpart does not impair the right of any person to engage in recreational activities or any other authorized activity on public lands BLM administers.

Occupancy is defined on pages 1 and 2 as follows:

*Occupancy* means full or part-time residence on the public lands. It also means activities that involve residence; the construction, presence, or maintenance of temporary or permanent structures that may be used for such purposes; or the use of a watchman or caretaker for the purpose of monitoring activities. Residence or structures include, but are not limited to, barriers to access, fences, tents, motor

homes, trailers, cabins, houses, buildings, and storage of equipment or supplies.

Occupancy is allowed if conditions set below (see page 3) are met:

**§ 3715.2 What activities do I have to be engaged in to allow me to occupy the public lands?**

In order to occupy the public lands under the mining laws for more than 14 calendar days in any 90-day period within a 25-mile radius of the initially occupied site, you must be engaged in certain activities.

Those activities that are the reason for your occupancy must:

- (a) Be reasonably incident;
- (b) Constitute substantially regular work;
- (c) Be reasonably calculated to lead to the extraction and beneficiation of minerals;
- (d) Involve observable on-the-ground activity that BLM may verify under §3715.7; and
- (e) Use appropriate equipment that is presently operable, subject to the need for reasonable assembly, maintenance, repair or fabrication of replacement parts.

Additional conditions that allow residency include (see pages 3 and 4):

**§ 3715.2-1 What additional characteristic(s) must my occupancy have?**

In addition to the requirements specified in §3715.2, your occupancy must involve one or more of the following:

- (a) Protecting exposed, concentrated or otherwise accessible valuable minerals from theft or loss;
- (b) Protecting from theft or loss appropriate, operable equipment which is regularly used, is not readily portable, and cannot be protected by means other than occupancy;
- (c) Protecting the public from appropriate, operable equipment which is regularly used, is not readily portable, and if left unattended, creates a hazard to public safety;
- (d) Protecting the public from surface uses, workings, or improvements which, if left unattended, create a hazard to public safety; or
- (e) Being located in an area so isolated or lacking in physical access as to require the mining claimant, operator, or workers to remain on site in order to work a full shift of a usual and customary length. A full shift is ordinarily 8 hours and does not include travel time to the site from a community or area in which housing may be obtained.

**Methodology**

Reviewed source document.

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## Assignment Workpaper

Prepared by: William McMullen 11/19/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.27

Subsection:

Program Name: BLM (Overall)

Subject: Trespass under FLPMA

Origination Doctlink: 

### Purpose

Document regulations related to trespass of lands vis a vis Federal Land Policy Management Act (FLPMA).

### Scope

BLM land management authorities.

### Source

43 CFR 2808 found <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=b4dc5b999725305bc80c21aad478acc3&rgn=div6&view=text&node=43:2.1.1.2.36.8&idno=43> and attached:



Trespass under FLPMA.pdf

### Conclusion

- Federal regulations developed after FLPMA (Rights of Way under the Federal Land Policy Management Act) define trespass as using, occupying, or developing the public lands or their resources without a required authorization or in a way that is beyond the scope and terms and conditions of your authorization.
- Trespass is prohibited.
- Trespass can be willful whereby it is consciously done even if the trespasser believes it is legal or
- Non-willful if the trespass is inadvertent or by mistake.

### Details

Trespass is defined on page 1 as:

#### § 2808.10 What is trespass?

(a) Trespass is using, occupying, or developing the public lands or their resources without a required authorization or in a way that is beyond the scope and terms and conditions of your authorization. Trespass is a prohibited act.

(b) Trespass includes acts or omissions causing unnecessary or undue degradation to the public lands or their resources. In determining whether such degradation is occurring, BLM may consider the effects of the activity on resources and land uses outside the area of the activity.

(c) There are two kinds of trespass, willful and non-willful.

(1) *Willful trespass* is voluntary or conscious trespass and includes trespass committed with criminal or malicious intent. It includes a consistent pattern of actions taken with knowledge, even if those actions are taken in the belief that the conduct is reasonable or legal.

(2) *Non-willful trespass* is trespass committed by mistake or inadvertence.

### Methodology

Reviewed source document.

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## Assignment Workpaper

Prepared by: William McMullen 11/20/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.28 **Subsection:**  
**Program Name:** BLM (Overall)  
**Subject:** BLM CDD AML 5-Year Plan

**Origination Doctlink:** [REDACTED]

### Purpose

Document BLM's California Desert District 5-Year AML Plan for Rapid Identification and Assessment of Unreported Sites.

### Scope

CA BLM California Desert District AML program.

### Source

CDD Plan provided to OIG as attachment to email shown in Details section.

### Conclusion

The CDD 5-Year Plan notes:

- there are about 20,000 AML sites in the CDD
- about 8,000 sites are on BLM land
- 400 of these 8,000 sites may impact water quality
- 2,000 of these 8,000 sites contain hazardous mine openings
- BLM CA has only 720 known abandoned mines on their inventory
- the inventory includes 6 mines that may impact water quality in 7 watersheds
- no water quality sites have been remediated
- 300 sites with safety hazards have been temporarily or permanently mitigated

### Details

**John Illson/DEN/OIG/DOI**

11/19/2007 06:07 AM

To William McMullen/DEN/OIG/DOI@OIG

cc

Subject Fw: CDD - (AML Pgm) 5 Year Plan Revision (11-16-07 version)

----- Forwarded by John Illson/DEN/OIG/DOI on 11/19/2007 06:06 AM -----

**David Lawler@ca.blm.gov**

11/16/2007 04:19 PM

To Steven\_J\_Borchard@blm.gov

cc Sterling\_White@blm.gov, Richard\_Grabowski@ca.blm.gov, Leroy\_Mohorich%BLM@ios.doi.gov, John\_Key@ca.blm.gov, George\_M\_Stone@blm.gov

Subject CDD - (AML Pgm) 5 Year Plan Revision (11-16-07 version)

Steve - -

I am sending you another draft version of the CDD 5-Year AML Plan (November 2007). This July version has been modified to facilitate rapid identification, reporting, and assessment, of the "significant" heretofore "unreported" BLM sites in the region of southern California during the FY2008 period.

As you may recall, Mike Poole and Richard Grabowski had requested that I compile the original version of the CDD 5-Year Plan during July 2007 - with the objective of providing the OIG with assurances that BLM California was rapidly moving forward in the identification, reporting, and assessment, of the remaining "significant" heretofore "unreported" BLM sites in the CDD

region during FY08. Specifically, these represent key AML/Hazmat sites similar to the "Kelly Mine, Randsburg-Yellow Aster Mine, and Ruth Mine-type AML sites" that represent significant legal liability for BLM in terms of hazmat, water quality, and human health impacts.

I understand that the CDD has revised the July 2007 draft Plan and that this version is currently under review by yourself and other CDD Managers.

Steve - could you please send us an electronic copy early next week - so that we can discuss the latest version of the CDD - 5-Year AML Rapid Assessment Plan ??.

Would you possibly be available next Tuesday afternoon for a brief 1- hour informal conference call with the CASO Minerals Division AML/Hazmat staff??

Regards,

David Lawler  
US-DOI-BLM - CASO - Energy and Minerals Division  
Abandoned Mine Lands Program  
Federal Center  
2800 Cottage Way, Rm. W-1618  
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916-425-3740 (Office)/916-978-4389 (Fax)  
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(See attached file: 5YearPlanCDD1107.doc) 5YearPlanCDD1107.doc

Page 1 of the plan provides basic information:

## AML Program -California Desert District- Unreported Sites - Rapid Identification and Assessment Plan

**Period: FY 2007 – FY 2013**

### Summary

Significant Mining Regions areas in are: Southern Sierra Nevada Mountains, Southern Inyo Mountains, Argus Range, Rand Mountains, El Paso Mountains, Calico Mountains, Big and Little Maria Mountains, Chocolate Mountains, Chuckwalla Mountains, Sacramento Mountains, Cargo Muchacho Mountains, Pinto Mountains, Foothill, South Coast Range Province, Mojave Desert Region, Colorado River Belt, Tranverse Range, and Tehachapi Mountains Region. Commodities mined were primarily (gold, silver, mercury, copper, lead, zinc, chrome, antimony, nickel, iron, rare earth, uranium, sulphur, asbestos)

Current estimates regarding the total number of abandoned mines in the CDD is roughly 20,000. An estimated 8,000 abandoned mines may exist on BLM-administered public lands, of which 400 may impact water quality and over 2,000 contain hazardous mine openings. BLM California currently has an inventory of 720 known abandoned mine sites on BLM-administered public lands. This inventory includes 6 mines that may impact water resources within 7 watershed areas; over 2,000 sites likely pose physical safety hazards. To date, no impaired water quality AML sites have yet been remediated. Approximately 300 sites with physical safety hazards have been the subject of some level of temporary or permanent mine remediation, to date.

The Plan includes sites with potential environmental and/or safety hazards in the Ridgecrest, Barstow, Palm Springs, El Centro and Needles Field Offices.

### **Methodology**

Reviewed source document.

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## Assignment Workpaper

Prepared by: William McMullen 12/06/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.29  
Program Name: BLM (Overall)  
Subject: AML Staff Qualifications

Subsection:

Origination Doctlink: ■

### Purpose

Document BLM AML staff qualifications.

### Scope

BLM AML program qualifications.

### Source

Responses to **survey questionnaire** sent by George Stone to AML staff in AZ, CA, NV and DC and followup discussions with George Stone.

#### Arizona responses



AML Workload Survey - Maes.doc



AML Workload Survey - Nov 2007\_ALLEN.doc



AML Workload Survey-Bates.doc



Cox.pdf



AML Workload Survey-Misiaszek.PDF

#### CA responses



AML Wkload Survey - Nov 2007\_Martinez.doc



AML Workload Survey - Nov 2007 - John Key.doc



AML Workload Survey - Nov 2007 - Graves.doc

AML Workload Survey - Nov 2007.doc



Wilkerson CA BFD.doc



AML Workload Survey - Steward.doc



AML Workload Survey - Walter Todd Nov 2007.doc



AML Workload Survey\_Lawler1107.doc



Cheryl\_Seath\_CA\_AML\_sur.doc



Elam.PDF



Forester.pdf



Nov2007AMLTCarroll.doc



rogers3858592survey2007.doc

#### NV responses



AML Workload Survey - Nov 2007ROSS.doc



AML Workload Survey - Varhalmi.doc



AMLSurvey Bjorklund- Nov 2007.doc



Drummond.pdf



McFailaneAML Workload Survey - Nov 2007.doc

#### DC responses



TorranceAML Workload Survey - Nov 2007.doc

### Conclusion

- AML field staff not in a zoned position or dedicated to a specific project spend only about 18% of their time on AML duties.
- These staff have varied relevant training for their AML duties.
- These staff have limited AML experience and rarely use the AMM.
- ■ These staff have limited knowledge of AML program documents (Policy, Strategic Plan, Handbook) and little experience in reporting program accomplishments. One staff member considers the program documents to be "junk."
- Most of the staff have submitted AML projects for funding and have managed \$25,000 or more in AML funding for projects.
- 9 of th 17 field staff (yellow highlights below in table) had relatively little experience (less than 10 sites) inventorying, characterizing or remediating environmental or safety sites.
- BLM had no minimum training qualifications for AML staff and that most collateral field staff spent little time on AML duties including posting signs and fencing sites ■ Ideally, training of AML staff would include locating, reporting, characterizing, and mitigating AML sites. In addition, training in cost estimating and program management would be useful as would training in complex environmental laws and regulations ■
- [Auditor opinion] Part of the problem in prioritizing projects for funding **K.BLM.Rip Van Winkle.01 Site Visit** ■ is that staff have little familiarity with AML program policy and guidance.
- [Auditor opinion] The collateralized field staff who spend less than 1 day per week on AML duties marginalizes the program, minimizes interest in the program, **neglects the needs of the program** and contributes to lack of accurate program information as well as poor program effectiveness.
- Collateralized field staff do not have consistent training relevant to their AML duties which also limits the program's effectiveness. For example, the fact that many staff have not had training in characterization of AML sites has likely limited the assessment and recording of AML sites and has contributed to BLM's ignorance of environmental hazards at AML sites.
- [Auditor Opinion] Successful performance of AML duties requires specific training to manage both physical safety and environmental hazards ■ Lack of training puts the public and BLM employees at risk from AML hazards. ■
- [Auditor opinion] AML field staff should be located at District offices and be responsible for the field offices under the District. AML staff should be full-time (assuming AML issues are significant in the District) and should have relevant educational and training qualifications to discharge their AML duties.

### Details

George Stone prepared and distributed a questionnaire to AML staff to determine 1) basic information, 2) % of time spent on AML duties, 3) relevant training of staff, 4) AML experience, 5) knowledge of Abandoned Mine Module (AMM) inventory database, 6) knowledge of AML program policy documents, 7) AML budgeting experience and 8) AML reporting experience. In discussing the questionnaire with George, he indicated that BLM had no minimum training qualifications for AML

staff and that most collateral field staff spent little time on AML duties including posting signs and fencing sites. George noted that ideally, training of AML staff would include locating, reporting, characterizing, and mitigating AML sites. In addition, training in cost estimating and program management would be useful as would training in complex environmental laws and regulations. George also noted that most collateral AML field staff were funded by the surface management program. For example, summarizing the responses from field staff above shows that many of the field staff have surface management duties

**Field staff**                      **Surface Management Program duties such as permitting, leasing, etc.**

Allen	No
Bates	No
Cox	Yes
Misiaszek	Yes
Martinez	Yes
Graves	No
Wilkerson	Yes (1990 is disturbed lands subactivity)
Steward	No
Todd	Yes
Seath	Yes
Elam	Yes
Carroll	Yes
Rogers	Yes
Varhalmi	Yes
Bjorkland	Yes
Drummond	Yes
McFarlane	Yes

■ George noted that many of the staff with surface management duties were primarily assigned to those duties and funded by that program. George noted that untrained, collateral duty staff with surface management program duties can neglect AML duties in favor of dealing with active mining claimants and operators under the surface management program. In some cases, support for active, or even inactive claimants, can conflict with the need to mitigate AML sites. ■

In analyzing the 17 field staff (excluding DC and State Office staff, zoned staff in AZ (Maes) and Rand project manager (Forester) shown in Red on the spreadsheet), it is apparent that:

- For % time spent on AML duties, staff spend on average about 27% of their time on AML duties  $(5+10+0+25+10+15+40+25+50+5+10+50+5+25+20+15+5)/17 = 315/17 = 18.5\%$
- 14 of 17 (82% Math Verified SGC 1/16/08) field staff spent 25% time or less on AML program.
- 10 of 17 (59% Math Verified SGC 1/16/08) of field staff had no AMM training. ■
- 11 of 17 (65% Math Verified SGC 1/16/08) of field staff had not entered or modified records in AMM.
- 10 of 17 (59% Math Verified SGC 1/16/08) had a low understanding of AML policies and procedures (manual 3720 and AML handbook). ■
- With regard to training, several of the staff have little relevant training especially regarding characterization of AML sites for hazardous materials.
- Several of the staff have limited experience with AML sites.
- Several of the staff have never been trained to use AMM and most of the staff have not used AMM
- ■ Most of the staff have limited familiarity with AML program documents (1 is unfamiliar, 5 is very familiar). One staff member noted (Misiaszek) "no time to read this junk." The Handbook (BLM AML Program Policy Handbook J.BLM.13 BLM AML Program Policy Handbook ■ [pages 7-10] note the responsibilities of AML coordinators and the applicable laws and regulations attendant to these responsibilities. Many of these laws and regulations are environmental in nature (CERCLA, NEPA, RCRA, CWA, NCP). 10 of 17 AML staff had little familiarity with the Handbook (scored a 1) and indicates they do not have adequate awareness or training in applicable environmental laws and regulations. We believe knowledge of these laws and regulations is imperative if AML sites are to be properly evaluated and mitigated. ■ Lack of such knowledge inhibits the ability of BLM to protect the public and its employees from AML hazards: [Auditor Opinion]
- Most of the staff have submitted budget requests for AML projects and have managed more than \$25,000 in AML funding.
- Most of the staff have limited AML experience reporting program accomplishments.
- 9 of the 17 field staff (yellow highlights below in table) had relatively little experience (less than 10 sites) inventorying, characterizing or remediating environmental or safety sites.

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

J BLM 29 AML Staff Qualifications

Name	Field office	State	Grade	Title	AML %	Degree	Training	Other	AML Experience				Trained on AMM?	AMM Knowledge				Knowledge of AML Policy				Budgeting				Reporting								
									# sites inventoried	# safety sites charac	# envr sites charac	# site remediations managed		Logged on last	Entered or modified records	Used AMM report	Site mapper use	Strategic plan	Manual 3/20	Handbook	Submitted AML project	SO Strat plan input	AML partnering	Funding managed	# sites inven	# safety mitigated	# acres mitigated	# sites monitored	# PRP actions	# hazmat cases referred	# hazmat site assess	# hazmat response actions		
Cox	Aviz Strip	AZ	11	Geol/AML Coord	< 5	BS Biol, MS Earth Sci	None	GIS, GPS, PK Placer	20	20	0	0	No	never	No	No	0	2	1	1	No	No	No	< \$25 k	0	0	0	0	0	0	0	0	0	0
Bates	Colo River Dist	AZ	12	Renew Resour Advisor	10	BS Biol, BA Botan, MS Biol	Charac of AML, Undergrnd Mine Safety for AML	GIS, Est ID and Mine Access for Wildlife	100	100	100	29	Yes	month	Yes	Yes	Yes	5	4	4	Yes	Yes	Yes	< \$25 k	0	0	0	0	0	0	0	0	0	
	Yuma	AZ	9	Geol	0	MS Earth Sci	Intro to Mining Law, Charac of AML, Procurement	None	0	0	0	0	No	never	No	No	No	1	1	1	Yes	No	No	< \$25 k	0	0	0	0	0	0	0	0		
Mees	Phoenix Dist	AZ	12	Zone Hazmat/AML Coord	100	BS Mech Eng	Charac of AML, Hazmat site charac, Hazmat basics, Hazwoper refresh, Procurement	Reclamation tech (water), AMD, GIS, Constr Inspect, DOT Haz mat shipping	20	5	2	4	Yes	month	Yes	Yes	Yes	3	3	3	Yes	Yes	Yes	\$500 k - \$1 million	7	1	0	0	0	0	0	8	8	
Miszczek	Colo River Dist	AZ	11	Geol/Hazmat/AML Coord	25	BS Geol	Intro to Mining Law, Hazmat site charac, Undergrnd Mine Safety for AML, Mine Law admin, Mine claim validity, Hazmat basics, Procurement	None	0	0	0	0	Yes	month	Yes	No	Yes	1	1	1	Yes	No	No	\$25 k - \$100 k	6	62	2	0	0	0	0	0	0	
Hogers Key	Redding CA SO	CA	11	Geol	5 - 10	BS Geol	Mine Claim Validity	GIS	30	30	0	10	No	never	No	No	No	2	1	1	Yes	Yes	Yes	< \$25 k	0	1	0	0	0	0	0	0	0	
	CA SO	CA	13	Hazmat/AML/NR DNR Prog Lead	25	BS Ag, MS Ag	Charac of AML, Hazmat Charac, Hazwoper refresh, CERCLA cost recovery, Procurement	various hazmat	0	0	300	250	Yes	quarter	No	No	No	5	5	5	Yes	Yes	Yes	> \$1 million	0	0	0	0	0	0	0	0	0	
Todd	El Centro	CA	11	Hazmat/AML Coord	15	BS Cool	Undergrnd Mine Safety for AML, Mine Claim Validity	None	No	No	No	5	No	never	No	No	No	1	1	1	Yes	No	No	\$25 k - \$100 k	5	7	0	0	0	0	0	0	0	
Seath	Bishop	CA	12	Geol/Hazmat/AML Coord	40	BS Geol	Undergrnd Mine Safety for AML, Mine Claim Validity, Hazwoper refresh, Procurement	ESA, Hazmat transport, envr Conflict Mgmt	10	150	4	6	No	never	Yes	No	No	4	1	2	Yes	No	Yes	\$25 k - \$100 k	18	4	0	0	0	0	0	5	1	
Oravco	Ridgecrest	CA	11	Natur Resour Spec	25	BA Bus, MS Law, JD	Hazmat Site Charac, Undergrnd Mine Safety for AML, Hazmat basics, Hazwoper refresh, CERCLA cost recovery, Procurement	OIS, various hazmat related courses	2	0	0	0	Yes	year	Yes	No	Yes	1	2	3	Yes	No	No	\$25 k - \$100 k	0	42	0	0	0	0	0	5	7	
Forester	Ridgecrest	CA	12	Envr Protec Spec, Hand Proj Mgr	100	BS Wildlife Mgmt	Charac of AML, Hazmat site charac, Hazmat basics, Hazwoper refresh, CERCLA cost recovery, Procurement	Mitigation/Remed techniques (safety), reclamation techniques (envr)	200	400	25	10	No	never	Yes	No	No	2	3	3	Yes	Yes	Yes	> \$1 million	0	0	0	0	0	0	0	0	10	
Carroll	Folsom	CA	11	Cool	25 - 50	BS Cool	None	OIS, Mine Safety Awareness	dozens	dozens	0	20	Yes	month	Yes	No	Yes	2	2	2	Yes	Yes	Yes	\$25 k - \$100 k	5	6	0	0	0	0	0	0	0	
Eam	Eagle Lake	CA	12	Hazmat Prog Coord	< 5	BS Forcstry, MS Resource Mgmt	Hazwoper refresh	None	0	0	0	0	No	never	No	No	No	1	1	1	No	No	No	0	0	0	0	0	0	0	0	0		
Martinez	Palm Springs	CA	12	Cool	5 - 10	BS Cool	Undergrnd Mine Safety for AML, Mine Claim Validity, Procurement	None	10	1	1	3	Yes	quarter	Yes	No	Yes	3	4	5	Yes	No	Yes	< \$25 k	0	0	0	2	0	0	0	0		
Lawler	CA SO	CA	12	AML Coord	100	BS Cool, MS Geol	Charac of AML, Undergrnd Mine Safety for AML, Hazmat basics, Hazwoper refresh, CERCLA cost recovery, Procurement	OIS, Mining law, Hazmat/AML site charac, remediation techn for water and soil	10 years experience	> 100	> 80	> 20	Yes	month	Yes	Yes	Yes	4	4	2	Yes	Yes	Yes	\$500 k - \$1 million	20	40	5	5	2	2	0	0		
Willerson	Bakersfield	CA	??	Cool	50	PhD Econ/Cool	Intro to Mining Law, Undergrnd Mine Safety for AML, Mine Law admin, Mine claim validity, Hazmat basics, Hazwoper refresh, Procurement	OIS	120	45	10	25	No	never	No	No	No	3	3	3	Yes	No	Yes	\$100 k - \$500 k	15	20	3	3	1	1	83	1		
Steward	El Centro	CA	12	Resour Br Ch	5	BS Wildlife Biol	Procurement	OIS	7	7	0	4	No	never	No	No	No	3	1	1	Yes	Yes	Yes	\$25 k - \$100 k	5	7	0	0	0	0	0	0	2	
Torrance	IWO	DC	13	Envr Protec Spec	100	MS, Publ Admin, PhD	CERCLA cost recovery	None	0	0	0	25	Yes	month	Yes	Yes	Yes	5	5	5	Yes	Yes	Yes	> \$1 million	0	0	0	0	0	0	0	0	0	

Drummond	Battle Mountain	NV	12	Sup Mining Engineer	25	BS Mining	Procurement	None	6	6	6	6	Yes	never	No	No	0	1	1	1	Yes	Yes	Yes	> \$1 million	0	0	17	0	0	0	22	3
Ross	NV SO	NV	13	AML Proj Lead	100	BS Biol, Nursing, PhD Ecol	Undergrnd Mine Safety for AML, Hazmat basics, Hazwoper refresh, Procurement	Safety mitigation tech, water reclaim tech, GIS	10	360	10	20	Yes	year	Yes	No	Yes	4	1	1	Yes	Yes	Yes	> \$1 million	914	55	500	0	0	0	0	0
Borland	Ely	NV	11	Envir Protoc Spec	20	BS Biol, Agron, MS Biol	Procurement	OIS	8	2	6	8	No	never	No	No	No	1	1	1	Yes	No	Yes	\$25 k - \$100 k	0	0	50	4	1	0	2	1
McFarlane	Elio	NV	12	Cool/Hazmat/AM L/CME	10 - 15	BS Cool, MS Geol	Intro to Mining Law, Undergrnd Mine Safety for AML, Mine Law admin, Mine claim validity, CERCLA cost recovery, Hazmat basics, Hazwoper refresh, Procurement	AMD, OIS	200	200	1	0	Yes	never	No	No	Yes	5	5	5	Yes	Yes	Yes	\$500 k - \$1 million	0	0	0	0	0	0	0	0
Vorhies	Las Vegas	NV	11	Cool	5	BS Earth Sci, MS Geol	Intro to Mining Law, Undergrnd Mine Safety for AML, Mine Law admin, Mine claim validity	None	2	0	0	0	No	never	No	No	No	?	?	?	No	No	No	0	0	0	0	0	0	0	0	

**Methodology**

Compiled responses in spreadsheet shown in Details section.

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## Assignment Workpaper

Prepared by: William McMullen 12/18/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.30  
**Program Name:** BLM (Overall)  
**Subject:** Funding History for AML

**Subsection:**

**Origination Doctlink:** 

### Purpose

Document history of funding for AML from 1010 subactivity.

### Scope

BLM AML program.

### Source

Email from George Stone shown in Details section.

### Conclusion

- From 2000 to 2006, funding for AML from the 1010 subactivity varied between \$9.5 million and \$10 million.
- In 2007 and 2008, funding decreased to about \$8.4 million.
- **[Auditor Opinion]** Decreases in annual funding for the AML program, such as seen in 2007 and 2008, could jeopardize efforts to temporarily mitigate sites (evaluate sites, post signs, fence sites) and would impact negatively efforts to more permanently mitigate sites.

### Details

Email shown below:

**John Illson/DEN/OIG/DOI**

12/17/2007 07:34 AM

To William McMullen/DEN/OIG/DOI@OIG, Sean Pettersen/DEN/OIG/DOI@OIG, Greta Bloomfield/DEN/OIG/DOI@OIG, Stephanie Christian/DEN/OIG/DOI@OIG

cc

Subject Fw: Historic AML Funding from Subactivity 1010

Lets reschedule this mornings meeting to 10:30. I'd like to turn the funding history summary (yearly total) attached into a bar graph or other chart to document the trend in the report.

----- Forwarded by John Illson/DEN/OIG/DOI on 12/17/2007 07:31 AM -----

**George M Stone/WO/BLM/DOI@BLM**

12/14/2007 06:18 AM

To john\_illson@oig.doi.gov@DOI, William McMullen/DEN/OIG/DOI@OIG

cc

Subject Historic AML Funding from Subactivity 1010



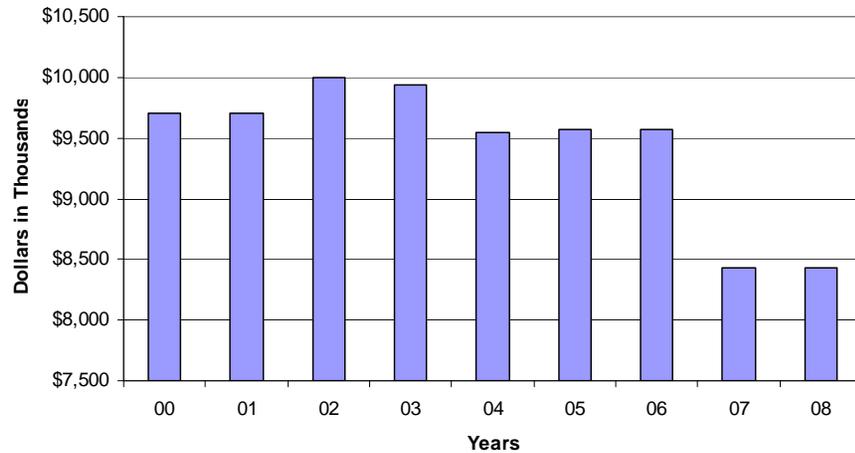
Historic 1010 AML AWP allocations.xls Guys -- as discussed this week. Here's a summary table of our 1010 funding and distributions to the field.

George Stone  
Senior Abandoned Mine Lands Specialist  
Division of Engineering & Environmental Services (WO-360)  
Bureau of Land Management  
v: 202.557.3573 f: 202.452.5046 c: 202.253 0061  
www.blm.gov/aml



Funding from subactivity 1010 (air, water and soil pollution: see title of spreadsheet) by year from 2000 to 2008 was analyzed Historic 1010 AML AWP allocations.xls and graphed as shown below. This subactivity provides the bulk of funding for the program **A.03.02 Initial Discussion with George Stone**.

### BLM AML Funding History



The program does receive some project funding from other sources [A.03.02 Initial Discussion with George Stone](#) such as Haz Mat (1640) [B.BLM.02 BLM AML Funding](#) and the Central Hazardous Materials Fund (CHF).

#### Methodology

Reviewed source email and prepared graph from spreadsheet data.

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## Assignment Workpaper

Prepared by: William McMullen 02/12/2008

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: J.BLM.30.01  
Program Name: BLM (Overall)  
Subject: Budget Requests

Subsection:

Origination Doctlink: [REDACTED]

### Purpose

Document BLM AML budget requests.

### Scope

BLM AML Program.

### Source

Email from George Stone to John Illson dated 2/12/08 shown in Details section.

### Conclusion

- BLM's AML program funding was decreased by \$1 million from \$9.5 million to \$8.5 million in FY2007 because it was not in a budget emphasis area in that budget cycle.
- AML Program could not request an increase in FY2008 because it was not in an emphasis area and was flatlined at \$8.5 million.
- AML Program submitted a request for a \$10 million increase for the FY2009 budget but, again, the program was not included in an emphasis area so no increases were allowed and the program was again flatlined
- AML Program is not in an emphasis area for FY2007-2012 according to BLM.

### Details

George M Stone/WO/BLM/DOI@BLM

02/12/2008 11:48 AM

To john\_illson@oig.doi.gov@DOI, William McMullen/DEN/OIG/DOI@OIG

cc Carl Rountree/WO/BLM/DOI@BLM, Nancy Dean/WO/BLM/DOI@BLM, Jim Renthal/WO/BLM/DOI@BLM, Stephanie Odell/DUFO/CO/BLM/DOI@BLM

Subject FY 2008 AML Budget Request - info

John --

On July 1, 2004, the Assistant Director, Business and Fiscal Resources issued IM 2004-201, "Development of a Budget Strategy for Fiscal Years (FY) 2007 to 2009. Assistant Directors, State Directors, and Center Directors were requested to review program areas and identify emphasis areas that should be considered as a priority as well as programs that could be de-emphasized. The IM has a paragraph entitled "How Will the BLM Use the Responses to this IM?" which states: *Responses to this IM will be used to formulate a strategic budget plan for the BLM that will guide budget requests through 2009. The plan will identify program areas that will receive priority for funding increases, and will identify areas that may expect reduced funding in the event the BLM must submit level or reduced budget requests to the Department of the Interior, OMB, and the Congress over the 2007 to 2009 time period.*

Some of the State Offices indicated AML was a priority, but overall the other Bureau priorities outweighed AML. Subsequent to the data call and analysis, on October 11, 2006, the Assistant Director, Business and Fiscal Resources issued IM 2007-003, "Budgeting Process for Fiscal Years (FY) 2008 and 2009 Using the Budget Planning System. The IM states that for FYs 2007-2012, emphasis areas include:

- Contributing to the domestic energy supply;
- Managing rangelands and forests to achieve healthy, productive watersheds;
- Improving dispersed recreational opportunities; and
- Protecting cultural and heritage resources.

Based on the emphasis areas, programs could ask for increases **if they were in an emphasis area**. **If programs were not in emphasis areas, they were slated for decrease**. In 2007, AML was slated for a decrease (first, elimination; ultimately, a \$1m decrease). In 2008, AML could not ask for an increase, because it was not an emphasis areas, and the program was maintained at the same funding level.

Last year, around this time, I submitted through my management a request for a \$10m increase for AML. My request was considered by the Budget Strategy Team, but it was not as compelling as other priorities. On November 26, 2007, the Assistant Director, Business and Fiscal Resources issued IM-2008-033, "Budget Process for Fiscal Years (FY) 2009 and 2010 Using the Budget Planning System (BPS). In 2009, AML asked for an increase because the emphasis areas were being re-examined. In 2009, the new emphasis areas are:

- Healthy Lands;
- Southwest Borders;
- Community Growth;
- Energy;
- Non-energy commodity; and,
- National Landscape Conservation System.

Therefore, AML will continue to be maintained at its current funding level or be subject to decreases based on further budget decisions. I trust this information will respond to your request. If more information is needed, I recommend contacting

the BLM Budget Officer, Carl Rountree. at (202) 452-7745.

George Stone  
Senior Abandoned Mine Lands Specialist  
Division of Environmental Quality and Protection (WO-280)  
Bureau of Land Management



v: 202.557.3573 f: 202.452.5046 c: 202.253 0061 im2007-003.htm im2008-033.htm im2004-201.htm  
www.blm.gov/wo/st/en/prog/more/  
Abandoned\_Mine\_Lands.html

**Methodology**

Reviewed source document.

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## Assignment Workpaper

Prepared by: William McMullen 12/26/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.31  
**Program Name:** BLM (Overall)  
**Subject:** Time Charged to AML Program

**Subsection:**

**Origination Doctlink:** ■

### Purpose

Document BLM records on time charged by field employees to AML program.

### Scope

BLM AML Program.

### Source

Email with attached spreadsheet from George Stone on 12/19/2007.

### Conclusion

- In CA, AZ and NV, the 107 field office staff who charged time to the AML program in 2007 all spent less than 50% time on the program as shown in the chart below.
- 9 employees charged more than 20% time
- most employees charged less than 5% time as shown in the chart, (72 out of 107 employees or 67%); ■
- Since over 100 people charged time to the AML program and that was equivalent to about 9 FTE's, most employees had AML as a minor collateral duty and charged little time to it ■

### Details

Email:

**George M Stone/WO/BLM/DOI@BLM**

12/19/2007 09:10 AM

To: John Ilson/DEN/OIG/DOI@OIG@DOI  
cc: Leslie Torrence/WO/BLM/DOI@BLM, William McMullen/DEN/OIG/DOI@OIG  
Subject: Re: FTE Statistics ■

John -- Leslie is on vacation until 1/7. Since I didn't see any email from her, here are the files that she prepared regarding AZ, CA and NV.

I'll look at them, too. I'll need to have Budget run labor reports nationwide for AML and Hazmat (1010/1640).

G.



FY2007 1010 AML Labor Query for OIG PH 12-13-07.xls FY2007 AML AZ CA NV 11-8-07.xls FY2007 1010 AML Labor Query for OIG Actual AML Staff & Hours AZ CA NV 10-25-07.xls

John Ilson/DEN/OIG/DOI@OIG

**John Ilson/DEN/OIG/DOI@OIG**

12/18/2007 07:59 AM

To: Leslie Torrence/WO/BLM/DOI@BLM  
cc: William McMullen/DEN/OIG/DOI@OIG, George M Stone/WO/BLM/DOI@BLM  
Subject: FTE Statistics

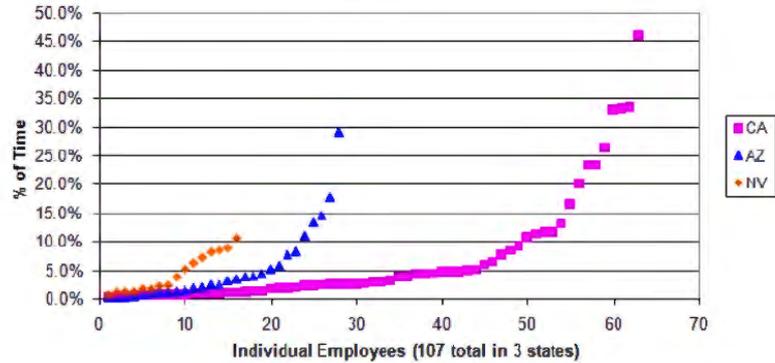
Hi Leslie, I wanted to make sure you sent the FTE stats we discussed last week. Of course now that I've had time to think about it, I'd like a little additional information. George mentioned 18 FTE nationwide and you provided stats on 3 states, CA, NV and AZ which identified over 100 individuals charging to the program. I'd like to get comparable information preferably nationwide but at least for the 3 states (i.e. total FTE budgeted (?) for the 3 states). Also, I need support for the 18 FTE and would like to know who the dedicated people are i.e. you, George, and the states with dedicated AML coordinators. Okay this is more than a little extra data. We can discuss this over the phone if you'd like (303 236 9119). Were getting close to the end of our quest for data. Thanks

The spreadsheets in the email above were reviewed. Data in the attachment "FY2007 AML AZ CA NV 11-8-07.xls" was assessed and a graph was prepared showing time charged by field staff (excluding known state office employees) as shown below.



BLM labor.xls

**Time Charged by Each Field Office Employee to AML in AZ, CA and NV in 2007**



The information above includes time charged by 63 field office employees in CA, 28 in AZ and 16 in NV. Thus, time charged for 107 employees (63+28+16) (Math verified by JCI on 1/28/08) is shown. All field office employees charged less than 50% time to the AML program. Nine employees charged more than 20% time while most employees charged less than 5% time as shown in the chart.

As shown in the spreadsheet ("BLM Labor.xls"), 44 employees in CA, 19 in AZ, and 9 in NV charged less than 5% time to AML. These 72 employees represent 67% of the total 107 employees. (Math verified by JCI on 1/28/08)

As shown in the spreadsheet, the title bar indicates that all time charged to the AML program represented about 9 FTE. This includes the time charged by field office, state and HQ personnel.



Since over 100 people charged time to the AML program and that was equivalent to about 9 FTE's, most employees had AML as a minor collateral duty and charged little time to it

**Methodology**

Reviewed and assessed information provided in email attachments.

Submission:	Submitted	William McMullen	01/28/2008 11:00:31 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	04/28/2008 12:51:42 PM

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

J BLM 31 Time Charged to AML Program

Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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**Record of Discussion**

Prepared by: William McMullen 05/02/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.32 **Subsection:**  
**Program Name:** BLM (Overall)  
**Subject:** NV State Division of Environmental Protection

**Origination Doclink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
John Illson	Auditor, Team Leader	Lakewood	303.236.9119	john_illson@doioig.gov
William McMullen	Evaluator, Asst Team Leader	Lakewood	303.236.9123	william_mcmullen@doioig.gov
David Gaskin	Chief, NV Bureau of Mining Regulation and Reclamation, Division of Environmental Protection	Carson City, NV	775.687.9397	

**Location:** phone call

**Date/Time:**  
 08/07/2007 10:00 AM

**Purpose**  
 Discuss AML issues in NV with state official.

**Scope**  
 AML sites in Nevada

**Conclusion**  
 [REDACTED] NV Director of Environmental Protection feels they know about any environmental AML sites of concern (potential for exposure to people). NV has a network of agencies on the lookout for AML sites that are reported to NAMLET for prioritization and action. NV views industry as "very responsive" in supporting mitigation of immediate environmental hazards.

**Summary**  
 We discussed our visit with Mike Visher K.BLM.08 Nevada Division of Minerals Mike Visher [REDACTED] and David related that the state has an informal inspection program for AML sites that takes input from people in the field and feeds it to NAMLET L.1.a NAMLET [REDACTED] for prioritizing and addressing AML site hazards. This network of people includes staff from NV Reclamation, Closure and Water groups, Div of Wildlife, Div of Minerals and other agencies who informally look for AML sites on private and public land. David said he thinks that historic mining issues (safety and environmental) are well understood in NV and that the state has a handle on environmental issues that they know about. He was confident that there we no lurking issues such as found in the Rand Mining District in part because the state is so sparsely populated that few people are exposed to AML environmental hazards. He said abandoned mines are dealt with on a case-by-case basis by the Bureau of Corrective Actions and that if issues are found on BLM land, then the state would encourage BLM to take action. If issues are found on private land, the Attorney General is the lead office for action. David was confident that if immediate environmental issues arose, he could get funding or action from industry easily because they are "very responsive." David thinks he has adequate funding to deal with short-term issues.

Submission: Submitted William McMullen 05/05/2008 03:09:06 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:01:27 PM

**Linkage Information**

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

J BLM 32 NV State Division of Environmental Protection

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**Assignment Workpaper**

Prepared by: William McMullen 05/02/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.33 **Subsection:**  
**Program Name:** BLM (Overall)  
**Subject:** Federal land ownership

**Origination Doctlink:** ■

**Purpose**  
 Document federal ownership of lands in the states.

**Scope**  
 Federal lands in the US.

**Source**  
 table from Census Bureau found at <http://www.blm.gov/natacq/pls05/PLScover06web.pdf> and shown in the Details section.

BLM ownership of land in the states found at <http://www.blm.gov/natacq/pls05/PLScover06web.pdf> and shown in the Details section.

- Conclusion**
- According to the Census Bureau (which references BLM Land Statistics), as of 1998, the federal government owned approximately 83% of the land in Nevada, the largest percentage of federally owned land in any state in the lower 48 or even al. 50 states.
  - As of 2007, BLM manages about 68% of the land in NV, higher than any other western state.

**Details**

According to the Census Bureau (which references BLM Land Statistics), as of 1998, the federal government owned approximately 83% of the land in Nevada, the largest percentage of federally owned land in any state in the lower 48 or even all 50 states.

**381. Total and Federally Owned Land, and by State: 1998**  
 [As of end of fiscal year; see text, section 9. Total land area figures are not comparable w th those in table 380. Public lands include any land and interest in land owned by the United States that are administered by the Secretary of Inter or through the BLM, without regard to how the Un ted States acquired ownership, except for (1) lands located on the Outer Continental Shelf, and (2) lands held for the benefit of Indians, Aleuts, and Eskimos. Includes public domain and acquired lands. This inventory is authorized by the Federal Property and Administrative Services Act of 1949 (63 Statute 377), as amended]

				1998					1998
				Not owned	Not owned		OWNED BY FEDERAL GOVERNMENT		
STATE	ABBREVIATION	FIPS CODE	Total (1,000 acres)	by Federal govt. (1,000 acres)	by Federal govt. (Per-cent)	Total (1,000 acres)	Public domain (1,000 acres)	Acquired by other methods (1,000 acres)	Per-cent
United States	US	00000	2,271,343	1,616,458	71.2	654,885	589,683	65,203	28.8

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

J BLM 33 Federal land ownership

Alabama	AL	01000	32,678	31,569	96.6	1,110	1	1,108	3.4
Alaska	AK	02000	365,482	117,195	32.1	248,287	248,010	277	67.9
Arizona	AZ	04000	72,688	39,558	54.4	33,130	31,766	1,364	45.6
Arkansas	AR	05000	33,599	30,174	89.8	3,260	1,040	2,386	10.2
California	CA	06000	100,207	55,179	55.1	45,027	41,586	3,441	44.9
Colorado	CO	08000	66,486	42,262	63.6	24,224	22,774	1,450	36.4
Connecticut	CT	09000	3,135	3,120	99.5	15	0	15	0.5
Delaware	DE	10000	1,266	1,239	97.9	27	0	27	2.1
District of Columbia	DC	11000	39	30	76.6	9	0	9	23.4
Florida	FL	12000	34,721	31,832	91.7	2,889	82	2,807	8.3
Georgia	GA	13000	37,295	35,215	94.4	2,080	0	2,080	5.6
Hawaii	HI	15000	4,106	3,500	85.3	605	255	350	14.7
Idaho	ID	16000	52,933	19,860	37.5	33,073	32,225	848	62.5
Illinois..	IL	17000	35,795	35,167	98.2	628	0	627	1.8
Indiana	IN	18000	23,158	22,648	97.8	510	1	510	2.2
Iowa	IA	19000	35,860	35,626	99.3	234	0	234	0.7
Kansas	KS	20000	52,511	51,846	98.7	665	26	639	1.3
Kentucky	KY	21000	25,512	24,277	95.2	1,236	0	1,236	4.8
Louisiana	LA	22000	28,868	27,583	95.5	1,285	3	1,282	4.5
Maine	ME	23000	19,848	19,656	99.0	192	0	192	1.0
Maryland	MD	24000	6,319	6,120	96.8	199	0	199	3.2
Massachusetts	MA	25000	5,035	4,957	98.4	78	1	78	1.6
Michigan ..	MI	26000	36,492	32,405	88.8	4,087	295	3,793	11.2
Minnesota ..	MN	27000	51,206	46,768	91.3	4,437	1,246	3,192	8.7
Mississippi	MS	28000	30,223	28,449	94.1	1,774	4	1,770	5.9
Missouri .	MO	29000	44,248	42,111	95.2	2,137	2	2,135	4.8
Montana	MT	30000	93,271	67,135	72.0	26,136	23,859	2,277	28.0
Nebraska	NE	31000	49,032	48,293	98.5	738	249	489	1.5
Nevada	NV	32000	70,264	11,889	16.9	58,375	58,045	330	83.1
New Hampshire	NH	33000	5,769	5,010	86.8	759	0	759	13.2
New Jersey	NJ	34000	4,813	4,648	96.6	166	0	165	3.4
New Mexico	NM	35000	77,766	51,172	65.8	26,594	24,116	2,478	34.2
New York.	NY	36000	30,681	30,559	99.6	122	0	122	0.4
North Carolina	NC	37000	31,403	28,894	92.0	2,508	1	2,507	8.0
North Dakota	ND	38000	44,452	42,603	95.8	1,850	251	1,599	4.2
Oh o .	OH	39000	26,222	25,825	98.5	397	0	397	1.5
Oklahoma	OK	40000	44,088	42,807	97.1	1,281	136	1,145	2.9
Oregon	OR	41000	61,599	29,167	47.4	32,431	28,764	3,668	52.6
Pennsylvania.	PA	42000	28,804	28,127	97.6	678	0	677	2.4
Rhode Island	RI	44000	677	673	99.4	4	0	4	0.6
South Carolina	SC	45000	19,374	18,186	93.9	1,188	0	1,188	6.1
South Dakota	SD	46000	48,882	46,128	94.4	2,754	1,523	1,231	5.6
Tennessee	TN	47000	26,728	25,084	93.9	1,643	0	1,643	6.1
Texas	TX	48000	168,218	165,413	98.3	2,804	59	2,746	1.7

Utah	UT	49000	52,697	18,691	35.5	34,006	32,241	1,765	64.5
Vermont	VT	50000	5,937	5,560	93.7	376	0	376	6.3
Virginia	VA	51000	25,496	23,197	91.0	2,299	1	2,299	9.0
Washington	WA	53000	42,694	30,507	71.5	12,186	10,722	1,465	28.5
West Virginia	WV	54000	15,411	14,233	92.4	1,178	0	1,178	7.6
Wisconsin	WI	55000	35,011	33,054	94.4	1,957	11	1,946	5.6
Wyoming	WY	56000	62,343	31,255	50.1	31,088	30,388	700	49.9

1 Excludes trust properties.

Source: U.S. General Services Administration, Summary Report on Real Property Owned by the United States Throughout the World, annual. 1999 report is available. Also appears in Public Land Statistics published by the U.S. Bureau of Land Management.

<http://policyworks.gov/org/main/mp/library/policydocs/wwi.htm> <http://www.blm.gov/>

[http://www.allcountries.org/uscensus/381\\_total\\_and\\_federally\\_owned\\_land\\_and.html](http://www.allcountries.org/uscensus/381_total_and_federally_owned_land_and.html)

These tables are based on figures supplied by the United States Census Bureau, U.S. Department of Commerce and are subject to revision by the Census Bureau.

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As of 2007, BLM manages about 68% of the land in NV, higher than any other western state.

**Western States Data  
Public Land Acreage (FS & BLM), Percentage of Land Base, and Population  
November 13, 2007**

**Alaska:**

Total Land Base: 424,490,880 acres  
Forest Service (NFS) Acres: 21.97 million  
BLM Acres: 87 million  
Population: 670,053

Forest Service Percentage: 5%  
BLM Percentage: 20.5%

**Arizona:**

Total Land Base: 72,958,720 acres  
Forest Service (NFS) Acres: 11.26 million  
BLM Acres: 12.2 million  
Population: 6,166,318

Forest Service Percentage: 15%  
BLM Percentage: 17%

**California:**

Total Land Base: 101,313,280  
Forest Service (NFS) Acres: 20.8 million  
BLM Acres: 15.2 million  
Population: 36,457,549

Forest Service Percentage: 21%  
BLM Percentage: 15%

**Colorado:**

Total Land Base: 66,678,400 acres  
Forest Service (NFS) Acres: 14.5 million  
BLM Acres: 8.4 million  
Population: 4,753,377

Forest Service Percentage: 22%  
BLM Percentage: 13%

**Idaho:**

Total Land Base: 53,530,880 acres  
Forest Service (NFS) Acres: 20.5 million  
BLM Acres: 11.9 million  
Population: 1,466,465

Forest Service Percentage: 38%  
BLM Percentage: 22%

**Montana:**

Total Land Base: 94,185,600 acres  
Forest Service (NFS) Acres: 17 million  
BLM Acres: 8 million  
Population: 944,632

Forest Service Percentage: 18%  
BLM Percentage: 8.5%

**Nevada State:**

Total Land Base: 70,762,880 acres  
Forest Service (NFS) Acres: 5.9 million  
BLM Acres: ~ 48 million  
Population: 2,495,529

Forest Service Percentage: 8%  
BLM Percentage: ~ 68%

**New Mexico:**

Total Land Base: 77,865,600 acres  
Forest Service (NFS) Acres: 9.4 million  
BLM Acres: 13.5 million  
Population: 1,954,599

Forest Service Percentage: 12%  
BLM Percentage: 17%

**Oregon State:**

Total Land Base: 68,018,240 acres  
Forest Service (NFS) Acres: 15.7 million  
BLM Acres: 15.73 million  
Population: 3,700,758

Forest Service Percentage: 23%  
BLM Percentage: 23%

**Washington State:**

Total Land Base: 42,612,480 acres  
Forest Service (NFS) Acres: 9.3 million  
BLM Acres: 364,600  
Population: 6,395,798

Forest Service Percentage: 22%  
BLM Percentage: < 1%

**Wyoming:**

Total Land Base: 62,603,520 acres  
Forest Service (NFS) Acres: 9.2 million  
BLM Acres: 18.4 million  
Population: 515,004

Forest Service Percentage: 15%  
BLM Percentage: 29%

**Rankings in Total Acreage by State/Agency:**

**Forest Service (NFS)-**

- 1) Alaska (21.97 million acres)
- 2) California (20.8 million acres)
- 3) Idaho (20.5 million acres)

J BLM 33 Federal land ownership

4) Montana (17 million acres)

**BLM-**

- 1) Alaska (87 million acres)
- 2) Nevada (48 million acres)
- 3) Wyoming (18.4 million acres)
- 4) Oregon (15.7 acres)

**Rankings by Percentage of Land Base by State/Agency:**

**Forest Service-**

- 1) Idaho (38%)
- 2) Oregon (23%)
- 3) Colorado and Washington (22%)

**BLM-**

- 1) Nevada (68%)
- 2) Wyoming (29%)
- 3) Oregon (23%)

**Rankings by Population:**

- 1) California (36,457,549)
- 2) Washington (6,395,798)
- 3) Arizona (6,166,318)
- 4) Colorado (4,753,377)
- 5) Oregon (3,700,758)
- 6) Nevada (2,495,529)\*
- 7) New Mexico (1,954,599)\*
- 8) Idaho (1,466,465)\*
- 9) Montana (944,632)\*
- 10) Alaska (670,053)\*

**Total NFS Land Acreage:** 192.8 Million Acres

**Total Western States Acreage (Above):** 155.53 Million Acres

**Western States Percentage of Total NFS Lands:** 81%

**Ref:**

Forest Service Data: [www.fs.fed.us/land/staff/lar/2007/TABLE\\_4.htm](http://www.fs.fed.us/land/staff/lar/2007/TABLE_4.htm)

BLM Data: From various state office websites.

Population Data: 2006 U.S. Census Bureau estimates

**Methodology**

Reviewed source document.

Submission: Submitted William McMullen 05/05/2008 03:08:47 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:02:02 PM

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**History**

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## Assignment Workpaper

Prepared by: William McMullen 05/16/2008

**Assignment Number:** C-IN-MOA-0004-2007

**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** J.BLM.34

**Subsection:**

**Program Name:** BLM (Overall)

**Subject:** Vehicle Recovery

**Origination Doctlink:** [REDACTED]

### Purpose

Document recovery of vehicle from AML shaft.

### Scope

BLM AML program.

### Source

Email from George Stone shown in Details section.

### Conclusion

George Stone, BLM AML Program Lead transmitted photos to OIG of the recovery of a vehicle from an AML shaft

### Details

**George M Stone/WO/BLM/DOI@BLM**

05/16/2008 08:57 AM

To William McMullen/DEN/OIG/DOI@OIG

cc john\_illson@oig.doi.gov

Subject Turmco Rescue images



DCP\_1340.JPG DCP\_1336.JPG DCP\_1337.JPG DCP\_1338.JPG DCP\_1339.JPG Bill -- here you go. Not sure which one you want.

G.



The photo was cropped for use in the report.

**Methodology**

Documented email from George Stone.

Submission:	Submitted	William McMullen	05/16/2008 11:56:05 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	06/02/2008 02:02:26 PM

[Linkage Information](#)

**History**

**Status:** Approved **Request Review:**

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**Assignment Program/Summary Workpaper**

Prepared by: Sean Pettersen 04/27/2007

Assignment Number: C-IN-MOA-0004-2007  
 Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section: K.  
 Assignment Program Name: BLM (Site Visits)

**Objective**

Document visits to BLM State and Field Offices and to AML sites to gather information on AML program, to assess specific site hazards, and to evaluate what actions BLM has taken to mitigate hazards at these sites.

**Background**

Visited over 30 sites and spoke with over 60 BLM staff in HQ, Arizona, Nevada and California to assess AML issues.

**Assignment Steps**

<b>K – Bureau of Land Management (Site Visits)</b>			
<b>Audit Step</b>	<b>Staff</b>	<b>Justification for Step Addition or Removal</b>	<b>Work Paper Reference</b>
1 Provide background information on sites visited		Added step to adequately describe AML sites visited by OIG	K.BLM.01 Virginia City, NV Population K.BLM.02 Nevada State Office Entrance Conference K.BLM.03 Dave Morlan NV Cadastral Survey K.BLM.06 BLM Carson City NV Field Office Manager K.BLM.07 BLM Carson City Field Office - Terry Neumann & Ken Nelson K.BLM.08 Nevada Division of Minerals Mike Vishur K.BLM.Arizona.01 Phoenix District Entrance Conference K.BLM.Arizona.05 Entrance Conference K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office K.BLM.VirginiaCity.05 Comstock Lode K.BLM.Virginia City.02 Cadastral Survey See also W/Ps in Step 3 K.BLM.VirginiaCity.06 Latest Status K.BLM.VirginiaCity.07 Aerial Photo of Section 29
		Overall concern about inventory and adequacy of AMM made issue of whether visited sites were on an inventory irrelevant	
3 What are the safety and environmental hazards at sites visited?		Added to further describe specific hazards at sites visited by OIG	K.BLM.04 Fatality at the Goat Basin Mine K.BLM.American Flat.01 Safety Issues K.BLM.Arizona.02 Site Visits K.BLM.Arizona.06 Site Visits K.BLM.Caselton.01 Site Visits K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis K.BLM.Nevada.01 Site Visits K.BLM.Rip Van Winkle.01 Site Visit K.BLM.Virginia City.04 Sample Results C.BLM.RidgecrestFO.03 Ridgecrest FO Rademacher Hills AML Data and Site Visit C.BLM.RidgecrestFO.04 GEM Data and Atoia Photos Ridgecrest FO C.BLM.RidgecrestFO.05 Spangler Hills OHV Area C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program C.BLM.RidgecrestFO.07 Site Visits Ruth and Darwin C.BLM.BarstowFO.01 Field visit to Barstow FO C.BLM.FolsomFO.01 Site Inspections K.BLM.Virginia City.01 Trespass Issues K.BLM.RosamondCA.01 Site Visit
4 What is the process by which sites with safety and environmental hazards are prioritized for mitigation		Added to describe how sites are prioritized for mitigation	C.BLM.HQ.01 BLM HQ Meeting with George Stone J.BLM.04.01 Response to OIG Questionnaire J.BLM.06.01 Response to OIG Questionnaire J.BLM.18.01 Responses to OIG Questionnaire J.BLM.20 AML Strategic Plan J.BLM.22 AML Strategic Plan Budget Needs K.BLM.California.01 Rapid Assessment Technical Team
5 What has BLM done to address safety and		Added to provide information of what BLM	K.BLM.Arizona.03 AZ Zoned AML Management

<p>environmental hazards at sites visited?</p>	<p>s doing to mitigate hazards at sites visited by OIG</p>	<p>K.BLM.Caselton.04 CERCLA Action Memorandum K.BLM.Caselton.05 Reprocessing Negotiations K.BLM.VirginiaCity.06 Latest Status Reporting Management's Response to Draft Report See also W/Ps in Step 3 K.BLM.Nevada.01 Site Visits K.BLM.Rip Van Winkle.01 Site Visit</p>
<p>6 Obtain the prioritized list of AML sites from each BLM office visited and obtain any supporting documentation for the prioritization, location and characterization of all known mine openings at sites visited (i.e. Randsburg)</p>		<p>J.BLM.04.01 Response to OIG Questionnaire J.BLM.06.01 Response to OIG Questionnaire J.BLM.18.01 Responses to OIG Questionnaire J.BLM.20 AML Strategic Plan (includes prioritized projects in states and field offices not visited by OIG.</p>
<p>7 Determine why prioritized, mitigated or other sites are not entered into the AMM inventory (i.e. don't ask - don't tell, training, other priorities or other reasons)</p>	<p>Deficiencies identified in the AMM inventory made the step of estimating sites not entered in the AMM irrelevant and unknowable at this point</p>	<p>J.BLM.02 BLM AMM Data - AMM Deficiencies J.BLM.29 AML Staff Qualifications</p>
<p>8 Obtain an inventory of all known abandoned mines that have been mitigated and details on the mitigation performed over the past 10 years at each BLM office visited Mitigation includes temporary and permanent closures, fences and signs posted at the site</p>		<p>J.BLM.04.01 Response to OIG Questionnaire J.BLM.06.01 Response to OIG Questionnaire J.BLM.18.01 Responses to OIG Questionnaire</p>
<p>9 For known injuries and fatalities, what have BLM offices done to mitigate safety risks at the site?</p>		<p>K.BLM.04 Fatality at the Goat Basin Mine K.BLM.Virginia City.03 AML deaths K.BLM.American Flat.01 Safety Issues K.BLM.Arizona.08 ATV Death and Mitigation</p>
<p>10 [REDACTED]</p>	<p>Deleted because audit focused on whether any mitigation is being done and not on how mitigative actions are inspected periodically Some W/Ps do comment on failure of temporary mitigation measures and lack of BLM efforts to ensure site hazards remain mitigated</p>	
<p>11 Has BLM closed public roads or trails to limit public access to dangerous old mining structures and mine openings</p>		<p>L.g. Withdrawal, Segregation and Closure of Lands</p>
<p>12 Discuss and evaluate the methods available and used for temporary and permanent closure of mines</p>		<p>S.BLM.01 BLM AML Background</p>
<p>13 Determine if BLM has requested specific funding for mitigating high risk sites including those with high mitigation costs If so, obtain all documentation supporting prior funding requests</p>		<p>C.01.01 FY07 CHF Project Budget Proposal C.01.02 Latest Funding Status E.04.05 CA State Director Briefings K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office J.BLM.20 AML Strategic Plan J.BLM.22 AML Strategic Plan Budget Needs J.BLM.04.01 Response to OIG Questionnaire J.BLM.06.01 Response to OIG Questionnaire J.BLM.18.01 Responses to OIG Questionnaire J.BLM.30.01 Budget Requests</p>
<p>14 Determine if BLM offices have any documented plans to mitigate the highest risk sites? (i.e. risks assessment, mitigation required and cost estimates) If not, why not?</p>		<p>J.BLM.20 AML Strategic Plan J.BLM.22 AML Strategic Plan Budget Needs J.BLM.04.01 Response to OIG Questionnaire J.BLM.06.01 Response to OIG Questionnaire J.BLM.18.01 Responses to OIG Questionnaire K.BLM.California.01 Rapid Assessment Technical Team</p>
<p>15 [REDACTED]</p>	<p>Deleted as not significantly important to audit although at least one site, American Flat, has not been mitigated because of concerns over its potential historic status In general, the historic nature of a site should not preclude mitigation of health and safety hazards</p>	
<p>16 [REDACTED]</p>	<p>Deleted as irrelevant to BLM, although this</p>	

	issue is relevant to NPS	
17 Aside from on site warnings does BLM have any documented warnings to the public on the dangers of AML sites (i.e. public brochures or internet access provided by BLM)?		J.BLM.14 Website Safety Information J.BLM.15 AML Safety Literature

**Conclusion**

Based on our visits to the Rand Mining District F.01.01 Patents, F.02.01 Red Mountain land conveyances, and Virginia City, we found historical and current trespass on or near AML sites located on BLM land. We conclude that there likely could be other such sites in the West where residents or visitors are exposed to safety and environmental hazards because they are in trespass on BLM AML sites. In such cases, there could be an increased risk of injuries, deaths or health effects to residents and visitors. In the Rand Mining District, long-standing trespass issues were not resolved until 1984 and 1997 and there is still ongoing trespass. In Virginia City, BLM has taken little action to resolve trespass issues. We conclude that such long-standing trespass may complicate BLM's efforts to mitigate the hazards at the AML sites K.BLM.Virginia City.01 Trespass Issues.

At several sites we visited (American Flat, Quartzsite, Virginia City, and Randsburg D.01.04 Photos of Red Mountain Safety Issues), deteriorating or dilapidated structures were evident that present a safety hazard to the public. In our opinion, these types of structures should be demolished and removed to eliminate these safety hazards [Auditor Opinion].

**STEP 1**

During the course of survey and audit work, OIG visited the following areas (3 state offices, BLM HQ, 9 field offices in California, Nevada and Arizona = 13 BLM offices and 39 AML areas) to inspect AML sites and hazards. In addition we visited 5 national Parks for a total of 44 areas with abandoned mines (39+5=44 math verified by Greta Bloomfield)

We visited BLM sites from March 2007 (D.01.04 Photos of Red Mountain Safety Issues) through January 2008 (K.BLM.RosamondCA.01 Site Visit). Our last audit visit was to Mojave National Preserve in April 2008. I.NPS.MOJA.01 Mojave National Preserve

We selected these sites based on knowledge gained from bureau officials, prior accident locations, and priority of hazards as identified in bureau plans or by bureau officials. J.BLM.20 AML Strategic Plan, K.BLM.02 Nevada State Office Entrance Conference. Details are shown in the blue tabs below.

We also talked in person or by phone to over 65 DO (5 DO) and BLM (64 BLM) staff as noted by the names in bold below (math independently verified by Greta Bloomfield 5/14/08 outcome= 64 BLM staff (there was a duplicate count on one member) and 5 do staff). We also visited 5 parks and talked with 15 NPS personnel H.NPS.11 Number of Parks and personnel visited. Thus, we visited over 40 AML areas and talked with over 75 BLM and NPS staff (BLM = 64, NPS = 15).

Finally, we reviewed hundreds of pages of documents including Caselton EECA (79 pages K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis), BLM's Strategic Plan (94 pages J.BLM.20 AML Strategic Plan), BLM's AML handbook (93 pages) and Safety Manual (18 pages) J.BLM.13 BLM AML Program Policy Handbook, BLM's CERCLA handbook (51 pages E.04.02 BLM CERCLA Handbook and Action Memo), and regulations such as 43 CFR 3809 (32 pages J.BLM.25 Surface Management under Mining Laws) to name a few.

OGC (Martinez) G.DOI.08 OGC Response to OIG Questions		
DOI (Meredith) D.DOI.01 SMIS Reporting Requirements		
DOI CHF (Wilson, Joseph, Taylor) G.DOI.04 Discussion with CHF and AML staff		
BLM HQ (Stone, Torrence, C.BLM.HQ.01 BLM HQ Meeting with George Stone, Haskins J.BLM.23 Discussion with Roger Haskins, Seymour G.DOI.02 Seymour Article, Stith B.BLM.03 Funding - Hazmat Fund, Cooper, Dean B.BLM.02 BLM AML Funding, Lasell, Moreson, Moore B.BLM.06 BLM Budgeting Process, Brown B.BLM.09 BLM Pits and quarries, Murrellwright B.BLM.10 BLM Post FLPMA Sites)		
BLM (offices not visited) (Gingrich) J.BLM.03 BLM NV - Winnemucca Field Office, (Seum) J.BLM.05 BLM NV - Las Vegas Field Office, (Drummond) J.BLM.07 BLM NV - Battle Mountain Field Office, (Downing) C.BLM.02 BLM CA - Needles Field Office, (Moore) C.BLM.03 BLM CA - Hollister Field Office, (Martinez) C.BLM.06 BLM CA - Palm Springs Field Office, (Rogers) C.BLM.08 BLM CA - Redding Field Office, (Seath) C.BLM.09 BLM CA - Bishop Field Office, (Elam) C.BLM.10 BLM CA - Eagle Lake Field Office, (Singleton) C.BLM.11 BLM CA - Alturas Field Office, (Harrison) C.BLM.12 BLM CA - Arcata Field Office, (Snyder) C.BLM.Cedar City FO.01 BLM AML Inventory- Cedar City FO, (Ginouves) F.BLM.01 AML sites "Historical Value")		
California (Poole, Berger)		
Ridgecrest Field Office:	Barstow Field Office:	Folsom Field Office (Folsom Area): (Carroll) C.BLM.FolsomFO.01 Site inspections
<ul style="list-style-type: none"> <li>Rand Mining District (Randsburg, Red Mountain) (Borchard, Villalobos, Weiwood, Gum, Forester) C.BLM.RidgecrestFO.02 AML Activities in Ridgecrest FO and California Desert District B.01.07 Update from Forester D.01.04 Photos of Red Mountain Safety Issues</li> <li>Atolia</li> <li>El Paso Mountains</li> <li>Rademacher Hills</li> <li>Spangler OHV area</li> <li>Darwin (Graves) B.02.02 Discussions with Peter Graves</li> <li>Ruth Mine</li> <li>Rosamond Area                             <ul style="list-style-type: none"> <li>Tropico Mine (Lawler, Key, Grabowski) K.BLM.RosamondCA.01 Site Visit</li> <li>Golden Queen Mine</li> <li>Cactus Mine</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Coolgardie area (Livingood) C.BLM.BarstowFO.01 Field visit to Barstow FO</li> <li>Goat Basin (Livingood) K.BLM.04 Fatality at the Goat Basin Mine</li> <li>Calico Mountains</li> </ul>	<ul style="list-style-type: none"> <li>You Bet Mine,</li> <li>Upper You Bet Sluice Tunnel,</li> <li>Boston Tunnel, Starr Pit,</li> <li>Green Creek,</li> <li>Davis Stamp Mill,</li> <li>Kenebec Shaft, and the</li> <li>South Yuba River Campground.</li> </ul>
Arizona (Burch, Harris, Zielinski, McClure, Lovato, Sanchez, Czapski, Hogan, Huntington) K.BLM.Arizona.03 AZ Zoned AML Management, K.BLM.Arizona.04 Exit Conference, K.BLM.Arizona.07 Exit Conference		
Phoenix District Office:	Yuma Field Office:	Colorado River District (Kingman Area): (Lovato, McClure, Misiaszek) K.BLM.Arizona.06 Site Visits
<ul style="list-style-type: none"> <li>Wickenburg mill site (Maes, Pils) K.BLM.Arizona.02 Site Visits</li> <li>Octave tailings</li> </ul>	<ul style="list-style-type: none"> <li>Quartzsite Mountain mills (Fusilier) K.BLM.Arizona.02 Site Visits</li> <li>Moon Mountain mill</li> </ul>	<ul style="list-style-type: none"> <li>Kingman (Windy Point Recreation Area)</li> </ul>

<ul style="list-style-type: none"> <li>Vulture area</li> </ul>		<ul style="list-style-type: none"> <li>Antler Mine</li> <li>Boriana Mine</li> <li>COD Mine</li> <li>Thumb Mine</li> </ul>
<b>Nevada (Ross, Kelso, Wenker, Johnson, Morlan) K.BLM.05 BLM Nevada State Office Exit Conference</b>		
Tonopah Field Office: Site near Beatty, NV <b>D.BLM.04 Fataality near Beaty, NV</b>		
Elko Field Office: <ul style="list-style-type: none"> <li>Rip van Winkle Mine (McFarlane) <b>K.BLM.Rip Van Winkle.01 Site Visit</b></li> <li>Tuscarora</li> <li>Spruce Mountain</li> </ul>	Ely Field Office: (Bjorkland) <b>K.BLM.Nevada.01 Site Visits</b> <ul style="list-style-type: none"> <li>Golden Butte</li> <li>Cherry Creek (King Midas mill)</li> <li>Ward</li> <li>Caselton tailings (Netcher, Ruhs, Peterson)</li> <li><b>K.BLM.Caselton.06 Ely Field Office Exit Conference</b></li> </ul>	Carson City Field Office: (Hicks, Neumann, Nelson) <b>K.BLM.06 BLM Carson City NV Field Office Manager</b> <b>K.BLM.07 BLM Carson City Field Office - Terry Neumann &amp; Ken Nelson</b> <b>K.BLM.American Flat.01 Safety Issues</b> <ul style="list-style-type: none"> <li>Virginia City area</li> <li>American Flat mill</li> </ul>

**STEP 2 deleted**

**STEP 3**

As shown in the Work Papers referenced in Step 3, OIG noted many physical safety and environmental hazards at the AML sites we visited including open shafts and dilapidated structures **D.01.04 Photos of Red Mountain Safety Issues** **K.BLM.American Flat.01 Safety Issues**. The most dangerous physical safety sites were in the Ridgecrest Field Office (CA), specifically the Rand Mining District, the Rademacher Hills, the El Paso Mountains and the Spangler OHV area. In addition, serious safety hazards were noted in the Barstow Field Office, the Carson City Field Office, specifically American Flat mill and the Colorado River District office, specifically Kingman. Many of these sites had not been mitigated either temporarily with signs and fences (an easy and inexpensive temporary solution [Auditor Opinion]) or permanently and were easily accessible. In the Rand Mining District and Caselton, residents and visitors are being exposed to arsenic and lead while residents in Virginia City may be exposed to mercury all without their knowledge. In many cases we visited, BLM has not evaluated the sites to determine the degree of risk to the public (Rand Mining District, Caselton, Virginia City, Ruth Mine, Darwin, Kingman). These site visits led us to conclude that BLM was not adequately protecting public health and safety from the hazards posed by AML sites and that this neglect of AML hazards has been long-standing for decades. [Auditor Conclusion]

The most significant environmental hazards were noted in the Rand Mining District (subject of Flash Report), the Caselton tailings (Ely Field Office) and the area of Virginia City (Carson City Field Office).

[Auditor Opinion] Many of the serious safety and environmental hazards at AML sites have not mitigated because BLM line managers (Field offices) have blatantly discouraged the identification, characterization, reporting and mitigation of these sites. BLM needs to be more aggressive in temporarily mitigating sites by posting signs, fencing sites and informing the public and/or by permanently mitigating sites by closing them. **G.BLM.01 BLM AML Background**

During our site visits, we also observed sites where members of the public have been injured or killed as a result of AML hazards **K.BLM.04 Fatality at the Goat Basin Mine** **K.BLM.American Flat.01 Safety Issues** **K.BLM.Virginia City.03 AML deaths** or have been exposed or potentially exposed to environmental contaminants **K.BLM.Caselton.04 CERCLA Action Memorandum** **K.BLM.Virginia City.04 Sample Results** **E.04.02 BLM CERCLA Handbook and Action Memo**.

**STEP 4**

Although the BLM AML Strategic Plan describes a peer review process for prioritizing sites, this process was slated to begin in 2008. Individual BLM field or state offices develop priority lists for AML sites in their areas. These are included in the Strategic Plan. [Auditor Opinion] OIG believes this approach (Rapid Assessment Technical Team) to rapidly assessing AML sites in the California Desert District is yielding important results in the Ridgecrest District to date and will likely do the same in the four other districts. The integrated Rapid Assessment Technical Team can quickly evaluate sites and is independent of the individual field office managers who may not want sites to be identified, for whatever reasons. We think BLM should continue to use the Rapid Assessment Technical Team approach and should meet their May 2008 schedule for completing reviews of sites in all of the districts in the California Desert District. We also think this approach has merit for other states such as Nevada.

**STEP 5**

As shown in the workpapers for this step, BLM has taken some action to mitigate safety and environmental hazards at AML sites. The use of a full-time AML person at the Phoenix District office in AZ is an example of an effective management approach to ensuring AML sites and identified and mitigated.

**STEP 6**

We obtained lists of high priority AML sites from the Ely and Elko BLM field offices in NV and the Phoenix and Colorado River District offices in AZ.

**STEP 7**

We found that many collateral duty AML field office staff were not trained on how to use AMM and had never input or edited information on AML sites in the AMM. We also found that some high priority sites designated by State Offices in the Strategic Plan were not in the AMM.

**STEP 8**

We obtained information on mitigation of AML sites from the Ely and Elko BLM field offices in NV and the Phoenix and Colorado River District offices in AZ.

**STEP 9**

At Goat Basin (Barstow Field Office), we found that BLM had done little to mitigate the site or to warn the pubic of AML hazards. At Virginia City, we found that the State of Nevada had erected a barrier across the entrance to the adit where two deaths occurred. At American Flat, we found that BLM had done little to mitigate the safety hazards at this site and had not restricted access or posted adequate warning signs.

**STEP 10 deleted**

**STEP 11**

We found that AZ BLM had used a land withdrawal process for the Tyro mill and that BLM CA had used administrative closures to restrict access to several AML sites.

**STEP 12**

**G.BLM.01 BLM AML Background** ■ **What are some of the ways BLM addresses hazards at abandoned mine sites?**

**BLM addresses physical safety hazards associated with abandoned mine sites by:**

- Posting warning signs and fencing off access to dangerous areas;
- Closing horizontal opening (adits) to keep people out. Where bats are present, BLM uses bat gates that allow them to use the adit for habitat;
- Closing vertical openings (shafts) either by filling them, or by covering them with little roofs (cupolas); and/or
- Removing and properly disposing hazards such as mining and milling equipment, oil and chemical drums, and other debris.

**BLM addresses environmental hazards associated with abandoned mine sites by:**

- Redirecting stream flow to avoid mine wastes and tailings;
- Capping mine waste and tailings piles located in and around stream beds, or removing and transporting them to an appropriate repository;
- Plugging adits to reduce or control flow of metals-laden water;
- Applying low-cost, low-maintenance water treatment methods; and/or
- Removing toxic soils impacting groundwater.

**STEP 13**

See links to workpapers in table above.

**STEP 14**

See links to workpapers in table above.

**STEP 15 deleted**

**STEP 16 deleted**

**STEP 17**

BLM has AML safety and warning information on their web site and has published a brochure outlining the hazards of abandoned mines. BLM also uses "Stay Out, Stay Alive" information published by the Mine Safety and Health Administration (MSHA).

**CA Rapid Assessment Technical Team**

**K.BLM.California.01 Rapid Assessment Technical Team** ■

- BLM formed a Rapid Assessment Technical Team comprised of a variety of experts in late 2005 to assess serious environmental hazards at AML sites in California's Desert District.
- To date, the Team has focused on the Ridgecrest field office and has identified 11 sites that could cost hundreds of millions of dollars to mitigate.
- The Team is scheduled to complete reviews of sites in all five of the California Desert District districts by May 2008.

**[Auditor Opinion]** OIG believes this approach to rapidly assessing AML sites in the California Desert District is yielding important results in the Ridgecrest District to date and will likely do the same in the four other districts. The integrated Rapid Assessment Technical Team can quickly evaluate sites and is independent of the individual field office managers who may not want sites to be identified, for whatever reasons. We think BLM should continue to use the Rapid Assessment Technical Team approach and should meet their May 2008 schedule for completing reviews of sites in all of the districts in the California Desert District. We also think this approach has merit for other states such as Nevada.

**California (various sites)**

**C.BLM.RidgecrestFO.03 Ridgecrest FO Rademacher Hills AML Data and Site Visit** ■

- The Rademacher Hills area just south of Ridgecrest CA is dotted with numerous AML sites and features.
- An inventory was conducted that mapped sites and features.
- Sites and features were ranked according to degree of hazard and accessibility.
- While many features were fenced, most fences had been vandalized to allow access to features.
- There were few warning signs posted near shafts and adits.

**C.BLM.RidgecrestFO.04 GEM Data and Atofia Photos: Ridgecrest FO** ■

- The California Desert District GEM database catalogues a number of AML features in the Randsburg Mining District of the Ridgecrest Field Office but many features have not been validated with a site visit to determine the degree of physical hazard they present.
- Photographs depict AML safety hazards near Red Mountain and Atofia in the Ridgecrest Field Office area.

**C.BLM.RidgecrestFO.05 Spangler Hills OHV Area** ■

- Spangler Hills is an OHV area near Ridgecrest that receives heavy periodic recreational use.

- BLM encourages heavy use of the area and has even discussed holding national events in the area with OHV groups.
- The area has numerous open shafts and adits.
- Mitigation attempts (short of filling in holes or blasting holes closed) have not been successful.

**C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program**

- BLM "Adopt a Cabin" Program as evidenced by the Edith E cabin site in the El Paso Mountains south of Ridgecrest CA attracts visitation to areas with known safety hazards.
- At Edith E, the open shafts and adits are actively claimed but have not been secured from public access and no warning signs have been posted.
- By "inviting" visitors to sites such as the Edith E, even if near active claims, BLM is increasing the risk to the public of incidents associated with safety hazards near the Edith E.

**C.BLM.RidgecrestFO.07 Site Visits: Ruth and Darwin**

The Ruth Mine, about 15 miles northwest of Trona, CA, is in a remote canyon upstream from a small community. The site has a large, eroded tailings pile, several deteriorating mill structures, an old residence and other outbuildings and an open adit (bat gate was open). There was evidence of recent trespass in the residence and there were no warning signs posted near the adit or old mill structures. At the time of our visit, no sample results had been obtained regarding contamination at the site.

Darwin is a small "arts" town about 80 miles north of Ridgecrest. There is a fairly new mill, now abandoned, just west of town with deteriorating structures, open access, tailings piles and no warning signs. At the time of our visit, no sample results had been obtained regarding contamination at the site.

**C.BLM.BarstowFO.01 Field visit to Barstow FO**

- Barstow FO does not have a formal AML inventory or prioritized list of sites.
- The FO did not respond to the Saginaw M according to the FO AML lead.
- There are numerous open shafts in the Coolgardie Historic Mining District northwest of Barstow; the area is routinely used for OHV recreation and rockhounding.
- Did not visit the site of a fatality near Joshua Tree National Park on BLM land as it was quite remote and the Barstow FO geologist had not been there.
- FO representative did not know of any other incidents related to AML at Barstow FO.

**C.BLM.FolsomFO.01 Site Inspections**

- The prior Folsom Resource Area Manager directed Dave to not identify AML sites and Dave Lawler's supervisor threatened retaliation for identifying them.
- Land acquisitions and exchanges may be performed without adequate environmental assessment. Dave cited the Comingder site and Kelly Mine appears to be another site where this occurred.
- The South Yuba Campground had a significantly dangerous mine shaft within about 200' of a pay as you go campground. The shaft previously had a substandard closing performed which subsequently failed.

**K.BLM.RosamondCA.01 Site Visit**

- Three sites near Rosamond, CA (Golden Queen mine, Cactus mine, Tropico mine) with elevated levels of arsenic in mine waste and tailings were visited by OIG staff. All three sites have potentially responsible parties.
- The Golden Queen mine is being proposed to reopen as an open pit gold mine by a Vancouver company that is working with BLM on acceptable ways to contain contaminated tailings.
  - The Cactus mine has an eroded tailings pile that is washing into a drainage; there is a potentially responsible party that BLM intends to contact regarding the site hazards.
  - The Tropico mine includes a small section of BLM land onto which tailings have washed and from which tailings are washing back onto private land. BLM hopes to work with the mine owner to mitigate the hazards at the site.

## California (Rand Mining District)

**B.02.01 Resident Interviews**

Based on interviews with selected residents and business people in the Rand Mining District (focusing on Red Mountain):

- Some residents are concerned about remining and continued exposure; a recent sampling event by 999 Plus resulted in generation of much dust.

**C.BLM.RidgecrestFO KellyMine.01 Red Mountain Kelly Mine Area and Hazards**

Richard noted that mitigation/remediation efforts at the Kelly Mine were complicated by existing current mining claims; Minerals Exploration Inc owns the current Kelly claim but 999 Plus has expressed interest in buying the claims and possibly remilling the tailings and conducting explorations of underground deposits. He also noted that 999 Plus might oppose mitigation if it interfered with their mining activity; this concern was expressed by Mines Exploration, the company from whom 999 Plus might buy the claim to the Kelly Mine. F.02.01 Red Mountain land conveyances (see last tab) Richard also noted that BLM had interest in re-mining because any company that remined the site would have to post a reclamation bond and that could minimize the amount of money BLM would need to contribute to ultimate remediation of the site.

## Arizona (various sites)

**K.BLM.Arizona.01 Phoenix District Entrance Conference**

- OIG Saginaw Flash Report provided a major impetus to focus AZ efforts on AML sites.
- BLM AZ is proactive in mitigating hazards at sites even with existing claimants by using the threat of CERCLA action or simply installing fences without approval of the claimants.
- BLM has been hampered in developing agreements with the State because AML responsibilities are split between several agencies.

**K.BLM.Arizona.02 Site Visits**

OIG Site Visits to Wickenburg, Octave, Vulture with James Maes, Zoned Hazmat Coordinator, and Matt Plis, Geologist, on 9/18/07.

OIG Site Visit to Quartzsite with Steve Fusilier, Realty Specialist, Yuma Field Office, on 9/19/07.

- The Phoenix zoned AML position, when staffed by a trained and experienced person, is an effective way to manage AML issues. K.BLM.Arizona.03 AZ Zoned AML Management
- AZ is aggressive in dealing with trespass issues in the Phoenix District.
- The sites visited do present potential environmental hazards but risk assessments should be done to determine the extent of possible human exposure.
- AZ Phoenix District is very proactive in taking samples of AML sites to determine nature and extent of environmental contaminants.
- AZ Phoenix District is successfully using CERCLA authority and threats of "if you touch it, you own it" with claimants to 1) get claimants to relinquish claims or 2) get claimants to allow BLM to mitigate sites.
- BLM (Steve Fusilier) is using relatively inexpensive concrete bat gates to cover open shafts as opposed to fabricated steel gates.

**Wickenburg**

BLM plans to test groundwater near the site and will seek permission from nearby residents to test well water. In the near term, BLM plans to fence the site to restrict access and may close a portion of a road that crosses the site.

#### Octave

The Octave site is located northwest of Wickenburg about 2 miles southeast of Stanton, AZ. There are a few residents in Stanton and the area is routinely visited by mineral collectors and RVers. The mill at the site is on patented land while most of the tailings are on BLM land in a wash that flows to the south. As of our visit, **no samples had been taken of the tailings** to determine the nature and extent of any contamination.

#### Vulture

The site visited was an open shaft near Vulture, AZ. There were a few residents nearby. The site was **fenced but the fence had been vandalized**.

#### Quartzsite

We visited 2 abandoned mill sites on the east side of Q Mountain in Quartzsite, AZ. The mills, according to Steve, were fairly small but do have small tailings piles on BLM land that can wash into drainages and that are near residents. As of our visit, **no samples had been taken of the tailings** to determine the nature and extent of any contamination. Steve plans to fence the sites (has procured fencing material) but has been delayed by the necessity of documenting a NEPA categorical exclusion for fencing activities. **There are also deteriorating structures at the mills that could present safety hazards.**

We also visited the Moon Mountain mill site in Quartzsite, a small (few acres) site near a school on the north side of town. The site has been remediated to some extent (concrete tanks were removed, but contaminated soil needs to be removed) and a fence has been installed. Steve noted that expected costs were about \$300k to remove the soil if it could be stabilized and placed in a regular landfill but the costs would be about \$500k if the soil had to be disposed in a hazardous materials landfill.

Steve noted that he has worked successfully with claimants to install fencing or bat gates to restrict access to claimed AML sites. In some cases, he provides a key to a locked fence or bat gate to the claimant. He also noted that he has successfully used concrete bat gates (instead of fabricated steel gates) for open shafts and that these cost about \$2500. They are built with a small crack at the base to allow bats, owls and small mammals to enter the shaft.

#### K.BLM.Arizona.04 Exit Conference

- BLM AZ supports better integration across all BLM entities of AML activities.

#### Summary

John reviewed both our visit and Greta and Sean's visit to the Kingman area. He noted that we visited three sites in the Phoenix District (Wickenburg, Octave and Quartzsite) and that none of these sites appeared to present as significant an environmental hazard as sites we had visited in CA and NV. He noted that we were impressed with the "zoned" AML approach being used in AZ and would likely comment on that in our report. John also noted that we planned to address the issue of AML integration of efforts at all levels including the 3809 groups.

Elaine supported OIG comments on the need for better integration of efforts but cautioned that BLM could not likely hire any more staff. She also noted that she supported the move of the AML and Hazmat programs at HQ to the 200 group from the 300 group and thought this would provide more focus on AML issues at HQ.

#### Arizona (Kingman)

##### K.BLM.Arizona.06 Site Visits

We visited the Kingman field office and adjacent areas.

When we heard about the accident, we requested the ownership status of the mineshaft from the Kingman field office and they reported back that the mineshaft was on a small privately-owned sliver of land within BLM's Windy Point Recreation Area. Because the mineshaft was reported to be easily accessible and media reported thousands of unmitigated mineshafts in the area, the team hypothesized that there were possible easily accessible mineshafts on BLM land in the same area and that it would be prudent to visit the area.

During our visit we observed some immediate physical and environmental hazards that have been both mitigated and not-mitigated: mineshafts in Windy Point Recreation Area, mineshafts outside the town of Chloride, the COD mine northeast of Kingman, the Antler and Boriana Mines southwest of Kingman, hazards among popular ATV routes in the Hualapai Mountains and the Thumb Mine

#### Attitudes / Beliefs and Stigmas

We believe there is a breakdown in trust and communication between the State, District and field, that creates an environment of distrust and secrecy. **One BLM employee told the Department last year that there are "thousands of dangerous abandoned mines"** and was reprimanded by the State Office for making such a statement. This same BLM employee stated that in response to our request for a visit, the State Office told the field office to "tell the truth and only answer the questions the IG asks and tell no more." This same employee also said "it doesn't make any difference to me personally that a dangerous mine opening is on private land. I want to fence them anyway. I was told that Brighter Days was a hazard a multitude of times and now look what happened!"

Another field office employee said that the Antler Mine and Brighter Days mines don't fall within the Saginaw criteria (a mile or less) Do we mean COD?

All BLM employees we interviewed believe the biggest impediment to getting the mines mitigated is funding.

#### Inventory:

We asked how important the inventory was to them and a District official stated, "putting these sites on an inventory is more detrimental to BLM than leaving them off. If we put them on a list we are acknowledging they are a hazard and if we cannot do anything about it because of funding, staffing, etc., then we are held liable." This same District employee said that we can give a recommendation for a targeted inventory but a "perfect inventory with perfect information is not going to fix any holes."

At this time, the Kingman field office does not have a complete inventory of ALL known abandoned mine sites. Kingman does not have a prioritized list of dangerous sites, and they do not provide adequate signage warning to the public via literature, website, signage (need to verify) of AML hazards.

However, the Kingman field office has mitigated xx hazards in the last year, they perform and document site inspections, they request specific funding for projects, they use different methods for mitigating safety hazards (from fencing to bat gates). At the District level, the Kingman field area is included in a prioritized list of physical and environmental hazards. Those priorities were based on visitation and/or proximity to population centers. They did provide a list of abandoned mines that have been mitigated in last ten years (29 projects and 133 features...ranging from signs to bat-gates). District had an accident where the mine was immediately bat-gated (California mine)

**K.BLM.Arizona.08 ATV Death and Mitigation**

- [redacted] drove their ATV into a mineshaft of Labor Day weekend. [redacted] The mine was an inactive (abandoned mine).
- BLM provided barbed wire fencing and the shaft was fenced (4 strand wire) after the accident.
- Warning signs were also posted after the accident.

**Nevada (various sites)**

**K.BLM.Nevada.01 Site Visits**

OIG (Illson and McMullen) visited **Tuscarora** with Deb McFarlane, BLM Elko, on 8/28/07, **Spruce Mountain** on 8/28/07, **Golden Butte** with Lynn Bjorkland, BLM Ely, on 8/29/07, and **Ward** with Lynn Bjorkland on 8/30/07. We selected these sites based on coordination with Chris Ross, BLM State AML lead using a prioritized list of sites (dated 2006) provided by Ross. We tried to concentrate on those sites that were rated High Priority on that list (see attachment "List of Prioritized Sites.pdf" in **J.BLM.06.01 Response to OIG Questionnaire**). One high priority site was so difficult to access that Ross recommended we not visit that site (Johnston Mill). None of these sites presented hazards as dangerous as those OIG observed at Randsburg, Caselton or Virginia City. The King Midas millsite is on BLM land just west of Cherry Creek; BLM did not recognize that the tailings were on BLM land and had never opened a case file on the mill claim since it was pre-FLPMA.

- The Rip Van Winkle mine is ranked as a High priority site with chemical hazards.
- The site reclamation costs are about \$1 million.
- The site is being reclaimed principally for wildlife habitat purposes.
- The site is very remote and located along an intermittently flowing creek.
- USGS has stated that site conditions are such that there is little concern for acid generation or metal releases from the site.
- [Auditor Opinion] BLM has inappropriately prioritized this site and should not be allocating funds to reclaim this site.
- During our trip, Deb noted she had been successful in getting claimants to mitigate safety hazards on their claims by calling them and pointing out their liabilities if someone were to be injured.

**Nevada (Caselton Tailings)**

**Chris Ross notes**

**J.BLM.16 07/20/07 ROD Chris Ross BLM Nevada**

Chris concurred that the physical and environmental hazards are a big problem in Nevada. Chris stated that the environmental hazards are difficult to document, versus a physical hazard such as falling down a hole. Chris stated that getting cancer 30 years from now and not knowing if it was from an environmental contamination or from smoking a pack a day, doesn't exactly help with pinpointing the cause and the valuating the potential risks. So as a result, he said BLM needs something really dramatic, in order to get attention. Chris used Castleton for example and that it's a huge problem and is known, but will take \$10 million to mitigate and BLM's current funding is just a drop in the bucket compared to the cost to fix this one site.

**Nevada (Caselton)**

**K.BLM.Caselton.01 Site Visits**

- tailings are quite extensive (tailings overview.jpg)
- recent OHV tracks on the tailings piles (OHV tracks on tailings.jpg)
- [redacted] dumps and waste left at Oxidor site (dump.jpg and interior room.jpg)
- hazardous waste (haz wste and trash.jpg), e.g. lead-acid batteries
- water pools in the tailings (pond and drums.jpg and Pooled water after recent rain 2.jpg)
- the site is minimally signed and fenced with no indication of risks (Sign at entrance to tailings.jpg)
- CERCLA Engineering Evaluation and Cost Analysis (EECA) presents results on the hazards of the site

We visited with a resident of Panaca who was an avid OHV enthusiast. He noted that he had 4-wheeled on the Caselton tailings with friends as a kid (he was probably 25 now) and he and his friends called the dark and light tailings "cookies and cream." He also noted that he had a well for his family's use in Panaca but had never had it tested. He was concerned that some of the contaminants from Caselton might be impacting his well.

**K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis**

The EECA notes that:

- studies done as early as 1989 (Previous Investigations tab) noted potential concerns at the site.
- high winds in the area can expose visitors to high concentrations of arsenic, lead and manganese
- water in the tailings ponds is very hazardous to humans and wildlife
- failure of tailings dams could severely impact water quality in Meadow Valley Wash
- tailings deposits have been found downstream as far as Meadow Valley Wash
- groundwater in wells near Panaca is assumed to not be impacted by tailings from Caselton Wash (Groundwater tab) but no groundwater sampling has ever been done.
- [Auditor Opinion] The site has been known by BLM to present hazards for over 20 years. BLM has not taken groundwater samples to validate assumptions that groundwater has not been affected by contaminants from the tailings

**K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office** [redacted] and, until 2006, had not addressed any environmental and safety concerns at Caselton **K.BLM.Caselton.04 CERCLA Action Memorandum** [redacted].

**K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office**

- Permanent mitigation actions as defined in the EECA (recontour and cap) **K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis** [redacted] have not been completed at the site.
- Dust needs to be minimized from the tailings as the temporary mitigation action to suppress dust is becoming ineffective.
- Down gradient wells need to be tested to verify assumptions that they are not being contaminated.
- Access to the site needs to be eliminated (better fences, signs, etc) **K.BLM.Caselton.01 Site Photos** [redacted]
- Site should be contoured to minimize ponding of very acid water (less than pH of 2). **K.BLM.Caselton.01 Site Photos** [redacted]

- There have been no AML injuries or fatalities on the Ely Field Office since 1988, at least, according to Dan who arrived at Ely in 1988.
- [Auditor Opinion] BLM should use validity exams to force relinquishment of claims so mitigation can proceed.
- [Auditor Opinion] BLM is "hoping" for new claimant to bring \$ to fix the problem; this "hope" has proven fruitless for the last 2 claimants; how much more should BLM rely on this "hope"?
- [Auditor Opinion] BLM allows claimants to hold mitigation that protects the public hostage to their perceived rights as claimants.

**K.BLM.Caselton.04 CERCLA Action Memorandum**

- BLM prepared an Action Memorandum for a Time-Critical Removal Action at the Caselton Tailings in NV on 11/1/2006. The Action supported efforts to divert surface water from the tailings to minimize off-site transport.
- The diversion action cost about \$460,000 including a contingency of \$41,800.
- The diversion action did not address contamination issues in the tailings or access to the tailings.
- The diversion action did not address any existing contamination in Caselton Wash downstream of the tailings.
- The diversion action occurred in 2006, twenty years after hazards were reported to BLM about the site.
- BLM is negotiating with a claimant to reprocess the tailings, the third time mitigation has been impacted by a claimant **K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office**
- [Auditor Opinion] This site represents another example (with Randsburg) of BLM inaction over extended periods of time to address significant environmental hazards at AML sites.
- [Auditor Opinion] BLM is delaying needed mitigation actions at Caselton in the hope that a claimant seeking to reprocess the tailings will succeed where two other such claimants have failed.

**K.BLM.Caselton.05 Reprocessing Negotiations**

- Lintail contacted the BLM NV State Office who then notified the Solicitor's Office of interest in reprocessing the Caselton tailings.
- It is unclear at what point, or whether, the BLM Ely Field Office has been involved in negotiations.
- BLM has not conducted nor does it plan to conduct feasibility studies of reprocessing of the Caselton tailings.
- BLM will review and technically evaluate the processes proposed by Lintail for such reprocessing.
- BLM believes an agreement with Lintail could save taxpayer dollars and is consistent with the Department's goal of cooperative conservation.

**Nevada (Virginia City)**

**Nevada (Virginia City)**

**K.BLM.VirginiaCity.05 Comstock Lode**

- Comstock Lode in the area of Virginia City was the richest silver deposit in the U.S. and was worked from 1859 to 1921.

**K.BLM.01 Virginia City, NV Population**

City: [Virginia City, NV](#)

[Storey County, NV](#)

Zip code population (2000): 938

Estimated population in 2005: 1,117

Virginia City is a major Nevada tourist attraction.

**K.BLM.Virginia City.03 AML deaths**

- Site of two fatalities in Virginia City in 1996 was an adit of the New Savage Mine that ceased operation in 1983 according to the Arizona Daily Star.
- Site is on BLM land (see Aerial Photo and Map Section below) and was signed with a fence that was bypassed by the victims (Arizona Daily Star Article).
- Site is securely closed currently.
- Signs and fences are not permanent remedies for physical safety hazards and may not adequately protect the public [Auditor opinion].

**K.BLM.Virginia City.02 Cadastral Survey**

The Master Title Plat for an area of Virginia City visited by the OIG (mill tour business and other commercial businesses in trespass) agrees with the BLM ownership overlay shown in [www.geocommunicator.gov](#) and shows the site of interest is on BLM land. **K.BLM.03 Dave Morlan NV Cadastral Survey** According to Dave Morlan, the latest cadastral survey conducted on sections 29 and 32 clearly indicate that the BLM land boundaries on our maps are correct. The latest survey has yet to be finalized, but according to Dave, "for title purposes" the map looks accurate

**K.BLM.Virginia City.01 Trespass Issues**

- Existing historic and new commercial and residential trespass is occurring on BLM land in Virginia City.
- Commercial business are in trespass on BLM land.
- The mill tour business is located inside a dilapidated old mill where the public pays to visit. Trespass at the mill and in the residential areas is exposing the public to potential health and safety issues which could increase BLM's liability. Increased injuries or deaths due to safety or environmental hazards could result.
- The public is being invited to tour an old mill site by a commercial enterprise on BLM land.
- BLM State and Carson City representatives do not actively visit Virginia City and have taken no action regarding trespass issues.
- BLM Carson City representative acknowledges that some action should be taken particularly regarding commercial businesses and new homes in trespass.
- There is disputed ownership in the area between BLM, Storey County and private individuals but BLM has taken no action to resolve these disputes.

[Auditor Recommendation]: Based on our findings regarding trespass in Virginia City and the Rand Mining District **F.02.01 Red Mountain land conveyances**, we believe BLM should: Identify and resolve trespass on AML sites and assess and mitigate hazards associated with these sites.

Terry Neumann email included in workpaper: "Someone probably should go up to this guy's mill and tell him that he should not be conducting paying tours of a mill that is probably unsafe and contaminated. Should it be a geologist like myself, or law enforcement, or reality? The guy will show you a title (Quitclaim deed or title document from Storey Co.), tell you to go screw yourself, and then call the Storey Co. Sheriffs Dept. who would dearly love to escort a federal employee out of town. If someone tries to build a home or business on the public lands these days, we can use our 3715 regulations to put a halt to it, but for these historic mining claims that have been bought and sold for decades or been in families for generations, its a very tough row to hoe. Probably best to sell the land at market price and walk away. And even if we did this, the homeowners would scream all the way to the legislature in Carson City and beyond."

**K.BLM.06 BLM Carson City NV Field Office Manager**

We filed Don Hicks in on the reason for our audit, our findings at Randsburg and the findings from the previous day's visit to Virginia City. We told Don about the first site we visited, which was on BLM land according to the map, but had clear signage warning us of private property and to "keep out." This site had a "tourist mill" operation where tourists pay to visit an old mill site. **K.BLM.Virginia City.01 Trespass Issues** We told Don we were not interested so much in the historic

trespassing issue, but more about BLM's responsibilities on this land should hazardous contamination exist and the new trespassing that appears to be occurring. We stated we have learned there has been very little testing conducted in Virginia City, more so by state or local agencies than by BLM and that it appears BLM does not have any of the testing results that have been done.

We asked Don why this problem in Virginia City has not been addressed.

Don stated that it has not been high on the priority list, as sites like Yerington have been the focus. Don said they are focusing on sites for which existing data exists and besides, no one has done a project proposal for any BLM lands in Virginia City.

Don agreed with Dave Morlan's declaration that the land status in Virginia City is clear, but that "Storey County is a tough nut to crack." Don said that if a community has a concern, they need to step up to the plate and voice them, but he hasn't heard a peep from anyone in Virginia City. Don said the only concern he has received from Storey County or Virginia City is regarding American Flat, regarding concerns over safety and law enforcement of the area. Don said there was some pushing and shoving regarding the high school site. Don did say they have "no data to support that there is no problem with wasterock dumps on Virginia City."

**K.BLM.07 BLM Carson City Field Office - Terry Neumann & Ken Nelson**

It is my opinion (OIG) that we are getting a lot of conflicting information and that BLM's Carson City field office is afraid to step in and take control of the land disputes between Storey County and BLM. BLM's Carson City Field office personnel are hesitant to conduct due diligence to see what existing or forthcoming documentation exists that supports BLM's status as a land owner within city limits. The State Chief of Geographic Services is stating BLM has conducted a thorough survey of Section 29 within Virginia City **K.BLM.03 Dave Morlan NV Cadastral Survey**, but Carson City is stating that the state office has not been able to survey that section. The Carson City field office is stating that there was no mercury use within the city limits, only cyanide which dissipates with UV rays. However, we have received conflicting information that mercury was in fact used in the mills within city limits **K.BLM.Virginia City.04 Sample Results**.

Terry asked Ken Nelson, realty specialist, to come into the meeting. Ken said he was told about yesterday's visit and that it is unclear what land in Virginia City is owned by BLM. Ken showed us the master title plat and stated that "what we see outside of the green area is public land." Ken stated he is very aware of this "historical situation" and that a lot of land is in dispute between Storey County and BLM. Ken said the County claims some of the land but he is unaware of the county selling any of the land that is in dispute. Ken said there is encroachment but he's unaware of title problems. Ken said Storey County has "historically done things their way and that Cadastral has been doing the survey and they haven't been into Section 29. With regard to the site we visited where a mil-tour business was in operation, Ken said he was aware of businesses and houses at this site and that they were on BLM land in trespass **K.BLM.Virginia City.01 Trespass Issues**.

**K.BLM.Virginia City.04 Sample Results**

- Previous sampling efforts by EPA in Virginia City found levels of mercury that exceeded residential occupancy as well as elevated levels of lead in soils that exceed EPA's standards for exposure to children.
- Lack of residential occupants on these sites in 1994 precluded them from being included in EPA's remediation activities under the Carson River Superfund Project.
- Residential, as well as commercial, occupancy is increasing on BLM land in Virginia City.
- BLM has not taken action to sample soils on BLM land near residents (who are trespassing) to determine if remediation is warranted.
- BLM is using EPA data collected over 10 years ago as an excuse to not sample and evaluate potential environmental contamination in Virginia City.

**K.BLM.VirginiaCity.06 Latest Status**

- BLM provided information on what had been done in the past to try to remedy the trespass situation in Virginia City.
- BLM contends that surveys of Section 29 (site of commercial and residential trespass) had not been done.

**K.BLM.VirginiaCity.07 Aerial Photo of Section 29**

BLM Las Cruces provided an aerial photo of Virginia City that highlights in Yellow the land managed by BLM in Section 29 **K.BLM.Virginia City.01 Trespass Issues**.

## Nevada (American Flat Mill)

**K.BLM.American Flat.01 Safety Issues**

- Funding from a PRP allowed demolition in 2006 of an old mill at American Flat that was an eyesore, injuries had occurred and kids liked to hang out. According to BLM, "This is a matter of physical safety. The buildings are a public nuisance and have to be dismantled." The catalyst for the BLM to take action occurred in 2001 when a youngster was seriously injured in a fall from one of the structures, Neumann said. "There is no reason for this to remain a potentially dangerous site," Neumann said.
- At the existing structure shown in the photos above, the mill is clearly an eyesore, someone was killed there on an ATV in 1996 and kids still like to hang out in a dangerous place. This death was not a "catalyst" for BLM action to mitigate safety hazards at the site.
- BLM claims to have signed and fenced the current mill site but this was not evident during OIG site visit.
- BLM also has plans to characterize the site environmentally and to formulate a plan for the site.
- BLM has implemented an agreement with the Storey County sheriff to have his office patrol the site.
- [Auditor Opinion] BLM consider structures at American Flat a pressing issue where a PRP is available to fund mitigation. BLM has not even conducted a PRP search on the existing structures. When a PRP is not readily apparent, matters of public safety receive less attention. BLM's reluctance to mitigate the current structure at American Flats represents a significant failure of the bureau to protect public health and safety. BLM's action to "hire" the county sheriff to patrol the site, while positive, is not an excuse for BLM's failure to mitigate safety hazards.

RENO GAZETTE-JOURNAL

September 8, 2006

[Auditor Note the site described below was demolished by a PRP at BLM's insistence]

Over the next few weeks, the landscape at American Flat will change dramatically. Buildings at a long abandoned mill that once processed gold and silver ore from the Comstock are coming down.

"This is a matter of physical safety. The buildings are a public nuisance and have to be dismantled," said Terry Neumann, geologist and hazardous materials coordinator for the U.S. Bureau of Land Management's Carson City Field Office.

The federal agency prevailed in a legal battle that began in 2002. "There is a responsible party and they're on the hook for \$400,000" in clean-up costs, Neumann said. "They want to keep a low profile but they've agreed to pay for everything." Records on file at the agency show the responsible party is El Paso Corp., which inherited the problem in an acquisition.

[Auditor Note the older site described below is the one that remains on BLM land, was the site of the 1996 ATV fatality, and was visited by OIG]

**Older site to remain**

After the work began, BLM officials said, they received several calls from Comstock residents concerned that another mill, directly to the south, had been targeted for demolition. "Nothing is going to be disturbed at the older site. People in the area have a strong connection to it and it's staying just as it is," Neumann said. At one time, he said, the older site's concrete structures comprised a state-of-the-art cyanide mill. [REDACTED] owner of Mark Twain Bookstore and author of "American Flat: Stepchild of the Comstock," said the older mill was built in the 1920s and operated for several years. The site, a haven for graffiti artists and littered with aluminum cans and other debris, has become a popular party location over the years. Neumann said federal antiquity laws make it very difficult for agencies to dismantle any buildings that are more than 50 years old.

**AML Zone Management**

K.BLM.Arizona.03 AZ Zoned AML Management [REDACTED]

- Zoning of dedicated AML/hazmat positions is an effective way to manage AML programs.
- Separating AML/hazmat duties from 3809 duties allows focus on AML issues.

Bill Harris noted that he had been with the State for about 3 years and had come from the DOD CERCLA program. He was very familiar with CERCLA regulations and the remediation process and had been involved in large CERCLA cleanup projects.

Al Burch provided a writeup for a zoned AML hazmat position and a position description. The position supports the Phoenix and Gila District Offices and their 10 field offices, monuments, and conservation areas. Al noted that zoning of James' position in the Phoenix District was the result of several efforts to effectively deal with AML issues in AZ. He noted that the OIG Saginaw Flash Report provided significant impetus to get this position in place and to more aggressively address AML issues in the state. He also noted that Cathy Wolf-White is a zoned AML person in the Colorado River District. He noted that these zoned positions had no 3809 responsibilities but were focused on AML and hazmat issues. This eliminated any conflicts of responsibility with regard to claimant rights under mining laws and allowed AML staff to focus on needed remediation under CERCLA or other authorities. In Bill and Al's view, zone management is much more effective than having numerous untrained collateral duty staff who spent little time on AML duties.

Al said he does not think there are many post-FLPMA sites in AZ where bonds are inadequate and that the BLM excuse that they do not have the expertise to review company bond proposals is inexcusable.

Al noted that withdrawals were a mechanism to use to eliminate claimant interests in a site but that they were used very rarely. He thought the only withdrawal of an AML site ever done in AZ was for the Tyro mill site, a "scam" mill established by a Eastern European company in an effort to lure investors. Al noted that closures were another way to limit access to lands but that these were typically for emergency situations. He thought that the Saginaw site had been closed using this mechanism. Either withdrawals or closures given BLM law enforcement personnel the authority to issue citations

- BLM management has discouraged identification, evaluation and mitigation of AML hazards.
- Serious safety and environmental issues are present at AML sites on BLM land.
- There is ongoing trespass at sites in California and Nevada that could inhibit mitigation efforts.
- AZ has adopted a "zone management" approach to AML with experienced environmental professionals in charge of AML duties at the state, but more importantly, district level offices. The zoned approach in the Phoenix district appears promising.
- California has adopted a Rapid Assessment Technical Team approach to identifying AML sites with significant hazards in the desert district.

Submission: Submitted William McMullen 07/18/2008 09:32:55 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 07/21/2008 03:27:49 PM

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Virginia City is a major tourist attraction in Nevada according to the source web sites [http //www.chiff.com/travel/nevada.htm](http://www.chiff.com/travel/nevada.htm).

"With much of Nevada a vast desert, it was only the unusually intrepid who explored the territory in the early 1800's. The U.S. obtained the region in 1848 following the Mexican War, and the first permanent settlement was a Mormon trading post near what is now [Genoa](#), Nevada.

Several years later, the state's population grew by the thousands when prospectors streamed into the state following the discovery of the spectacularly rich [Comstock Lode](#) silver and gold deposit in 1859.

Today, tourists by the millions visit the state annually in the hope of striking it rich at world-famous [Las Vegas](#) and [Reno](#) gambling hotels and resorts. Other major Nevada tourist attractions include [Lake Tahoe](#), Lake Mead and [Hoover Dam](#), [Virginia City](#) and Carson City."

**Methodology**

Submission:	Submitted	William McMullen	01/11/2008 09:46:09 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	01/16/2008 08:32:01 AM

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Ron added that if anyone can explain the situation, Dave Morlan, Chief Cadastral Survey can explain it (link to ROD with Dave). Ron stated that mining claims follow the lode and that millsite claims are on the surface. When these areas get patented, you end up with little slivers of BLM land, amongst private land.

John thought that this shows the need for a more accurate survey in Virginia City.

Ron went back to the mitigation of hazards. Ron stated that signage is ineffective and there are a lot of barriers at times to closure, such as cultural feathers and bat presence. The bats in time have migrated to these mines and adits and bat gates are being installed to keep people outside and bats inside.

Submission:	Submitted	Greta Bloomfield	11/02/2007 01:23:52 PM
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## Assignment Workpaper

Prepared by: Sean Pettersen 07/31/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.04  
Program Name: BLM (Site Visits)  
Subject: Fatality at the Goat Basin Mine

Subsection: Audit Step K.4

Origination Doctlink: [REDACTED]

### Purpose

To determine what steps BLM took to mitigate hazards at the Goat Basin Mine and at another site in the same general area where visitors have died.

### Scope

Injuries and fatalities at AML sites

### Source

Information was provided by Luke Sabala, Joshua Tree National Park (760)367-5563

We visited the Goat Basin Mine site in August 2007 with Luke Sabala, Jamie Livingood, BLM-Barstow, and Wayne Bekowki, Volunteer for NPS. The mine was located near the BLM and NPS boundry at Joshua Tree National Park near Twentynine Palms, CA

### Conclusion

The mine site is on BLM land managed the the BLMs Barstow Field Office. The Goat Basin Mine site is not listed on BLM's inventory of abandoned mines nor is has it been prioritized for mitigation. BLM does not have plans to mitigate any of the hazards in the area. There was a barbed wire fence around the opening but it is no longer effective. Remnants of the old fence can be seen in the pictures below. There are no signs in the area warning the public of dangers in the area.

This site had death, should have been a high priority, and wasn't even on the inventory.

There were two U.S. Marines killed in 1976 in a mine a short distance from the Goat Basin Mine. The mine where the Marines died was also on BLM land. The vehicle they were driving fell into an open mine shaft. One of the victims set fire to a tire and apparently both victims died from smoke inhalation. BLM did not have any details about this accident. The information provided below was provided by Wayne Bekowki, Volunteer for NPS who was a former Sheriff in the area.

There were a total of three deaths in the area since 1976 (two Marines and the Goat Basin incident).

The site was identified on a BLM map of the area.

### Details

In [REDACTED] a visitor bypassed a fence barrier around a mine shaft and attempted to lower himself into the shaft using two lengths of chain from the bumper of his truck. The chains slipped and he fell 200 feet to his death (see page one of the attached Word document).



JOTR - Injuries and Fatalities.doc Case Incident Report 1991.pdf

The site is easily accessible by road and is not remote (as was stated by BLM). The mine is located a short distance from Twentynine Palms, CA. The road runs next to the dangerous opening. BLM did little to mitigate the site. There was evidence that the opening was once fenced, but there is little remaining of the fence. According to BLM, the fence was put up after the accident. There were 2 posts remaining and a few strands of barbed wire laying on the ground. This mitigation measure was clearly ineffective. See picture.

K BLM 04 Fatality at the Goat Basin Mine



There were no signs in the area warning the public of the dangers at the site. There was clear evidence that visitors were driving vehicles up the waste rock pile. As they crest the top of the pile, they come within inches of the dangerous opening. A visitor driving over the pile would be blind to the danger ahead. (See pictures) According to BLM, this type of feature is commonly called an "ant trap" because once a person goes over the edge, there is no way to stop from falling into the hole.



(this image shows the scale of the opening. To the left of the people in the photograph is where visitor come over the waste rock pile).



(this image shows the tracks going up the waste rock pile)

According to Jamie Livingood, there are many more opening in the area similar to the Goat Basin Mine. None of the mines in this area have been inventoried and BLM does not have plans to mitigate any of the hazards.

Two U.S. Marines killed in 1976 in a mine a short distance from the Goat Basin Mine. The mine where the [REDACTED] died was also on BLM land. The vehicle they were driving fell into an open mine shaft. One of the victims set fire to a tire and apparently both victims died from smoke inhalation. BLM did not have any details about this accident.

Police Report [REDACTED] filed in Mine Shaft.pdf

(page three of this attachment states that [REDACTED] had completed this post on the above two victims. Neither had suffered any bullet wounds, both victims showed signs of smoke inhalation, and had soot deep in their lungs. This would indicate that both were alive when the fire started, prior to rescue attempt). There was no mitigation performed at this site, however natural erosion has resulted in a collapse and the shaft no longer poses a danger.

**Methodology**

N/A

Submission:

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:47:23 PM

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Dave said he is not sure how to force the issue and that in Storey County's mind, the land is theirs. Dave thinks BLM has subsurface and the County has surface.

Ron asked what the next step would be.

Dave explained that he is waiting for finalization and approval of the survey but other congressional requests have taken priority. Dave said he will talk to Carson City to see what their next steps will be, once Carson City has the survey in their hands.

Ron said they will have to look at the situation and determine what it will take to transfer ownership.

Submission:	Submitted	Greta Bloomfield	11/02/2007 12:44:24 PM
Level 1 Approval:	Approved	William McMullen	11/14/2007 02:41:52 PM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:52:12 PM

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**Record of Discussion**

Prepared by: Greta Bloomfield 09/04/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.06 **Subsection:**  
**Program Name:** BLM (Site Visits)  
**Subject:** BLM Carson City NV Field Office Manager

**Origination Doctlink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Don Hicks	Field Manager	Carson City Field Office, Carson, NV	775.885-6000	don_hicks@blm.gov
John Illson	Auditor	134 Union Blvd, Ste 510, Lakewood CO 80228	303-236-9243	john_illson@doioig.gov
Bill McMullen	Evaluator	134 Union Blvd, Ste 510, Lakewood CO 80228	303-236-9243	william_mcmullen@doioig.gov
Greta Bloomfield	Evaluator	134 Union Blvd, Ste 510, Lakewood CO 80228	303-236-9243	greta_bloomfield@doioig.gov

**Location:** Carson City Field Office

**Date/Time:**

08/01/2007 11:00 AM

**Purpose**

To interview the Carson City Field Manager and get his knowledge and opinions regarding the hazards found in and around Virginia City.

**Scope**

BLM Nevadas physical and environmental hazards related to AML

**Conclusion**

The field manager knew very little regarding any concerns by outside entities regarding BLM AML hazards within Virginia City and that no one has come to him with any problems. He said their primary focus has been cleaning up sites like Yerington and that no one has done a project proposal for Virginia City.

**Summary**

We filled Don Hicks in on the reason for our audit, our findings at Randsburg and the findings from the previous day's visit to Virginia City. We told Don about the first site we visited, which was on BLM land according to the map, but had clear signage warning us of private property and to "keep out." This site had a "tourist mill" operation where tourists pay to visit an old mill site. **K.BLM.Virginia City.01 Trespass Issues** [REDACTED] We told Don we were not interested so much in the historic trespassing issue, but more about BLM's responsibilities on this land should hazardous contamination exist and the new trespassing that appears to be occurring. We stated we have learned there has been very little testing conducted in Virginia City, more so by state or local agencies than by BLM and that it appears BLM does not have any of the testing results that have been done.

We asked Don why this problem in Virginia City has not been addressed.

Don stated that it has not been high on the priority list, as sites like Yerington have been the focus. Don said they are focusing on sites for which existing data exists and besides, no one has done a project proposal for any BLM lands in Virginia City.

Don agreed with Dave Morlan's declaration that the land status in Virginia City is clear, but that "Storey County is a tough nut to crack." Don said that if a community has a concern, they need to step up to the plate and voice them, but he hasn't heard a peep from anyone in Virginia City. Don said the only concern he has received from Storey County or Virginia City is regarding American Flat, regarding concerns over safety and law enforcement of the area. Don said there was some pushing and shoving regarding the high school site. Don did say they have "no data to support that there is no problem with wasterock dumps on Virginia City."

We stated we will be writing a report and this is one of the areas we will be addressing and again we won't focus on the historic trespass issue, but we are also concerned about businesses conducting mine tours on BLM land and how do we stop future encroachment? We also suggested a "sample protocol" be developed to prove there is no problem with BLM lands within Virginia City.

Don mentioned the Desert Research Institute in Reno and the fact they could be a partnership, due to the desert mapping they conduct.

Submission: Submitted Greta Bloomfield 11/14/2007 11:25:24 AM  
 Level 1 Approval: Approved William McMullen 11/14/2007 02:44:12 PM  
 Level 2 Approval: Approved John Illson 04/28/2008 12:52:25 PM

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**Record of Discussion**

Prepared by: Greta Bloomfield 09/04/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.07 **Subsection:** Audit Step K.1  
**Program Name:** BLM (Site Visits)  
**Subject:** BLM Carson City Field Office - Terry Neumann & Ken Nelson

**Origination Doclink:** [REDACTED]

**Participants:**

Name	Title	Office Location	Phone No.	Email Address
Terry Neumann	Geologist/Hazmat	5665 Morgan Mill Rd Carson City, NV	775 885-6155	terry_neumann@blm.gov
Ken Nelson	Realty Specialist	5665 Morgan Mill Rd Carson City, NV	775 885-6155	ken_nelson@blm.gov
John Illson	Auditor	134 Union Blvd, Ste 510, Lakewood CO 80228	303-236-9243	john_illson@doioig.gov
Bill McMullen	Evaluator	134 Union Blvd, Ste 510, Lakewood CO 80228	303-236-9243	william_mcmullen@doioig.gov
Greta Bloomfield	Evaluator	134 Union Blvd, Ste 510, Lakewood CO 80228	303-236-9243	greta_bloomfield@doioig.gov

**Location:** Carson City Field Office, Carson City Nevada

**Date/Time:**

08/01/2007 01:00 PM

**Purpose**

Determine if BLM performs and maintains documentation on site inspections and re-inspections of high priority sites including those with prior mitigation.

**Scope**

BLM's Abandoned Mine Lands program and related inspections for environmental sites, at Carson City

**Conclusion**

It is my opinion that we are getting a lot of conflicting information and that BLM's Carson City field office is afraid to step in and take control of the land disputes between Storey County and BLM. BLM's Carson City Field office personnel are hesitant to conduct due diligence to see what existing or forthcoming documentation exists that supports BLM's status as a land owner within city limits. The State Chief of Geographic Services is stating BLM has conducted a thorough survey of Section 29 within Virginia City K.BLM.03 Dave Morlan NV Cadastral Survey [REDACTED], but Carson City is stating that the state office has not been able to survey that section. The Carson City field office is stating that there was no mercury use within the city limits, only cyanide which dissipates with UV rays. However, we have received conflicting information that mercury was in fact used in the mills within city limits K.BLM.Virginia City.04 Sample Results [REDACTED].

**Summary**

We asked Terry for documentation of inspections for the sites we visited in Virginia City. Terry stated the only inspections he has are for 3809 compliance and that they don't actually go out and do environmental inspections. Terry said they do some sampling and that he has "reams of analyses for different sites."

Terry stated that most of the mines we visited are on patented ground and that's why BLM doesn't do sampling.

We asked Terry if BLM Carson City has an AML Environmental Inspection Program and Terry stated, " I have a lot of files in file cabinets."

Terry asked Ken Nelson, realty specialist, to come into the meeting. Ken said he was told about yesterday's visit and that it is unclear what land in Virginia City is owned by BLM. Ken showed us the master title plat and stated that "what we see outside of the green area is public land." Ken stated he is very aware of this "historical situation" and that a lot of land is in dispute between Storey County and BLM. Ken said the County claims some of the land but he is unaware of the county selling any of the land that is in dispute. Ken said there is encroachment but he's unaware of title problems. Ken said Storey County has "historically done things their way and that Cadastral has been doing the survey and they haven't been into Section 29. With regard to the site we visited where a mill-tour business was in operation, Ken said he was aware of businesses and houses at this site and that they were on BLM land in trespass [REDACTED] K.BLM.Virginia City.01 Trespass Issues [REDACTED]."

John mentioned the likelihood some of the dumps in Virginia City could be hazardous and Ken replied that the "dumps are part of the national historic landscape."

We asked to see the file of Virginia City High School's indemnification documentation.

We asked Ken if he had anything else to add. Ken stated this is the "most complex land pattern issue I have ever dealt with, and it's one of those typical local government vs federal government issues."

Regarding the piles in Virginia City, Terry stated people have been trying to characterize the piles for years and years and lot of agencies have sampled them, but not BLM, but that's because the piles are on private land. When a homeowner buys something, Terry said they want to ensure its okay so the homeowners have sampling done, especially if they want to get a loan from the bank.

Terry said that most of their AML sites are elsewhere, not in Virginia City. Terry said that Veta Grande is leaching cyanide into domestic wells and that they had to use CERCLA to get El Paso Corp to back up the cleanup of American Flats.

Terry said the relationship with Storey County isn't very good and yes, there are some properties in trespass and that Cadastral does not want to go there. Terry said "there have never been cancer clusters or people complaining."

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

K BLM.07 BLM Carson City Field Office - Terry Neumann & Ken Nelson

John said "let's face it. It's BLM land. BLM should be taking the lead to ensure the land is safe." We went on to ask whether or not the County would be receptive to an initiative to test. Terry said he "didn't think so." Terry said the mills in town use cyanide which dissipates with ultraviolet exposure. Terry said the 6-mile canyon areas used mercury but that's below Virginia City.

Submission:	Submitted	Greta Bloomfield	01/09/2008 02:16:58 PM
Level 1 Approval:	Approved	William McMullen	01/09/2008 05:36:32 PM
Level 2 Approval:	Approved	John Illson	04/28/2008 12:52:36 PM

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**In Progress Edit:** Greta Bloomfield/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 09/06/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.American Flat.01                      Subsection:  
Program Name: BLM (Site Visits)  
Subject: Safety Issues

Origination Doctlink: ■

**Purpose**  
Site visit to American Flat Mill to document physical safety hazards.  
Article on demolition of one mill at American Flat found at [http://www.blm.gov/style/medialib/blm/wo/MINERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/aml/aml\\_news Par 56536.File dat/BLM\\_DemolishAmericanFlatMill.pdf](http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/aml/aml_news Par 56536.File dat/BLM_DemolishAmericanFlatMill.pdf) and attached:



BLM\_DemolishAmericanFlatMill.pdf

**Scope**  
BLM AML physical safety issues.

**Source**  
Photos taken by OIG during site visit:



inside mill building 1 small.JPG



inside mill building floor small.JPG



■ inside mill building floor hole small.JPG



inside mill building debris.JPG

■ Photo of holes in second floor of mill where people could fall through



inside mill building small.JPG

■ Photos of exteriors of dilapidated mill structures at American Flat



exterior 1 small.JPG



exterior 2 small.JPG

Email from Terry Neumann, BLM Carson City shown in Detail section.

Article from Virginia City News found at <http://www.virginiacitynews.com/County.html> and shown below.

Topo map of area around American Flat found at <http://www.geocommunicator.gov/NILS-PARCEL2/map.jsp?MAP=MC> and shown in Details below:



Article "The History of the Crookedest Short Line in America, the Virginia and Truckee Railroad" describing American Flat mill found at <http://www.vcnvada.com/history/Vnthist.htm> and attached: American flat cyanide.pdf



Page 3 from Nevada Dept of Minerals 2006 report summarizing AML incidents in Nevada and shown below. Full report is attached: Nevada aml report 2006.pdf

### Conclusion

- Funding from a PRP allowed demolition in 2006 of an old cyanide mill at American Flat that was an eyesore, injuries had occurred and kids liked to hang out. According to BLM, "This is a matter of physical safety. The buildings are a public nuisance and have to be dismantled." The catalyst for the BLM to take action occurred in 2001 when a youngster was seriously injured in a fall from one of the structures, Neumann said. "There's no reason for this to remain a potentially dangerous site," Neumann said.
- At the existing structure shown in the photos above, the ■ mill is clearly an eyesore and a deteriorating structure that presents significant safety hazards, a teen was killed there on an ATV in 1996 while trying to climb a set of stairs, and kids still like to ■ hang out in a dangerous place. This death was not a "catalyst" for BLM action to mitigate safety hazards at the site.
- ■ BLM claims to have signed and fenced the current mill site but this was not evident during OIG site visit. During our visit, access to the site was unrestricted. ■
- BLM also has plans to characterize the site environmentally and to formulate a plan for the site.
- BLM has implemented an agreement with the Storey County sheriff to have his office patrol the site.
- BLM has offered that the site's historic nature, lack of funding, local opposition and difficulty in restricting access as reasons for BLM inaction at American Flat mill.

- **[Auditor Opinion]** BLM consider structures at American Flat a pressing issue when a PRP is available to fund mitigation. BLM has not even conducted a PRP search on the existing structures. When a PRP is not readily apparent, matters of public safety receive less attention. ■ BLM's reluctance to mitigate the current structure at American Flats represents a significant failure of the bureau to protect public health and safety. BLM's action to "hire" the county sheriff to patrol the site, while positive, is not an excuse for BLM's failure to mitigate safety hazards.
- **[Auditor Opinion]** BLM should use signs, fences, road closures or other means to restrict access to the site and protect the public until the structure is demolished. These temporary precautions could prevent injuries and fatalities.

**Details**

■ Description of American Flat cyanide mill from "The History of the Crookedest Short Line in America, the Virginia and Truckee Railroad."

**American Flat mill history**

In 1922, the United Comstock Mining Company built a large cyanide mill at American Flat that still stands today, and once again the V & T experienced a short rejuvenation. But the mines in Virginia City were depleted and in 1924 the straight passenger service to Virginia City was down graded to mixed trains after 55 years of continual service. In 1926 the American Flat Mill closed and left the V & T again running on the deep and generous pockets of its owner, Ogden Mills. In 1935 The Crown Point trestle in Gold Hill, the famous symbol of the Comstock, was torn down to mine the rich ore beneath.

Topo map of area shown below with arrow added by OIG to indicate site of American Flat. Note scale at bottom of map.

**Topo Map**

■ OIG visited the site about 4 miles southwest of Virginia City with Terry Neumann and Chris Ross on 7/31/2007. As shown in the Source photos, the American Flat cyanide mill site ■ (under Carson City Field Office) is covered with graffiti, ■ dangerous holes in the floors, and large dilapidated structures that present safety hazards. ■ According to Terry Neumann (see email below), BLM Carson City, who accompanied us on the tour, the site is routinely used by kids as a party site. Terry noted that ■ a person was killed in an ATV accident inside the mill in 1996. BLM has tried fencing the access roads to the site without success. Even the local sheriff, according to Terry, cannot keep people away from the site. ■ Terry also noted that the site is in the Virginia City National Historic District (due to its being the largest concrete structure constructed in the early 1920's) and that this ■ "historic value" has greatly complicated any BLM efforts to demolish the site to remove physical safety hazards. Terry did note that BLM was taking action in the next month to block roads leading to the site and to award contracts to evaluate cultural resources at the site and to perform environmental characterization of the site, all perhaps in preparation for demolition. In addition, a PRP search will be conducted with FY2008 funding.

Although Nuemann's email at the tab below indicates that a ■, the Nevada Division of Minerals 2006 report (below) states that a ■ We were told by Neumann during our site visit that the person was trying to climb a set of stairs inside the structure when the ATV flipped over killing the person. ■

Table 1. Reported AML Incidents through 2006.

NEVADA DIVISION OF MINERALS Reported Abandoned Mine Lands Incidents		
Date	Incident	County
		Carson City
		Clark
		Clark
		Lyon
		Lyon
		Lyon
		Clark
		Nye Esmeralda
		Humboldt
		Douglas
		Washoe
		Lyon
		Douglas
		Humboldt
		Storey
		Humboldt
		Clark
		Storey
		Storey
		Mineral Esmeralda
		Douglas
		Clark
		Lander
		Nye
		Storey
		Pershing
		Storey
		Clark
		Humboldt
		Clark
		Clark
		Carson City
		Washoe

Neumann Emails

Terry Neumann/CCFO/NV/BLM/DOI@BLM  
08/23/2007 02:58 PM

To: William McMullen/DENOIG/DOI@OIG@DOI  
cc: Don Hicks/CCFO/NV/BLM/DOI@BLM, Linda J Kelly/CCFO/NV/BLM/DOI@BLM  
Subject: Re: Info on active claims in Virginia City

riding his ATV inside the ruins. Ambulances and Care Flights [e.g., helicopter flight-for-life, description added by auditor based on conversation with Neumann] have been called to the site numerous times throughout the years. It is estimated that the site receives over 50 visitors a week, mostly school age kids. No lawsuits have resulted from the fatality or injuries.

Past and present BLM management have been made aware of the issues at American Flat, and the probability of future fatalities and injuries to visitors. CCFO has fenced the site and posted warning and no trespass signs, but they are torn down soon after they are put up. Even though we have taken measures to guard and warn per Nevada State landowner immunity laws, we will be taking additional measures in the near future. Beginning next month, both access roads going into the site will be scarified and bermed to restrict access. We are currently in the process of awarding a contract for a cultural survey of the site, and we'll be performing environmental characterization sampling to clear the way for possible future demolition or disposal. A PRP search contract will be let with FY08 funding. This 1922-era mill has been declared eligible for the National Register of Historic Sites and is an element of the Virginia City National Landmark, which has always been a roadblock in reclaiming the site (as well as the estimated demolition cost of \$750K-\$2 million, opposition from local interest groups, and a lack of interest from management).

The reclaimed mill site I showed you before we went down to the old mill was demolished last Fall because of public safety issues (a kid fell off one of the mill buildings and was seriously injured). That mill was under active millsite claims and the claimant refused to fence or otherwise restrict access to the site. This office used our 43 CFR 3809 and 3715 regs to resolve compliance issues and take over ownership of the mill buildings, a process that took years to work its way thru the IBLA court system. We also used our CERCLA authority to bring back a responsible party to reclaim the site.

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG  
08/22/2007 06:01 AM

To: Terry Neumann/CCFO/NV/BLM/DOI@BLM@DOI  
cc  
Subject: Re: Info on active claims in Virginia City

Terry, I understand the difficulties regarding trespass. Perhaps of more concern than historic structures are the new homes we saw being constructed on BLM land in VC. It seems that the problem just keeps expanding.

I am also interested in any information you have regarding the ATV death at American Flat. Mike Visher said he had no info other than that the killed was on an ATV tour of some kind. If you could send any info you have (newspaper articles, BLM accident reports, etc) that would be helpful. Thanks.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

While the current mill site discussed above languishes, another mill located to the northwest was dismantled in 2006 according to an article in the Reno Gazette-Journal. In the article, the current mill structure is referred to the "older site". Ironically, the concerns expressed about the site demolished in 2006 are similar to those evident at the "older site", that is, it is an eyesore, a fatality has occurred there, and "it's a dangerous place where kids go to fool around and hang out." (quote about the demolished site but equally true of the "older site") Neumann notes about the older site that "Nothing is going to be disturbed at the older site. People in the area have a strong connection to it and it's staying just as it is." This historical attachment and the concerns Neumann notes about dealing with historic structures put public health and safety in a secondary position.

BLM took action to demolish the site in 2006 when they found a Potentially Responsible Party who would pay the costs. However, according to Neumann, "This is a matter of physical safety. The buildings are a public nuisance and have to be demolished."

The current structure certainly is a matter of physical safety and a public nuisance, but BLM's failure to act without a PRP funding source indicates the real priority of safety hazards to BLM [auditor opinion]. It is only in 2008 that BLM even plans to conduct a PRP search on the current site. Neumann also noted, besides lack of funding and the site's historic nature, opposition to demolition exists within the local and state community. He also noted that it is quite difficult to restrict access to the site which is one of the reasons BLM has contracted with the Storey County Sheriff to patrol the site (see article below).

#### Newspaper Articles

Public safety prompts  
BLM to demolish  
American Flat mill  
Tim Anderson (TANDERSON@RGJ.COM)  
RENO GAZETTE-JOURNAL  
September 8, 2006

Over the next few weeks, the landscape at American Flat will change dramatically. Buildings at a long abandoned mill that once processed gold and silver ore from the Comstock are coming down.

"This is a matter of physical safety. The buildings are a public nuisance and have to be dismantled," said Terry Neumann, geologist and hazardous materials coordinator for the U.S. Bureau of Land Management's Carson City Field Office. After a complicated ownership history and several years of legal battles over the 45-acre Storey County site, the federal government secured ownership of the structures. "In a few weeks, this will look completely different," Neumann said while looking at the demolition progress last week. After the multi-story mill structures -- some as high as 60 feet -- are brought down and steel and timber are salvaged, Neumann said what's left will be buried in place as part of reclamation work. Later, the site will be revegetated. The former mill, about four miles northeast of the Carson City line, is in the center of American Flat -- a site with a mining history dating to 1859. "But this particular mill site has no historical significance. It's been a problem and an eyesore for years," said Joe Curtis, Storey County's emergency management director and Virginia City's volunteer fire chief. "We've had to respond to several fires over the years and it's a dangerous place where kids go to fool around and hang out."

#### Youth injured in fall

The catalyst for the BLM to take action occurred in 2001 when a youngster was seriously injured in a fall from one of the structures, Neumann said. "There's no reason for this to remain a potentially dangerous site," Neumann said. "The mill hasn't operated since 1980." He and Curtis said a number of "squatters" have camped out at the former mill over the past quarter-century. "On one occasion, five 30-foot-high redwood settling tanks were set on fire. It took us days to get the fires out," Curtis said. There have also been rumors that the site, on BLM land, was used as a meth lab. Houston Oil & Minerals formerly operated the mill, trucking in ore from a nearby mining pit. In more recent years, Neumann said an operation called Comstock Ore Buyers claimed to have acquired the buildings at auction. But he said no proof was provided. "At one time, the claimant was using the mill as a residence," Neumann said.

#### Legal struggle

The federal agency prevailed in a legal battle that began in 2002. "There is a responsible party and they're on the hook for \$400,000" in clean-up costs, Neumann said. "They want to keep a low profile but they've agreed to pay for everything." Records on file at the agency show the responsible party is El Paso Corp., which inherited the problem in an acquisition. Neumann said samples of the soil in the tailings impoundment and water downslope from the old mill will be tested beginning later this year for evidence of potentially dangerous chemicals. Any work needed on the tailings will be completed next year, Neumann said. He said a preliminary examination of the soil shows small amounts of cyanide that aren't considered a health hazard. The chemical is used to separate gold and silver from ore.

#### Older site to remain

After the work began, BLM officials said, they received several calls from Comstock residents concerned that another mill, directly to the south, had been targeted for demolition.

■ "Nothing is going to be disturbed at the older site. People in the area have a strong connection to it and it's staying just as it is," Neumann said. At one time, he said, the older site's concrete structures comprised a state-of-the-art cyanide mill. Curtis, owner of Mark Twain Bookstore and author of "American Flat: Stepchild of the Comstock," said the older mill was built in the 1920s and operated for several years. The site, a haven for graffiti artists and littered with aluminum cans and other debris, has become a popular party location over the years. Neumann said federal antiquity laws make it very difficult for agencies to dismantle any buildings that are more than 50 years old.

Virginia City News article notes that BLM has implemented an agreement with the Storey County sheriff to patrol American Flat.

### Storey to get \$5,000 to patrol BLM land

The commissioners approved an agreement with the Bureau of Land Management to provide law enforcement on BLM land in American Flat for \$5,000.

Storey County Undersheriff Bruce Larson told the Storey County Commissioners that the Sheriff's Department already provided the service.

"That's something we do already," he said. "We will provide patrols on three heavy-use weekends, put staff out there to enforce state and county laws. If federal law is broken, we make a report."

Larson said there had always been a problem covering that area and the agreement will clarify what department is responsible.

Mitigation actions at American Flat J.BLM.06.01 Response to OIG Questionnaire ■

#### Mitigation Actions

4. For known injuries and fatalities, what has your BLM field office done to mitigate safety risks at the sites?

At the HOM Mill, a severe injury from a fall from a mill building prompts BLM to take measures to move forward with building demolition.

There have been injuries and one fatality at the historic American Flats Mill located near Virginia City. BLM has posted the area of the mill buildings, facilities with no trespassing signs and fencing was put around the buildings to keep folks out of the deteriorating buildings. BLM Law Enforcement and county sheriff officers periodically patrol the area to ensure that folks are keeping out of the buildings and that there are no illegal activities at this site.

5. Does your BLM field office perform and maintain documentation on site inspections and re-inspections of high priority AML sites including those with prior mitigation?

Yes, if the site is associated with an inactive mining plan of operations, then inspections are performed and inspection reports are kept in the associated case file. The Nevada Department of Environmental Protection may also conduct periodic site inspections of these types of sites.

Scheduled monitoring and environmental sampling is conducted at Veta Grande for cyanide contamination; Perry Canyon for acid mine drainage; HOM Mill for cyanide contamination. Gooseberry Mine/Mill for ongoing characterization; historic American Flats Mill will have a complete environmental characterization performed in late August 2007.

6. Has your BLM field office closed public roads or trails to limit public access to dangerous old mining structures and mine openings?

Yes, public access was restricted to the buildings at the historic American Flats Mill. BLM intends to reclaim the access roads to this mill site in fall 2007.

9. Does your BLM field office have any documented plans to mitigate the highest risk sites? (i.e. risks assessment, mitigation required and cost estimates). If not, why not? If so, please provide the plans.

A plan for addressing mitigation of the historic American Flats Mill site is currently being formulated. Environmental characterization is scheduled for August 2007 utilizing BLM 1640 and 1010 program funds. Estimated sampling cost of \$8,000.

10. Has your BLM field office designated or determined whether any mine openings have historic value? What is the criterion for designating an opening as historic?

Yes, the historic American Flats Mill should be evaluated for eligibility for entry to the National Register of Historic Places (NRHP). The Comstock Historic District (Virginia City) lies within the CCFD management boundary. Pursuant to the NRHP, the following criteria are usually cited: Criterion A (events that have a significant contribution to history); Criterion B association with lives of persons significant in the past; Criterion C distinctive characteristic of type period of method of construction that represent significant or distinguishable entity/mining architecture; Criterion D (data likely to yield information important in mining history).

11. Does your BLM field office take any action to encourage site visits (i.e. site identification on visitor publications) and do they ever mitigate hazards at those sites?

At the historic American Flats Mill, the signs warn people not to trespass into the deteriorating buildings, but encourage taking photographs of the structures.

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#### Methodology

Reviewed sources and documented site during site visit.

Submission:	Submitted	William McMullen	05/05/2008 03:08:10 PM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	06/02/2008 02:03:34 PM

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visit. ■ no samples had been taken of the tailings to determine the nature and extent of any contamination. Steve plans to fence the sites (has procured fencing material) but has been delayed by the necessity of documenting a NEPA categorical exclusion for fencing activities. ■ There are also deteriorating structures at the mills that could present safety hazards.

We also visited the Moon Mountain mill site in Quartzsite, a small (few acres) site near a school on the north side of town. The site has been remediated to some extent (concrete tanks were removed, but contaminated soil needs to be removed) and a fence has been installed. Steve noted that expected costs were about \$300k to remove the soil if it could be stabilized and placed in a regular landfill but the costs would be about \$500k if the soil had to be disposed in a hazardous materials landfill.

Steve noted that he has worked successfully with claimants to install fencing or bat gates to restrict access to claimed AML sites. In some cases, he provides a key to a locked fence or bat gate to the claimant. ■ He also noted that he has successfully used concrete bat gates ■ (instead of fabricated steel gates) for open shafts and that these cost about \$2500. They are built with a small crack at the base to allow bats, owls and small mammals to enter the shaft.

[Quartzsite photos](#)



Securid Q mtn mill site and Tysun clearance.JPG moon mtn mill site partially remediated.JPG Q mtn mill.JPG Q mtn mill tailings.JPG Q mtn mill tailings erosion.JPG Q mtn mill\_tailings\_residences.JPG

**Methodology**

Viewed AML sites and noted discussions with BLM staff.

Submission:	Submitted	William McMullen	05/05/2008 03:07:28 PM
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**Record of Discussion**

Prepared by: William McMullen 10/24/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.Arizona.03                      **Subsection:**  
**Program Name:** BLM (Site Visits)  
**Subject:** AZ Zoned AML Management

**Origination Doclink:** ■

**Participants:**

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Bill Harris	BLM State AML Lead	BLM State Office	602.417.9348	William_Harris@blm.gov

**Location:** BLM State Office, Phoenix, AZ

**Date/Time:**  
 09/20/2007 08:00 AM

**Purpose**  
 Discuss AZ AML program and zoned AML positions.

**Scope**  
 AZ AML Program.

- Conclusion**
- Zoning of dedicated AML/hazmat positions is an effective way to manage AML programs.
  - Separating AML/hazmat duties from 3809 duties allows focus on AML issues.

**Summary**



AZ AML zoned position description.PDF

Bill noted that he had been with the State for about 3 years and had come from the DOD CERCLA program. He was very familiar with CERCLA regulations and the remediation process and had been involved in large CERCLA cleanup projects. ■

Al provided a writeup for a full-time zoned AML hazmat position and a position description as shown in the above attachment ■ . Page 2 includes an introduction for the position. The position supports the Phoenix and Gila District Offices and their 10 field offices, monuments, and conservation areas ■ in both AML and hazmat issues. Al and Bill both noted that a zoned management position for AML was more effective in that a full-time AML/hazmat person could focus on AML duties and have no conflicts with surface management duties. They also noted it was critical to have a trained, experienced person in the AML role who understood AML issues including mitigation of safety and environmental hazards. ■ In their view, this was much more effective than having numerous untrained collateral duty staff who spent little time on AML duties. ■ J.BLM.31 Time Charged to AML Program ■

ENVIRONMENTAL PROTECTION SPECIALIST GS-028-12

INTRODUCTION

This position is located at the Phoenix District Office, but is the zoned program *lead* position responsible for the Bureau of Land Management (BLM) Hazardous Materials Management (HMM) program in both the Phoenix and *Gila* Districts. The Hassayampa, Lower Sonoran Field Offices, Agua Fria Monument and Sonoran Desert Monument offices comprise the Phoenix District for purposes of hazardous materials management. The Gila District is comprised of the Safford Field Office, the Tucson Field Office, the Gila Box National Conservation Area (NCA), the San Pedro NCA, Las Ciencas NCA and the Ironwood National Monument. The incumbent performs duties throughout both Districts including the cities of Phoenix (and the surrounding metropolitan area) Safford, Tucson, and Sierra Vista and will *deal* with extremes such as highly urbanized landscapes to extremely *rural* areas. The incumbent will be confronted with issues that involve situations concerning realty actions, mining claims, industrial accidents, illegal dumping and border issues with the U.S. and Mexico border.

Al and Bill noted that AML sites in AZ are identified by local field offices and priorities are set by these offices. They noted that the State Mine Inspector, using BLM funds in part, inventoried and ranked AML sites in the mid -1990's and that any sites scoring greater than 27 on the State system were to be addressed. About that time, they also noted that BLM stopped any support for or additional effort to inventory AML sites. Currently, they are working with James Maes to review these old records to identify high-priority sites from a zone perspective. Bill noted that he was in the process of preparing an AML action plan for future AML work.

Al noted that zoning of James' position in the Phoenix District was the result of several efforts to effectively deal with AML issues in AZ. ■ He noted that the OIG Saginaw Flash Report (OIG Flash Report No. C-IN-MOA-0013-2005, *Public Safety Issues at Saginaw Hill Property, Bureau of Land Management*, March 2005) provided significant impetus to get this position in place and to more aggressively address AML issues in the state. ■ He also noted that Cathy Wolf-White is a zoned AML person in the Colorado River District. He noted that these zoned positions had no 3809 responsibilities but were focused on AML and hazmat issues. This eliminated any conflicts of responsibility with regard to claimant rights under mining laws and allowed AML staff to focus on needed remediation under CERCLA or other authorities.

Al said he does not think there are many post-FLPMA sites in AZ where bonds are inadequate and that the BLM excuse that they do not have the expertise to review company bond proposals is inexcusable.

Al noted that withdrawals were a mechanism to use to eliminate claimant interests in a site but that they were used very rarely. He thought the only withdrawal of an AML site ever done in AZ was for the Tyro mill site, a "scam" mill established by a Eastern European company in an effort to lure investors. Al noted that closures were another way to limit access to lands but that these were typically for emergency situations. He thought that the Saginaw site had been closed using this mechanism. Either withdrawals or closures given BLM law enforcement personnel the authority to issue citations.

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**Record of Discussion**

Prepared by: William McMullen 10/24/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.Arizona.04                      **Subsection:**  
**Program Name:** BLM (Site Visits)  
**Subject:** Exit Conference

**Origination Doclink:** [REDACTED]

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Representatives on phone from district and field offices				

**Location:** BLM State Office, Phoenix, AZ

**Date/Time:**

09/20/2007 10:00 AM

**Purpose**

Review OIG site visits to Arizona with BLM State and Field Office staffs.

**Scope**

OIG site visits to AML sites in AZ.

**Conclusion**

- BLM AZ supports better integration across all BLM entities of AML activities.

**Summary**

John reviewed both our visit and Greta and Sean's visit to the Kingman area. He noted that we visited three sites in the Phoenix District (Wickenburg, Octave and Quartzsite) and that none of these sites appeared to present as significant an environmental hazard as sites we had visited in CA and NV. He noted that we were impressed with the "zoned" AML approach being used in AZ and would likely comment on that in our report. John also noted that we planned to address the issue of AML integration of efforts at all levels including the 3809 groups.

Elaine supported OIG comments on the need for better integration of efforts but cautioned that BLM could not likely hire any more staff. She also noted that she supported the move of the AML and Hazmat programs at HQ to the 200 group from the 300 group and thought this would provide more focus on AML issues at HQ.

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K BLM.Arizona.05 Entrance Conference

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## Assignment Workpaper

Prepared by: Greta Bloomfield 10/31/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Arizona.06

Subsection: Kingman

Program Name: BLM (Site Visits)

Subject: Site Visits

Origination Doctlink: [REDACTED]

### Purpose

To go to Kingman and determine if physical and environmental hazards exist

### Scope

BLM Kingman Field District's management and execution of AML activities

### Source

- Discussions with Bernadette Lovato (Lake Havasu District Office), Don McClure (Kingman FO) and Paul Misiaszek (Kingman FO) during site visits to various mine features in the Kingman district.
- Our own visual observations during the site visits to mine features in the Kingman district.
- Photographs taken by auditors during site visits.

### Conclusion

Kingman, like many areas, has a lot of physical and environmental hazards and many of the highest priority hazards are being addressed, though many hazards remain un-mitigated. We found open shafts next to the main road that runs through the Windy Point National Recreation Area [REDACTED], dangerous headframes at the COD mine [REDACTED], large potential environmental hazards at the Antler [REDACTED] and COD mine, as well as the Borianna mine [REDACTED].

There is a lack of trust and communication among State, District and the field. One employee told the Department last year there are thousands of dangerous AML lands and he was scolded by the State for making such a statement. The field office told us that in response to our visit, the State Office told them to "tell the truth and only answer the questions the IG asks and tell no more." [REDACTED]

Another field employee said that the potentially hazardous Antler Mine does not fall within the Saginaw criteria. All BLM Employees we interviewed believe the biggest obstacle to mitigating and remediating mine sites is funding. [REDACTED]

Lastly, the field office is maintaining a different inventory than the District office. And the District office made the comment that "putting these sites on an inventory is more detrimental to BLM than leaving them off. If we put them on a list we are acknowledging they are a hazard and if we cannot do anything about it because of funding, staffing, etc., then we are held liable." [REDACTED]

### Details

#### Kingman, Arizona

We visited the Kingman field office and adjacent areas, after two sisters recreating outside Chloride, Arizona drove their ATV into a 125 foot mineshaft over [REDACTED]. The [REDACTED] were stuck in the shaft overnight before being rescued the next morning though sadly, one [REDACTED] did not survive and the [REDACTED] has suffered extensive injuries.

When we heard about the accident, we requested the ownership status of the mineshaft from the Kingman field office and they reported back that the mineshaft was on a small privately-owned sliver of land within BLM's Windy Point Recreation Area. Because the mineshaft was reported to be easily accessible and media reported thousands of unmitigated mineshafts in the area, the team hypothesized that there were possible easily accessible mineshafts on BLM land in the same area and that it would be prudent to visit the area.

During our visit we observed some immediate physical and environmental hazards that have been both mitigated and not-mitigated: mineshafts in Windy Point Recreation Area, mineshafts outside the town of Chloride, the COD mine northeast of Kingman, the Antler and Borianna Mines southwest of Kingman, hazards among popular ATV routes in the Hualapai Mountains and the Thumb Mine outside of such and such.

### Physical Hazards

#### Windy Point NRA

The Windy Point National Recreation Area is just outside the town of Chloride, north of Kingman. [REDACTED] There is a campground, a popular hiking trail and many rough roads throughout the area. Though we drove as close as possible, we were not able to see the accident site, due to the fact it was on private land and we adhered to BLM's policy not to go onto private land without permission. The Cerum Peak Trailhead is a short distance from the mine accident. We saw no signs at or near the trailhead, just down the trail or anywhere on the road through the NRA warning of the hazards with AML in the area. We also did not see any warning signage at the windy point campground, the primary campground in the area.



The image above is the mine shaft the [REDACTED] fell into. The memorial is [REDACTED]. The image was purchased from APImages for use in our report (see attached receipt for the image).



010908365467.pdf

Driving back from the accident site to Chloride, we saw some mine shafts within a few feet from the road.



One of the shafts, partially fenced, was at least a hundred feet deep (see picture) but the public would still have easy access.



The second shaft, about 15-20 feet from the road, was not fenced off and BLM estimated the shaft to be at least 200 feet deep.



In our opinion, there is nothing preventing someone who goes off the road, from falling into the mine on an ATV, bicycle, motorcycle etc... (attach pictures).

#### **Other BLM Land Outside Chloride**

Near Chloride, we went to two drive-up mitigated physical sites just outside the town of Chloride. BLM had erected 4-strand barbed wire fences in 2007. Each shaft had a "stay out stay alive" sign affixed to the barbed wire. According to information provided by BLM, there were five other shafts that had been fenced in that area and they were all fenced in 2007.

#### **COD Mine Northeast of Kingman in Cerum Mountains**

We went to the COD mine northeast of Kingman with permission to access the mine from private land. The COD potentially has both safety and environmental hazards. The private land owner who lives directly below the mine believes his well water is contaminated by the COD mine.



The COD mine consists of a bunch of buildings and eroded tailing piles. Barrels of environmental contaminants have recently been removed. There were signs that looters have come up to steal copper wiring. BLM

contacted the claimant several times in 2005 to notify claimant of refuse, abandoned vehicles, theft and vandalism, especially in dangerous areas of the property. In 2007, the claimant tack welded a steel plate over the mine shaft, where a lot of the wiring was removed. The shaft is estimated to be over 800 feet deep. BLM noted in their file dated Sept 5, 2007 that upon an inspection in late august, the reclamation (i.e. tack welding) had been completed. However during our site visit, the plate had been removed. This is a big plate. This is a concern mainly because looters have been descending an old wooden dilapidated latter to get to the copper wiring in order to remove it. The ladder is estimated to not go down the full length of the shaft. BLM and the claimant were in agreement to install the plate, to prevent this dangerous situation.



Need to clarify the barrel situation i.e. environmental status versus physical status.

#### **Thumb Mountains**

Example of BLM trying to work with claimant to make it safe. This particular mine is privately owned but an extremely dangerous and attractive hazard. Big headframe...hole is very deep, crazy guy in trailer up above, dudes that own it are being cooperative? I think...help. Sean to give more background.

#### **Environmental Hazards**

We went to the Antler Line up Boriana Mine Road. BLM told us the estimated clean up costs are \$1.5 million with \$300K to be paid by Standard Metals, the PRP. At this time, BLM does not have the funding to clean up the site. The physical hazards are located on the patented land and like the Brighter Days area, we respected BLM's policy of not entering private property



There are barrels of contaminants and a 800 ft deep open shaft on the private land.



However, there is no indication to alert the visitor of the existing hazards, nor no indication as to what is BLM land and what is private land. A large part of the tailings below the physical hazards are on BLM land and contain sulfides and iron pyrite that are leaching out of the waste piles, into the MacKenzie Wash which runs into the Sacramento Wash and then to the Colorado River which is a water source for populated areas down river. There is a small ranch approximately one mile down wash from the site and a small development approximately three miles down wash from the site.





Massive tailings pile at the Antler Mines is being washed away.  
The site has not been tested.





We found the Boriana Mine during our drive through the Hualapai Mountains. BLM stated the tailings are inert, but they haven't done any testing.





### Barriers to successful mitigation of hazards

#### Attitudes / Beliefs and Stigmas

We believe there is a breakdown in trust and communication between the State, District and field, that creates an environment of distrust and secrecy. One BLM employee told the Department last year that there are “thousands of dangerous abandoned mines” and was reprimanded by the State Office for making such a statement. ■ This same BLM employee stated that in response to our request for a visit, the State Office told the field office to “tell the truth and only answer the questions the IG asks and tell no more” This same employee also said “it doesn’t make any difference to me personally that a dangerous mine opening is on private land . I want to fence them anyway. I was told that Brighter Days was a hazard a multitude of times and now look what happened!”

Another field office employee said that the Antler Mine and COD mines don’t fall within the Saginaw criteria (a mile or less).

All BLM employees we interviewed believe the biggest impediment to getting the mines mitigated is funding.

#### Inventory: ■

We asked how important the inventory was to them and a District official stated, “putting these sites on an inventory is more detrimental to BLM than leaving them off. If we put them on a list we are acknowledging they are a hazard and if we cannot do anything about it because of funding, staffing, etc , then we are held liable.” This same District employee said that we can give a recommendation for a targeted inventory but a “perfect inventory with perfect information is not going to fix any holes.” ■

At this time, the Kingman field office does not have a complete inventory of ALL known abandoned mine sites. Kingman does not have a prioritized list of dangerous sites, and they do not provide adequate signage warning to the public via literature, website, signage (need to verify) of AML hazards.

However, the Kingman field office has mitigated many hazards in the last year, they perform and document site inspections, they request specific funding for projects, they use different methods for mitigating safety hazards (from fencing to bat gates).

At the District level, the Kingman field area is included in a prioritized list of physical and environmental hazards. Those priorities were based on solely on visitation and/or proximity to population centers, which in the Kingman AML coordinator's opinion, does not include the most dangerous sites. We asked him, "if you were to give us a list of your highest priority sites, would the list be the same as the list the District provided us?" He told us no and if he had his way, dangerous sites on private land such as Brighter Days where the little girl was killed, would have been on the list and mitigated long ago. In his opinion, it doesn't make a difference whether or not a dangerous opening is on private or public land. If he is aware of it, he wants to fix it. He had received several complaints about the Brighter Days mine and was unable to do a thing. They did provide a list of abandoned mines that have been mitigated in last ten years (29 projects and 133 features...ranging from signs to bat-gates). District had an accident where the mine was immediately bat-gated (California mine).

#### Methodology

Drove around, asked questions, took pictures.

Submission:	Submitted	Greta Bloomfield	02/06/2008 05:21:46 PM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	04/28/2008 12:53:33 PM

#### Linkage Information Set By Sean Pettersen/DEN/OIG/DOI On 05/15/2008 04 56 03 PM

The following information was copied from the rich text field(s) above into this field by Sean Pettersen/DEN/OIG/DOI on Thu 05/15/2008 04:56 PM. For original text, refer to the field(s) above.

#### Purpose:

To go to Kingman and determine if physical and environmental hazards exist

#### Scope:

BLM Kingman Field District's management and execution of AML activities

#### Source:

- Discussions with Bernadette Lovato (Lake Havasu District Office), Don McClure (Kingman FO) and Paul Misiaszek (Kingman FO) during site visits to various mine features in the Kingman district.
- Our own visual observations during the site visits to mine features in the Kingman district.
- Photographs taken by auditors during site visits.

#### Conclusion:

Kingman, like many areas, has a lot of physical and environmental hazards and many of the highest priority hazards are being addressed, though many hazards remain un-mitigated. We found open shafts next to the main road (BLM maintains the road SRP 05/15/08) that runs through the Windy Point National Recreation Area; dangerous headframes at the COD mine, large potential environmental hazards at the Antler and COD mine, as well as the Borianna mine.

There is a lack of trust and communication among State, District and the field. One employee told the Department last year there are thousands of dangerous AML lands and he was scolded by the State for making such a statement. The field office told us that in response to our visit, the State Office told them to "tell the truth and only answer the questions the IG asks and tell no more."

Another field employee said that the potentially hazardous Antler Mine does not fall within the Saginaw criteria. All BLM Employees we interviewed believe the biggest obstacle to mitigating and remediating mine sites is funding.

Lastly, the field office is maintaining a different inventory than the District office. And the District office made the comment that "putting these sites on an inventory is more detrimental to BLM than leaving them off. If we put them on a list we are acknowledging they are a hazard and if we cannot do anything about it because of funding, staffing, etc., then we are held liable."

#### Details:

##### Kingman, Arizona

We visited the Kingman field office in September 2007 and adjacent areas, after two sisters recreating outside Chloride, Arizona drove their ATV into a [REDACTED] were stuck in the shaft overnight before being rescued the next morning though sadly, one sister did not survive and the other sister has suffered extensive injuries.

When we heard about the accident, we requested the ownership status of the mineshaft from the Kingman field office and they reported back that the mineshaft was on a small privately-owned sliver of land within BLM's Windy Point Recreation Area. Because the mineshaft was reported to be easily accessible and media reported thousands of unmitigated mineshafts in the area, the team hypothesized that there were possible easily accessible mineshafts on BLM land in the same area and that it would be prudent to visit the area.

During our visit we observed some immediate physical and environmental hazards that have been both mitigated and not-mitigated: mineshafts in Windy Point Recreation Area, mineshafts outside the town of Chloride, the COD mine northeast of Kingman, the Antler and Borianna Mines southwest of Kingman, hazards among popular ATV routes in the Hualapai Mountains and the Thumb Mine outside of such and such.

**Physical Hazards**  
**Windy Point NRA**

The Windy Point National Recreation Area is just outside the town of Chloride, north of Kingman. ■ There is a campground, a popular hiking trail and many rough roads throughout the area. Though we drove as close as possible, we were not able to see the accident site, due to the fact it was on private land and we adhered to BLM's policy not to go onto private land without permission. The Cerum Peak Trailhead is a short distance from the mine accident. We saw no signs at or near the trailhead, just down the trail or anywhere on the road through the NRA warning of the hazards with AML in the area. We also did not see any warning signage at the windy point campground, the primary campground in the area



The image above is the mine shaft the ■ fell into. The memorial is for ■. The image was purchased from APImages for use in our report (see attached receipt for the image).



010908365467.pdf

Driving back from the accident site to Chloride, we saw some mine shafts within a few feet from the road.



One of the shafts, partially fenced, was at least a hundred feet deep (see picture) but the public would still have easy access.



The second shaft, about 15-20 feet from the road, was not fenced off and BLM estimated the shaft to be at least 200 feet deep.



In our opinion, there is nothing preventing someone who goes off the road, from falling into the mine on an ATV, bicycle, motorcycle etc... (attach pictures).

#### **Other BLM Land Outside Chloride**

Near Chloride, we went to two drive-up mitigated physical sites just outside the town of Chloride. BLM had erected 4-strand barbed wire fences in 2007. Each shaft had a “stay out stay alive” sign affixed to the barbed wire. According to information provided by BLM, there were five other shafts that had been fenced in that area and they were all fenced in 2007.

#### **COD Mine Northeast of Kingman in Cerum Mountains**

We went to the COD mine northeast of Kingman with permission to access the mine from private land. The COD potentially has both safety and environmental hazards. The private land owner who lives directly below the mine believes his well water is contaminated by the COD mine.



The COD mine consists of a bunch of buildings and eroded tailing piles. Barrels of environmental contaminants have recently been removed. There were signs that looters have come up to steal copper wiring. BLM

contacted the claimant several times in 2005 to notify claimant of refuse, abandoned vehicles, theft and vandalism, especially in dangerous areas of the property. In 2007, the claimant tack welded a steel plate over the mine shaft, where a lot of the wiring was removed. The shaft is estimated to be over 800 feet deep. BLM noted in their file dated Sept 5, 2007 that upon an inspection in late august, the reclamation (i.e. tack welding) had been completed. However during our site visit, the plate had been removed. This is a big plate. This is a concern mainly because looters have been descending an old wooden dilapidated ladder (See picture below) to get to the copper wiring in order to remove it. The ladder is estimated to not go down the full length of the shaft. BLM and the claimant were in agreement to install the plate, to prevent this dangerous situation.



Need to clarify the barrel situation i.e. environmental status versus physical status.

#### **Thumb Mountains**

Example of BLM trying to work with claimant to make it safe. This particular mine is privately owned but an extremely dangerous and attractive hazard. Big headframe...hole is very deep, crazy guy in trailer up above, dudes that own it are being cooperative? I think...help. Sean to give more background.

#### **Environmental Hazards**

We went to the Antler Line up Boriana Mine Road. BLM told us the estimated clean up costs are \$1.5 million with \$300K to be paid by Standard Metals, the PRP. At this time, BLM does not have the funding to clean up the site. The physical hazards are located on the patented land and like the Brighter Days area, we respected BLM's policy of not entering private property.



There are barrels of contaminants and a 800 ft deep open shaft on the private land.



However, there is no indication to alert the visitor of the existing hazards, nor no indication as to what is BLM land and what is private land. A large part of the tailings below the physical hazards are on BLM land and contain sulfides and iron pyrite that are leaching out of the waste piles, into the MacKenzie Wash which runs into the Sacramento Wash and then to the Colorado River which is a water source for populated areas down river. There is a small ranch approximately one mile down wash from the site and a small development approximately three miles down wash from the site.





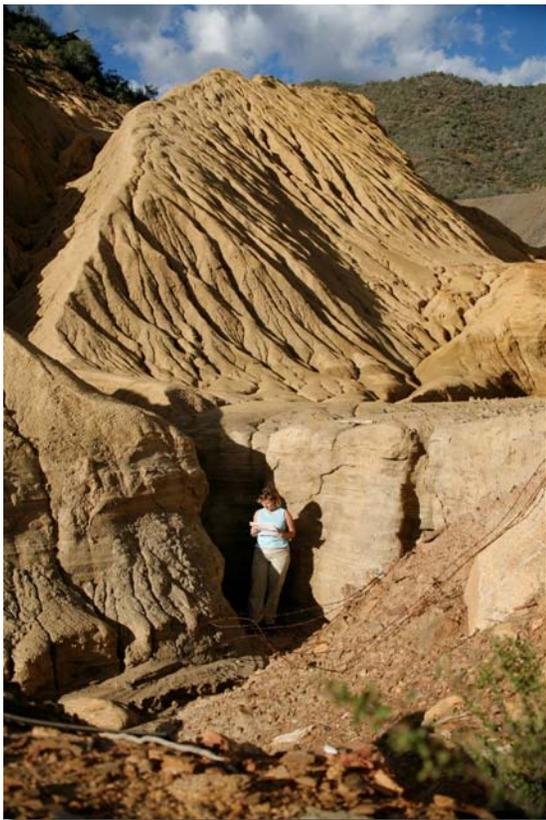
Massive tailings pile at the Antler Mines is being washed away.  
The site has not been tested.





We found the Boriana Mine during our drive through the Hualapai Mountains. BLM stated the tailings are inert, but they haven't done any testing.





### Barriers to successful mitigation of hazards

#### Attitudes / Beliefs and Stigmas

We believe there is a breakdown in trust and communication between the State, District and field, that creates an environment of distrust and secrecy. One BLM employee told the Department last year that there are “thousands of dangerous abandoned mines” and was reprimanded by the State Office for making such a statement. ■ This same BLM employee stated that in response to our request for a visit, the State Office told the field office to “tell the truth and only answer the questions the IG asks and tell no more” This same employee also said “it doesn’t make any difference to me personally that a dangerous mine opening is on private land . I want to fence them anyway. I was told that Brighter Days was a hazard a multitude of times and now look what happened!”

Another field office employee said that the Antler Mine and COD mines don’t fall within the Saginaw criteria (a mile or less).

All BLM employees we interviewed believe the biggest impediment to getting the mines mitigated is funding.

#### Inventory: ■

We asked how important the inventory was to them and a District official stated, “putting these sites on an inventory is more detrimental to BLM than leaving them off. If we put them on a list we are acknowledging they are a hazard and if we cannot do anything about it because of funding, staffing, etc , then we are held liable.” This same District employee said that we can give a recommendation for a targeted inventory but a “perfect inventory with perfect information is not going to fix any holes.” ■

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Methodology:  
Drove around, asked questions, took pictures.

**History**

**Status:** Approved **Request Review:**  
**In Progress Edit:** Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI  
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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

K BLM Arizona.07 Exit Conference

Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: Greta Bloomfield 01/10/2008

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Arizona.08

Subsection: Kingman

Program Name: BLM (Site Visits)

Subject: ATV Death and Mitigation

Origination Doctlink: [REDACTED]

### Purpose

To determine whether or not the ATV accident was on BLM land.

### Scope

BLM Arizona's Abandoned Mine Program

### Source



USA Today Article scanned and inserted below: usa today article atv death.pdf

Followup emails with BLM (Paul Misiaszek) describing mitigation (see Details below).

### Conclusion

- [REDACTED] ATV into a mineshaft of Labor Day weekend. [REDACTED] died and her [REDACTED] was injured. The mine was an inactive (abandoned mine).
- BLM provided barbed wire fencing and the shaft was fenced (4 strand wire) after the accident.
- Warning signs were also posted after the accident.

### Details

## Girl in serious condition after mine-shaft fall

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CHLORIDE, Ariz. (AP) — The desert hillsides are known as a risky playground, where a derelict mine shaft swallowed two sisters out riding an all-terrain vehicle, killing one over the Labor Day weekend.

"I don't go anywhere off a trail here," said Bill Keller, who has lived in Chloride for 10 years and goes ATV riding in the hills regularly. "I am totally amazed that it hasn't happened before."

The terrain and clumps of brush concealed the mine near a dirt road in the hills visible from the home of 13-year-old Rikki Howard and her 10-year-old sister, Casie Hicks.

The girls were riding an ATV early Saturday evening when they plunged into the 125-foot-deep mine shaft. Their father was riding ahead of them and didn't see them fall. He alerted authorities after they vanished, but the darkness hindered the search.

Early Sunday, Rikki was found dead in the shaft and her younger sister was taken to University Medical Center in Las Vegas, where she was upgraded to serious condition Monday.

The family declined to comment, the hospital said.

"They're just about as distraught as humans can be," said Seth Johnson, a neighbor.

Several relatives placed a cross that read "In loving memory: Rikki." They placed yellow daisies on the cross and laid purple and orange tulips and a pink teddy bear at its base. They declined to talk about the tragedy.

Riding in the countryside was a frequent pastime for the family.

"These mountains are everyone's backyard," said Russell Agee, who goes up to the hills where the accident happened at least once a week. "The trails are a lot of fun if you're careful."

Residents estimate there are dozens of abandoned mines in the hills surrounding this rural community about 200 miles northwest of Phoenix and 80 miles southeast of Las Vegas.

"A lot of them you can't tell they're there until you're right on them," Agee said, riding through town on a mud-spattered four-wheeler.

The mine where the girls were found had no signs or barriers and is believed to be inactive.

F:\C:\Documents\20m\20Setting\GB\onField\AD\PROD\Desktop\Girl%20serious%20condi%20after%20mine-shaft%20fall%20-%20USATODAY\_com.htm (2 of 5) [1/1/0206

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Paul Misiaszek/KFO/AZ/BLM/DOI@BLM

02/20/2008 12:22 PM

To William McMullen/DEN/OIG/DOI@OIG@DOI  
cc William L Harris/AZSO/AZ/BLM/DOI@BLM  
Subject Re: Labor Day 2007 AML accident near Kingman

Sir:

Four strand barbed-wire fence (provided by BLM, even though it was later determined to be private property) and warning signs were erected around the Brighter Days abandoned mine shaft shortly after the accident.

Paul L. Misiaszek  
Geologist  
Bureau of Land Management  
Kingman Field Office  
2755 Mission Boulevard

K BLM Arizona.08 ATV Death and Mitigation

Kingman, Arizona 86401  
Tel (928) 718-3728  
Fax -3761  
Cel (928) 530-8144

Paul Misiaszek/KFO/AZ/BLM/DOI@BLM  
02/20/2008 01:40 PM

To William McMullen/DEN/OIG/DOI@OIG@DOI  
cc  
Subject Re: Labor Day 2007 AML accident near Kingman

William:

By the way, the AZ Mine Inspector has estimated the cost of backfilling the workings on the Brighter Days patented claim (three shafts) to be about \$20,000. They are pursuing the owners, Magnum Resources, owned by a seventy-year old woman living in the South Pacific Ocean.

Paul L. Misiaszek  
Geologist  
Bureau of Land Management  
Kingman Field Office  
2755 Mission Boulevard  
Kingman, Arizona 86401  
Tel (928) 718-3728  
Fax -3761  
Cel (928) 530-8144

**Methodology**

scanned web article and inserted it into the details.

Submission: Submitted William McMullen 05/05/2008 03:06:12 PM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 06/02/2008 02:04:56 PM

[Linkage Information](#)

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## Assignment Workpaper

Prepared by: William McMullen 02/12/2008

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.California.01 Subsection:  
Program Name: BLM (Site Visits)  
Subject: Rapid Assessment Technical Team

Origination Doclink: [REDACTED]

### Purpose

Document BLM CA's approach to identifying high priority AML sites.

### Scope

BLM AML Program.

### Source

Email from Dave Lawler to John Illson dated 02/08/2008 shown in Details section.  
Discussions with Dave Lawler and Richard Grabowski.

### Conclusion

- BLM formed a Rapid Assessment Technical Team comprised of a variety of experts in late 2005 to assess serious environmental hazards at AML sites in California's Desert District because of the situation in the Rand Mining District that had not been adequately addressed.
- To date, the Team has focused on the Ridgecrest field office and has identified 11 sites that could cost hundreds of millions of dollars to mitigate.
- The Team is scheduled to complete reviews of sites in all five of the California Desert District districts by May 2008.
- [Auditor Opinion] OIG believes this approach to rapidly assessing AML sites in the California Desert District is yielding important results in the Ridgecrest District to date and will likely do the same in the four other districts. The focused, concerted effort of the integrated Rapid Assessment Technical Team allows for quick evaluation sites. The Team is independent of the individual field office managers who may not want sites to be identified, for whatever reasons. We think BLM should continue to use the Rapid Assessment Technical Team approach and should meet their May 2008 schedule for completing reviews of sites in all of the districts in the California Desert District. We also think this approach has merit for other states such as Nevada.

### Details

OIG staff visited AML sites near Rosamond, CA on 1/30-31/08 K.BLM.RosamondCA.01 Site Visit [REDACTED] in response to findings of the Rapid Assessment Technical Team that the Golden Queen, Cactus and Tropic mines near Rosamond had elevated levels of arsenic in mine waste and tailings.

[REDACTED] Lawler and Grabowski noted that these sites were identified by the informal Rapid Assessment Technical Team established by BLM CA to identify high priority AML sites especially in the California Desert District. [REDACTED] The interdisciplinary team is comprised of staff from BLM CA State Office, BLM National Operations Center, BLM field offices and USGS. The Team was formed after serious safety and environmental issues in the Rand Mining District were identified and began work in late 2005 in the Ridgecrest Field Office area and, to date, has identified 11 AML sites that present potential concerns due to elevated levels of arsenic and other heavy metals in mine waste and tailings. These 11 sites are located near growing populated areas ("urban interfaces") and may experience recreational visitation as well, according to Lawler. Lawler also noted that mitigation of the environmental hazards at these sites may cost hundreds of millions of dollars (perhaps as much as half a billion dollars) and that many of the sites have Potential Responsible Parties that BLM may be able to tap for funding or actual mitigation actions.

According to the Team schedule, all five districts in the California Desert District will be assessed for AML sites with serious environmental hazards by the end of May, 2008.

[Auditor Opinion] OIG believes this approach to rapidly assessing AML sites in the California Desert District is yielding important results in the Ridgecrest District to date and will likely do the same in the four other districts. The integrated Rapid Assessment Technical Team can quickly evaluate sites and is independent of the individual field office managers who may not want sites to be identified, for whatever reasons. We think BLM should continue to use the Rapid Assessment Technical Team approach and should meet their May 2008 schedule for completing reviews of sites in all of the districts in the California Desert District. We also think this approach has merit for other states such as Nevada.

### Lawler Email

— Forwarded by John Illson/DEN/OIG/DOI on 02/08/2008 10:57 AM —

David Lawler%BLM@ios.doi.gov  
02/08/2008 10:56 AM

To: John\_Illson@doioig.gov  
cc: George\_M\_Stone@blm.gov, John\_Key@ca.blm.gov, Richard\_Grabowski@ca.blm.gov, Leroy\_Mohorich%BLM@ios.doi.gov, Hector\_Villalobos@ca.blm.gov  
Subject: CA AML Pgm - Rapid Assessment Technical Group - "Best Management Practices" Approach California Desert District (5-Year Plan Implementation)

John -  
Per your request - attached is the summary information on the informal "Rapid Assessment Technical Group (RATP) "Best Management Practices"

K BLM.California.01 Rapid Assessment Technical Team

approach to effectively dealing with the series of newly discovered AML sites with significant environmental hazards in the rapidly urbanizing "urban interface" region of the California Desert District (CDD).

Hope this information is useful for integration into your California AML OIG report.

Regards

David Lawler  
US-DOI-BLM - CASO - Energy and Minerals Division  
Abandoned Mine Lands Program  
Federal Center  
2800 Cottage Way, Rm. W-1618  
Sacramento, CA 95825  
916-425-3740 (Office)/916-978-4389 (Fax)  
Email: dlawler@blm.gov.us



(See attached file: OIG\_CDD\_AML\_RATTSummary208ver2.doc) OIG\_CDD\_AML\_RATTSummary208ver2.doc

Attachment on RATT in Email from Lawler

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CALIFORNIA STATE OFFICE  
TELEPHONE (916) 978-4360 FAX (916) 978-4389

- Memorandum -

**TO:** John Ilson - OIG Auditor **OFFICE:** OIG (Denver) Office  
**FAX Number:** **Office Number:** (303) 236-9119  
**Date:** February 6, 2007  
**From:** David Lawler-(AML Program Coordinator) **Phone:** (916)-978-4365/425-3740  
**Office:** CA-920  
**Subject:**  
**BLM - California CDD AML -Rapid Assessment Technical Team -**

John -  
I am providing you with summary information on the *informal* AML Program strategy that was intentionally developed since January 2006 in BLM's California Desert District (CDD) to effectively deal with "rapid site assessment and prioritization" of "newly discovered" AML sites with significant environmental contamination in this "urban interface" region

The *informal* "Rapid Assessment Technical Team" (RATT) - key summary facts are as follows:

**Process:**  
Integrated technical approach (water, sediment, air, biota sampling) to arsenic, base metal COC's  
Rapid assessment of relative human health-risk, mine waste characterization and subsequent site prioritization for cleanup

**Integrated Team : (Rapid Assessment Technical Team -RATT)**  
1) Rytuba Group (USGS) - Menlo Park) Geochemists/Geologists  
(Dr. James Rytuba/Aaron Slowey/Chris Kim/Andrea Foster/Roger Ashley)  
Role: (Arsenic speciation-particle size analysis-mine waste + natural background)  
2) BLM NOC Group- (BLM - Denver)  
(Dr. Karl Ford) Toxicologist/Envtl Scientist  
Role: Human/Envtl Health Risk - Streamlined Risk Assessment - CERCLA RSI docs  
3) BLM-CASO AML Group  
(David Lawler - Economic Geologist/Mining Engineer/Mine Historian)  
Role: AML Environmental Contaminants - identification/evaluation/reporting  
4) BLM - Ridgecrest FO Group  
(Peter Graves - Environmental S  
Role: Field Office labor/logistical support/community contacts

**Key AML Site Identification/Characterization:(Ridgecrest Field Office)(2005-2008)**  
1) Rand Mine Pjt - (Dec/05 - April/06) (Historic lode gold operations)(High Level Arsenic Waste)  
2) Randsburg Mine Pjt - (Dec/05 - April/06) (Historic lode gold operations)(High Level Arsenic Waste)  
3) Johannesburg Mine Pjt - (Dec/05 - April/06) (Historic lode gold operations)(High Level Arsenic Waste)  
4) Atolia Mine Pjt - (Dec/05 - April/06) (Historic placer Tungsten operations)(High Level Arsenic Waste)  
5) Ruth Mine Pjt - (March/06 - April/07) (Historic lode gold operations)(High Level Arsenic Waste)

- 6) **Darwin Mine Pjt** - (April – Oct/07) (Historic lode gold operations)(High Level Pb, Zn, Arsenic Waste)
- 7) **Golden Queen Mine Pjt** -(April–Dec/07) (Historic lode gold operations)(High Level Arsenic Waste)
- 8) **Tropico Mine Pjt** - (Dec/07 – June/08) (Historic lode gold operations)(High Level Arsenic Waste)
- 9) **Cactus Mine Pjt** - (Oct/07 – June/08) (Historic lode gold operations)(High Level Arsenic Waste)
- 10) **Keeler Mine Pjt** - (Oct/07 – June/08) (Historic lode gold operations)(High Level Pb, Zn, Arsenic Waste)
- 11) **Standard Hill Mine Pjt** - (Oct/07 – June/08) (Historic lode gold operations)(High Level Arsenic Waste)

**CDD 5-Year Plan Implementation–(CASO AML Pgm Staff)-Field Office Site Visits (Winter/Spring 08)**

- 1) **Ridgecrest FO** (Manager/Staff Mtgs/AML site visits) (January 29-Feb1)
- 2) **El Centro FO** (Manager/Staff Mtgs/AML site visits) (Feb 25-29)
- 3) **Barstow FO** (Manager/Staff Mtgs/AML site visits) (March 24-28)
- 4) **El Centro FO** (Manager/Staff Mtgs/AML site visits) (April 21-25)
- 5) **Needles FO** (Manager/Staff Mtgs/AML site visits) (May 26-30)

**Methodology**

Reviewed source document and documented discussions with Dave Lawler and Richard Grabowski.

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We visited with a resident of Panaca who was an avid OHV enthusiast. He noted that he had 4-wheeled on the Caselton tailings with friends as a kid (he was probably 25 now) and he and his friends called the dark and light tailings "cookies and cream." He also noted that he had a well for his family's use in Panaca but had never had it tested. He was concerned that some of the contaminants from Caselton might be impacting his well.

**Methodology**

N/A

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Purpose:  
Document site visits to Caselton tailings.

Scope:  
Caselton tailings AML site.

Source:  
Photos taken by OIG during site visits on 8/30 and 9/26/2007.  
Discussion with resident of Panaca, NV on 8/30/07.

- Conclusion:  
Photos show the extent of the tailings at the Caselton site in Nevada. OIG noted:
- tailings are quite extensive (tailings overview.jpg)
  - recent OHV tracks on the tailings piles (OHV tracks on tailings.jpg)
  - dumps and waste left at Oxidor site (dump.jpg and interior room.jpg)
  - hazardous waste (haz wste and trash.jpg), e.g. lead-acid batteries
  - water pools in the tailings (pond and drums.jpg and Pooled water after recent rain 2.jpg)
  - the site is minimally signed and fenced with unrestricted access no indication of risks (Sign at entrance to tailings.jpg)
  - nearby resident noted he rode OHV's on tailings ("cookies and cream") as a kid.
  - CERCLA Engineering Evaluation and Cost Analysis presents results on the hazards of the site

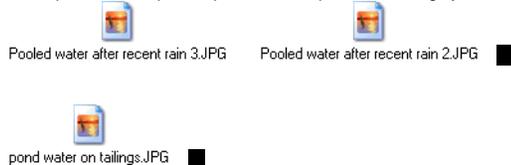
Details:

We visited the Caselton Tailings site on August 30, 2007 and September 26, 2007. The site is west of Pioche, NV K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis and about 6 miles north of Panaca, NV. The site is upstream of Panaca and Meadow Valley Wash and evidence of migration of tailings downstream in Caselton Wash toward Meadow Valley Wash has been reported See Risk Assessment tab, next to last para of K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis

The site was easily accessible and had only two small "No Trespassing" signs with no other signs warning of the hazards at the site. The site is about 1/2 mile to 1 mile west of the mill that generated the tailings (on private land) and there are residences in Caselton Heights across the road to the east from the tailings (about 1/2 mile away).



These photos show pooled pond water reported to be highly acidic K.BLM.Caselton.04 CERCLA Action Memorandum



The CERCLA Engineering Evaluation and Cost Analysis presents results on the hazards of the site K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis

We visited with a resident of Panaca who was an avid OHV enthusiast. He noted that he had 4-wheeled on the Caselton tailings with friends as a kid (he was probably 25 now) and he and his friends called the dark and light tailings "cookies and cream." He also noted that he had a well for his family's use in Panaca but had never had it tested. He was concerned that some of the contaminants from Caselton might be impacting his well.

Methodology:  
N/A

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**History**

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**Add Document Readers:**

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## Assignment Workpaper

Prepared by: William McMullen 10/22/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Caselton.02  
Program Name: BLM (Site Visits)  
Subject: Engineering Evaluation/Cost Analysis

Subsection:

Origination Doctlink: 

### Purpose

Document engineering evaluation/cost analysis (EECA) conducted for Caselton tailings.

### Scope

Caselton AML site.

### Source

EECA dated January 30, 2001, provided as pdf file by BLM Ely Field Office to OIG during site visit on 9/25/07 and attached:



EECA.pdf

Site location and site map provided as pdf files (converted to jpg files by OIG) to OIG during site visit on 9/25/07 and attached:



Location Map.jpg



Site Map.jpg

Pages from previous Weston Site Inspection Report (referenced in EECA) provided by BLM to OIG and attached in Previous Investigations tab.

topo map from [www.geocommunicator.gov](http://www.geocommunicator.gov) showing area around Panaca and Caselton and Meadow Valley Washes (shown below).

Definition of "wash" found at [http://encarta.msn.com/dictionary/\\_wash.html](http://encarta.msn.com/dictionary/_wash.html) and shown below.

### Conclusion

The EECA notes that:

- studies done as early as 1989 (Previous Investigations tab) noted potential concerns at the site.
- high winds in the area can expose visitors to high concentrations of arsenic, lead and manganese (Risk Assessment tab).
- water in the tailings ponds is very hazardous to humans and wildlife (Risk Assessment tab).
- failure of tailings dams could severely impact water quality in Meadow Valley Wash (Risk Assessment tab).
- tailings deposits have been found downstream as far as Meadow Valley Wash (Risk Assessment tab).
- groundwater in wells near Panaca is assumed to not be impacted by tailings from Caselton Wash (Groundwater tab) but no groundwater sampling has ever been done.
- [Auditor Opinion] The site has been known by BLM to present hazards for over 20 years. BLM has not taken groundwater samples to validate assumptions that groundwater has not been affected by contaminants from the tailings [K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office](#) and, until 2006, had not addressed any environmental and safety concerns at Caselton [K.BLM.Caselton.04 CERCLA Action Memorandum](#).

### Details

The EECA was prepared by Dynamac Corporation for the BLM Ely Field Office and published in January 2001 (see cover page of EECA.pdf). The EECA includes the following introduction and goals:

#### Introduction and Goals

## 1.0 INTRODUCTION

The U.S. Department of Interior, Bureau of Land Management (BLM), Ely District Office authorized Dynamic Corporation (Dynamic) to generate an Engineering Evaluation Cost Analysis (EECA) to be performed at the Caselton Wash Tailings Ponds, under Task Order BLM12-37R. This EECA has been prepared in accordance with the criteria established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), sections of the National Contingency Plan (NCP) applicable to removal actions (40 CFR § 300.415 (b)(4)(i)). The EECA is also consistent with the U.S. Environmental Protection Agency (EPA) guidance document, *Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA*.

The goals of the EECA are to:

- Verify results of previous Site studies.
- Fill data gaps necessary to satisfy environmental review requirements and document the need for removal actions to address contamination on site.
- Evaluate the extent of off site migration.
- Conduct streamlined human health and ecological risk assessments to determine the potential threats posed by contamination originating at the Site.
- Satisfy administrative record requirements for improved documentation of removal action selection, and.
- Provide a framework for the evaluation and selection of potential response actions and applicable technologies.

The Caselton tailings are located in southeast Nevada on State Hwy 320 (off of US 93) between Ely and Las Vegas near the town of Pioche (see Location Map.jpg). The tailings are described in the Executive Summary (page ES-1) of the EECA as follows:

### Site Description

The Caselton Tailings Impoundments (Site) are abandoned silver, lead, manganese and other metal processing tailings ponds located along the southwestern flank of the Pioche Hills of Lincoln County, Nevada, three miles southwest of the town of Pioche. The largest tailings ponds in Caselton Wash are approximately one mile southwest of Caselton Heights with a smaller tailings pond, associated with the Prince Mine Area and located in an unnamed drainage, southeast of Caselton Heights.

The EECA notes that the tailings are comprised of upper and lower sections. All tailings are dominated by manganese minerals. The upper section contains Ponds 1-5 which are very acidic and which contain "significant concentrations of arsenic, lead and zinc..." The lower section contains Ponds 6-9 which are alkaline with "significant concentrations of lead and zinc." The ponds are identified on the Site map.jpg.

The tailings are in Caselton Wash which is an ephemeral stream that flows into Meadow Valley Wash about seven miles downgradient near the town of Panaca, NV (page 6 of EECA). A wash is defined as by the online MSN Encarta Dictionary:

wash

noun (plural wash-es)

**Definition:**

16. *Southwestern U.S.* **dry stream bed:** the dry bed of a stream that flows only after heavy rains, often found at the bottom of a canyon

The EECA notes that sampling of groundwater under the tailings or downgradient in Caselton Wash was not part of the study (page 6) but notes that wells near the town of Panaca were assumed to be deriving water from the Meadow Wash

alluvium and not the Casellon Wash alluvium as follows:

#### Groundwater

Although groundwater was not part of this investigation, the Final Site Investigation Report (Weston, 1989) identified five wells in the Casellon Heights and Prince Mine Camp areas northeast and east of the tailings ponds. Well logs were not available but Roy F. Weston Inc. (Weston) suggested that the water source for these wells was mine shafts located approximately 850 feet below ground surface. These wells were apparently used for both domestic and industrial water supply. A sixth well was identified approximately six miles southwest of the site with a water level of 134 feet below ground surface. The closest wells installed in alluvium are near Panaca approximately seven miles downgradient. Those wells are likely completed in Meadow Valley Wash alluvium and consequently do not monitor groundwater, if any, in Casellon Wash.

The EECA notes the results of previous studies (pages 9 and 10) as follows:

#### Previous Investigations



Pages from Weston 1989 Site Inspection Report.pdf

##### 2.9 Previous Investigations

A Preliminary Assessment (PA) was conducted at the Site in 1986 but was not considered acceptable by the BLM. For that reason sampling results from that PA will not be discussed.

In 1989, Roy F. Weston, Inc. conducted a Site Inspection at the Site. Eighteen samples were collected on and off site and were analyzed for Extraction Procedure (EP) toxicity metals and total cyanide. Of these samples, two had lead concentrations above the RCRA waste standard. The report described the impoundments as follows: "...The tailings ponds are completely stained and completely devoid of vegetation except near the margins of the lower ponds. Soil discoloration and stressed vegetation were noted for at least two miles downgradient from the site, in all upstream tributaries, and in several drainages adjacent to the site..."

In 1999, the BLM conducted a reconnaissance tailings investigation that consisted of the collection of 10 samples for metals analysis by inductively coupled plasma (ICP). The results showed that arsenic, lead, cadmium, and zinc were present in concentrations high enough to present a concern. This concern is based on the fact that the Site is popular as an OHV recreational area and because wind-blown contamination is being readily transported off-site.

The EECA notes that the tailings contain 26.2 grams per ton of gold and 0.519 grams per ton of silver (page 23) as follows:

#### Gold and Silver Assay

The EECA evaluated risks to the public and wildlife from the tailings and associated ponds as shown below (page 31).

#### Risk Assessment

Most significant tailings exceedances are for arsenic and lead where RMCs are exceeded by 1-5-fold, placing the site in the moderate risk category for site visitors. Manganese is also present in extremely high concentrations in the lower tailings ponds with a maximum of 183,910 ppm in GP-11-E-CT. Inhaled manganese causes a Parkinson's type disease of the central nervous system and NIOSH has established a recommended limit of 1 mg/m<sup>3</sup> of airborne manganese. While on site, heavy winds were observed to mobilize fine-grained tailings in clouds off of the site. Visitors exposed to winds such as these are exposed via inhalation to high concentrations of arsenic, lead and manganese.

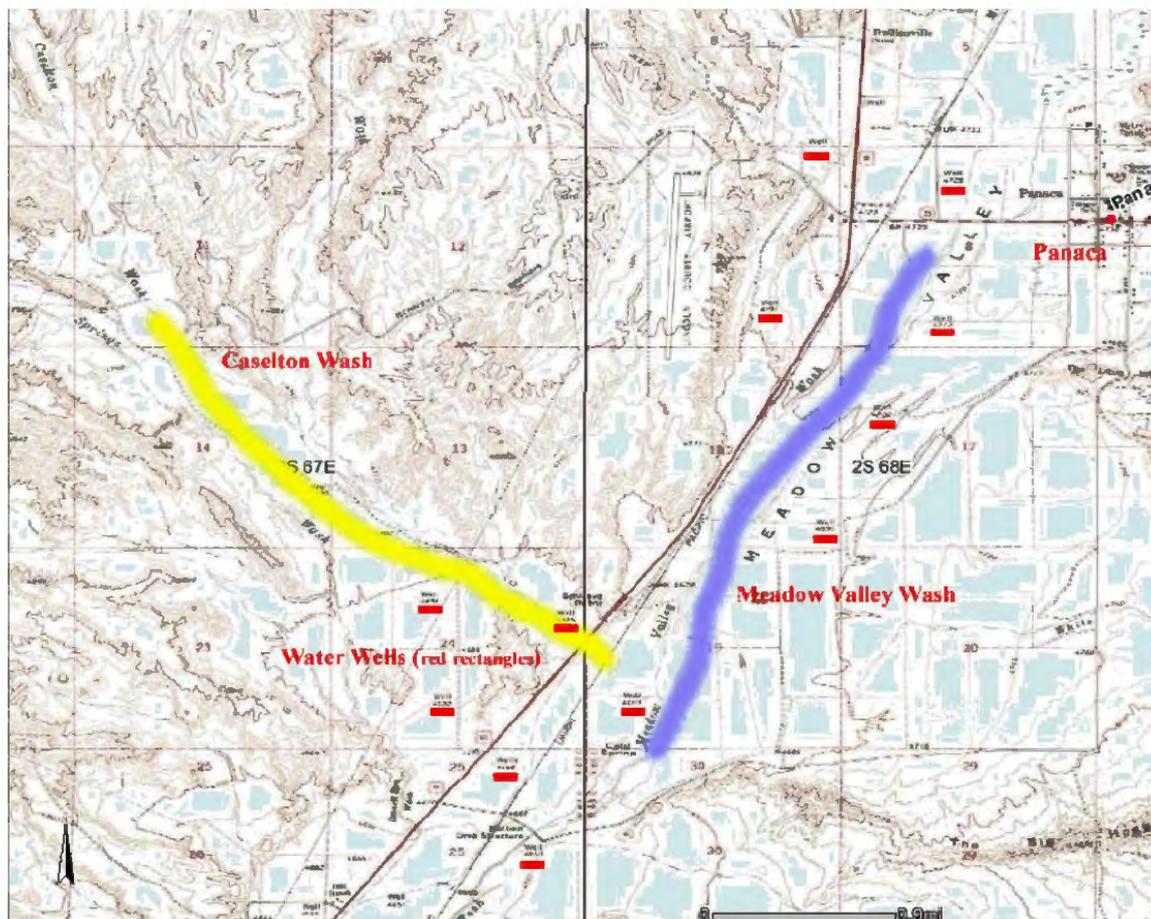
For surface water, using the sample with the highest concentration of metals in the surface water at the site, sample Pond3-SW shown below, exceeds Nevada water quality standards for arsenic (87-fold), cadmium (772-fold), chromium (350-fold), copper (989-fold), iron, manganese (6,000-fold), nickel, and zinc (5083-fold) during the April sampling. This sample is ponded water on the tailings. This water is a severe health threat to humans if they consume it. The arsenic lethal dose to humans is as low as 2 mg/kg (ATSDR, 1993), so a 10 kg child would receive a lethal dose from arsenic alone by ingesting 1.5 liters of this water. Of course, ponded water such as this is unlikely to be consumed by humans, but it may cause injury or death to wildlife that may consume it. Additionally, the water has a pH of less than 2.0 and represents a dermal contact threat as well.

Water quality in Meadow Valley Wash downgradient of Caselton Wash exceeds Nevada water quality standards (sample Med-2-SW). Catastrophic release of tailings from tailings dam failures could severely and intensively impact water quality in Meadow Valley Wash. Visual evidence of old historic tailings release and deposits is found in Caselton Wash more than 10 miles downstream nearly to the confluence with Meadow Valley Wash.

Run-on controls will protect downstream Caselton and Meadow Valley Wash receptors from catastrophic releases. Containment of the tailings material will eliminate risks from direct contact, will reduce release of arsenic and other heavy metals to Caselton Wash and will help achieve ambient water quality standards.



■ Topo map showing Caselton Wash as it flows into Meadow Valley Wash near the town of Panaca approximately 3 miles away. Reference text in 3rd para under Risk Assessment tab "Visual evidence of old historic tailings release and deposits is found in Caselton Wash more than 10 miles downstream nearly to the confluence with Meadow Valley Wash." Water wells in the vicinity of the washes near Panaca are shown at the red rectangles on the map.



The EECA defines the objectives of a removal action at the site as follows

#### Removal Action Objectives

##### 5.1 Definition of Removal Action Objectives

The general evaluation criteria for the analysis of potential removal actions, as defined in the EPA document *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA (1993)*, are effectiveness, implementability, and cost. These criteria are discussed in detail in Section 6.2. To define the RAOs for the Site, the results of the site characterization and streamlined risk assessment were examined in an effort to construct removal goals which comply with the applicable or relevant and appropriate requirements (ARARs) and are protective of human health and the environment. The RAOs are to:

- Prevent or reduce human exposure to metals in tailings.
- Prevent or reduce ecological exposure to metals in tailings.
- Prevent or reduce potential migration of metals via surface runoff and wind dispersion.

The EECA evaluated several alternatives to mitigate the hazards of the Casleton tailings (No Action and five various treatment or removal actions). The selected remedy was to recontour and cap the site as described below (page 51):

#### Selected Mitigation Action

**Alternative 4: Recontour Tailings, Add Lime, Cap, and Seed**

The on site capping alternative is a comprehensive effort that is more effective than the previous three alternatives to meet the response goals and identified ARARs for the project. Neutralization of the tailings through the application of lime, capping, and subsequent revegetation of the tailings surfaces will stabilize the surface and essentially eliminate the volume of tailings being washed into the drainage channels and being disturbed by wind, thereby eliminating the volume of material leaving the site by both surface water and air pathways. In addition, the cap will serve as a barrier between site contamination and potential human and ecological receptors. Revegetation of select native material used as a growth media should easily support sufficient vegetation to stabilize the tailings surface.

**Methodology**

Reviewed source documents.

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Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	06/02/2008 02:05:57 PM

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## Assignment Workpaper

Prepared by: William McMullen 10/22/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Caselton.03

Subsection: Audit Step K.1

Program Name: BLM (Site Visits)

Subject: Interview with Dan Netcher, BLM Ely Field Office

Origination Doctlink: ■

### Purpose

Discuss Caselton tailings with BLM Project Manager for the site.

### Scope

BLM Caselton tailings AML site.

### Source

Meeting with Dan Netcher and OIG staff during visit to Ely Field Office on 9/25/07.

### Conclusion

#### OIG Conclusions:

- Permanent mitigation actions as defined in the EECA (recontour and cap) **K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis** ■ have not been completed at the site.
- Dust needs to be minimized from the tailings as the temporary mitigation action to suppress dust is becoming ineffective.
- ■ **Ground water sampling of down gradient wells need to be done to verify assumptions that they are not being contaminatec.**
- **Access to the site was unrestricted during our visit with few fences and inadequate warning signs** **K.BLM.Caselton.01 Site Photos** ■
- Site should be contoured to minimize ponding of very acid water (less than pH of 2). **K.BLM.Caselton.01 Site Photos** ■
- There have been no AML injuries or fatalities on the Ely Field Office since 1988, at least, according to Dan who arrived at Ely in 1988.
- **[Auditor Opinion]** BLM should use validity exams to force relinquishment of claims so mitigation can proceed.
- EE/CA proposed action is about \$11 million (recontour and cap with 6' of crushed limestone to minimize generation of acid and remove dump site debris)
- ■ **[Auditor Opinion]** ■ BLM is "hoping" for new claimant to bring \$ to fix the problem; this "hope" has proven fruitless for the last 2 claimants (Ades and Oxidor); how much more should BLM rely on this "hope"? Where practical, we support the potential for reprocessing to reduce risks and provide funding in lieu of BLM. However, we believe the public health and safety must take precedence and BLM must, at some point, make a decision on whether to hold out hope for private funds based on expressed interest and the economic potential of reprocessing, or take action to mitigate the hazards with federal funds
- **[Auditor Opinion]** BLM allows claimants to hold mitigation that protects the public hostage to their perceived rights as claimants.

### Details

Notes from OIG meeting with Dan Netcher follow:

#### General Background

■ Dan is a hydrogeologist who took over management of the Caselton project in the mid-1990's when the project was moved from the Caliente BLM office (under Las Vegas Field Office) to the Ely Field Office.

At that time (mid 1990's), there was an active claimant (Eli Ades) working under 3809 but who had posted no bond; he was working to reprocess the old tailings

Around 1997, Ades declared bankruptcy and BLM was left with responsibility and costs of mitigation; BLM began requesting funds from CHF and wanted to get Ades' claims relinquished by bankruptcy court; court refused and sold claims to Oxidor in early 2000's.

Oxidor proposed a Plan of Ops for a plant to reprocess the tailings and posted a small bond; Oxidor wanted to test a biologic process to recover metals from the tailings; worked the plant about a year and concluded the process was not successful.

BLM has thus worked and negotiated with two claimants (Ades and Oxidor) over the last decade to reprocess the mine tailings. They are now negotiating, through the Solicitor, with a third claimant (Lintail) to reprocess the tailings.

During this time, BLM did remove some hazardous material from the site left over from Ades

BLM could not proceed with tailings mitigation using CHF funds because of concern over possible "takings" from Oxidor

BLM did install some fencing on the north side of the tailings and along the highway, posted some signs, applied a geomorph polymer to the tailings to reduce dust (lasts about 4 years and needs to be reapplied in 2007 or 2008),

installed some sediment fences to prevent erosion and improved drainages along the north and west sides of the site

BLM installed a diversion ditch along the west side and finished with rip rap lining in 2007; about \$200,000 from 1010

All BLM actions were coordinated with Oxidor to minimize interference

After Oxidor concluded their process was not successful, BLM again tried to get the claimant to relinquish the claim with no success

BLM requested funds from CHF in 2006 to perform a validity exam of the tailings in preparation for potentially withdrawing the land from location; request was denied (about \$40,000) because the site was a pre-FLPMA site; in general, according to Dan, while BLM trains its staff on the withdrawal process, BLM is very hesitant to do withdrawals because "Congress hates them"; BLM never considered a "closure" of access to the site as a way to impose legal penalties for trespassers (fines from law enforcement); BLM did put notices in local papers warning people of hazards of tailings as part of a Community Relations Plan; **NOTE not doing validity exams is a form of "don't ask, don't tell"**

Oxidor sold their claim to Lintail Mining who proposed reclaiming the tailings using their technology under a Brownfields approach under CERCLA; Solicitor (Natalie Smith, Portland) is working with Lintail to draft an agreement allowing this **K.BLM.Caselton.05 Reprocessing Negotiations** ■

Dan realizes soil stabilization chemical needs to be reapplied and that more fencing and signage should be installed; he feels the site is "relatively secure and safe from immediate threat of harm to humans"

#### Site Sampling **K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis** ■

EE/CA was done in about 2000 and found depth to groundwater of 600' at site

## All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

K BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office

EE/CA proposed an engineered cap as the solution to the tailings

Nearest wells are about 6 miles down gradient near the highway; unlikely that any contaminated groundwater would migrate that far but BLM has not sampled wells; these wells, according to USGS maps are not very deep, i.e., depth to groundwater near the highway is not much

Site is very acidic but underlain by limestone that neutralizes the acid and minimizes infiltration into groundwater (according to Dan)

EE/CA proposed action is about \$11 million (recontour and cap with 6' of crushed limestone to minimize generation of acid and remove dump site debris)

Dan and Karl Ford did walk the entire wash down gradient of the site and found tailings in the oxbow bends but did not think these piles could contaminate groundwater; the tailings were not in the main channel but along the sides at the bends

### Injuries and Fatalities

Dan was aware of no injuries or fatalities associated with AML sites in the Ely Field Office for as long as he has been there (1988).

### Methodology

N/A.

Submission: Submitted William McMullen 05/05/2008 03:04:34 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:07:38 PM

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Purpose:

Discuss Caselton tailings with BLM Project Manager for the site.

Scope:

BLM Caselton tailings AML site.

Source:

Meeting with Dan Netcher and OIG staff during visit to Ely Field Office on 9/25/07.

Conclusion:

#### OIG Conclusions:

- Permanent mitigation actions as defined in the EECA (recontour and cap) **K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis** have not been completed at the site.
- Dust needs to be minimized from the tailings as the temporary mitigation action to suppress dust is becoming ineffective.
- Ground water sampling of down gradient wells need to be done to verify assumptions that they are not being contaminated.
- Access to the site was unrestricted during our visit with few fences and inadequate warning signs **K.BLM.Caselton.01 Site Photos**
- Site should be contoured to minimize ponding of very acid water (less than pH of 2). **K.BLM.Caselton.01 Site Photos**
- There have been no AML injuries or fatalities on the Ely Field Office since 1988, at least, according to Dan who arrived at Ely in 1988.
- **[Auditor Opinion]** BLM should use validity exams to force relinquishment of claims so mitigation can proceed.
- EE/CA proposed action is about \$11 million (recontour and cap with 6' of crushed limestone to minimize generation of acid and remove dump site debris)
- **[Auditor Opinion]** BLM is "hoping" for new claimant to bring \$ to fix the problem; this "hope" has proven fruitless for the last 2 claimants; how much more should BLM rely on this "hope"? Where practical, we support the potential for reprocessing to reduce risks and provide funding in lieu of BLM. However, we believe the public health and safety must take precedence and BLM must, at some point, make a decision on whether to hold out hope for private funds based on expressed interest and the economic potential of reprocessing, or take action to mitigate the hazards with federal funds
- **[Auditor Opinion]** BLM allows claimants to hold mitigation that protects the public hostage to their perceived rights as claimants.

Details:

Notes from OIG meeting with Dan Netcher follow:

#### General Background

Dan is a hydrogeologist who took over management of the Caselton project in the mid-1990's when the project was moved from the Caliente BLM office (under Las Vegas Field Office) to the Ely Field Office.

At that time (mid 1990's), there was an active claimant (Eli Ades) working under 3809 but who had posted no bond; he was working to reprocess the old tailings.

Around 1997, Ades declared bankruptcy and BLM was left with responsibility and costs of mitigation; BLM began requesting funds from CHF and wanted to get Ades' claims relinquished by bankruptcy court; court refused and sold claims to Oxidor in early 2000's.

Oxidor proposed a Plan of Ops for a plant to reprocess the tailings and posted a small bond; Oxidor wanted to test a biologic process to recover metals from the tailings; worked the plant about a year and concluded the process was not successful.

BLM has thus worked and negotiated with two claimants (Ades and Oxidor) over the last decade to reprocess the mine tailings. They are now negotiating, through the Solicitor, with a third claimant (Lintail) to reprocess the tailings.

During this time, BLM did remove some hazardous material from the site left over from Ades

BLM could not proceed with tailings mitigation using CHF funds because of concern over possible "takings" from Oxidor

BLM did install some fencing on the north side of the tailings and along the highway, posted some signs, applied a geomorph polymer to the tailings to reduce dust (lasts about 4 years and needs to be reapplied in 2007 or 2008), installed some sediment fences to prevent erosion and improved drainages along the north and west sides of the site

BLM installed a diversion ditch along the west side and finished with rip rap lining in 2007; about \$200,000 from 1010

All BLM actions were coordinated with Oxidor to minimize interference

After Oxidor concluded their process was not successful, BLM again tried to get the claimant to relinquish the claim with no success

BLM requested funds from CHF in 2006 to perform a validity exam of the tailings in preparation for potentially withdrawing the land from location; request was denied (about \$40,000) because the site was a pre-FLPMA site; in general, according to Dan, while BLM trains its staff on the withdrawal process, BLM is very hesitant to do withdrawals because "Congress hates them"; BLM never considered a "closure" of access to the site as a way to impose legal

penalties for trespassers (fines from law enforcement); BLM did put notices in local papers warning people of hazards of tailings as part of a Community Relations Plan; **NOTE not doing validity exams is a form of “don’t ask, don’t tell”**  
Oxidor sold their claim to Lintail Mining who proposed reclaiming the tailings using their technology under a Brownfields approach under CERCLA; Solicitor (Natalie Smith, Portland) is working with Lintail to draft an agreement allowing this **K.BLM.Caselton.05 Reprocessing Negotiations**  
Dan realizes soil stabilization chemical needs to be reapplied and that more fencing and signage should be installed; he feels the site is “relatively secure and safe from immediate threat of harm to humans”

**Site Sampling K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis**

EE/CA was done in about 2000 and found depth to groundwater of 600’ at site  
EE/CA proposed an engineered cap as the solution to the tailings  
Nearest wells are about 6 miles down gradient near the highway; unlikely that any contaminated groundwater would migrate that far but **BLM has not sampled wells; these wells, according to USGS maps are not very deep, i.e., depth to groundwater near the highway is not much**  
Site is very acidic but underlain by limestone that neutralizes the acid and minimizes infiltration into groundwater (according to Dan)  
**EE/CA proposed action is about \$11 million (recontour and cap with 6’ of crushed limestone to minimize generation of acid and remove dump site debris)**  
Dan and Karl Ford did walk the entire wash down gradient of the site and found tailings in the oxbow bends but did not think these piles could contaminate groundwater; the tailings were not in the main channel but along the sides at the bends

**Injuries and Fatalities**

Dan was aware of no injuries or fatalities associated with AML sites in the Ely Field Office for as long as he has been there (1988).

Methodology:  
N/A.

**History**

**Status:** Approved **Request Review:**

**In Progress Edit:** William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 10/26/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.Caselton.04  
**Program Name:** BLM (Site Visits)  
**Subject:** CERCLA Action Memorandum

**Subsection:**

Origination Doctlink: [REDACTED]

### Purpose

Document BLM Action Memorandum for mitigation actions at Caselton.

### Scope

Caselton AML site.

### Source

Action Memo dated 11/1/06 copied from BLM files in Ely Field Office by OIG during site visit and attached:



Action Memo.pdf

### Conclusion

- BLM prepared an Action Memorandum for a Time-Critical Removal Action at the Caselton Tailings in NV on 11/1/2006. The Action supported efforts to divert surface water from the tailings to minimize off-site transport.
- The diversion action cost about \$460,000 including a contingency of \$41,800.
- The diversion action did not address contamination issues in the tailings or access to the tailings.
- The diversion action did not address any existing contamination in Caselton Wash downstream of the tailings.
- The diversion action occurred in 2006, twenty years after hazards were reported to BLM about the site.
- BLM is negotiating with a claimant to reprocess the tailings, the third time mitigation has been impacted by a claimant **K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office** [REDACTED].
- **[Auditor Opinion]** This site represents another example (with Randsburg) of BLM inaction over extended periods of time to address significant environmental hazards at AML sites.
- **[Auditor Opinion]** BLM is delaying needed mitigation actions at Caselton in the hope that a claimant seeking to reprocess the tailings will succeed where two other such claimants have failed.

### Details

Extracts from the Action Memo are shown below:

#### A Site Description

The Caselton Tailings Site consists of tailings from inactive, historic base metals, gold, silver and manganese milling operations from the Caselton Mill and the Prince Mill located near Caselton, Nevada. **The tailings are a product of milling and processing ores from the Pioche Mining District** located to the north and east in the Pioche Hills or Ely Range. **Silver and silverlead mining in the district began in 1869. Milling operations at the Caselton Site occurred approximately from the 1920s to the 1970s. After 1976, various levels of tailings reprocessing occurred.** The excavations at the tailings ponds are a result of this reprocessing and more recent activity associated with cyanide heap leaching on a small scale.

**The Caselton Wash tailings area covers approximately 75 acres** in the northern end of Caselton Wash and comprises nine tailings impoundments, which stretch down Caselton Wash for approximately 1.1 miles. The tailings ponds are mostly dry, but they have areas of surface water ponding with highly degraded water quality. The northern ponds are approximately 1000 feet by 600 feet in area, decreasing to 300 feet by 100 feet at the southern ponds. The Site also has two elongated dry ponds encompassing an additional 16.4 acres in unnamed washes below the Prince Mill. There are considerable additional mining wastes not stored in tailings ponds. The Site is not fenced around its perimeter, and the main access road to the Site is not gated.

#### 1 Removal site evaluation

A removal site evaluation was conducted by the Bureau of Land Management (BLM) during April 2000. The site evaluation involved characterization of the nine tailings ponds in Caselton Wash and the tailings in two unnamed washes immediately east of Caselton Wash associated with the Prince Mill. **The tailings ponds occupy approximately 90 acres and total approximately**

2,900,000 cubic yards

Tailings from Caselton Wash have migrated from the Site to within 1 mile of Meadow Valley Wash. In addition, during the site evaluation, tailings were observed to be released in vast quantities during a wind storm on April 17, 2000, and were blowing offsite in clouds that obscured visibility.

BLM conducted a removal site evaluation and Engineering Evaluation/Cost Analysis (EE/CA) in 2000-2001. The EE/CA indicates that the tailings found at the Site contain significant concentrations of arsenic (range 97-409 ppm), lead (range 906-3,489 ppm), manganese (range 2,634-143,104 ppm), zinc (range 1,465-7,197 ppm), and iron (range 274,637-279,172 ppm), with lesser amounts of sporadically detected copper, nickel and chromium.

### III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby human populations, animals, or the food chain

BLM uses risk management criteria (RMCs) for metals that define acceptable metal concentrations for various human receptors and wildlife. The ratio of the environmental media concentration to the RMC is used to determine risk. Most significant tailings exceedances are for arsenic and lead where RMCs are exceeded by 1-5fold, placing the Site in the moderate risk category for site visitors. Manganese is also present in extremely high concentrations in the lower tailings ponds with a maximum of 183,910 ppm. For surface water, using the on-site sample with the highest concentration of metals in the surface water at the Site, sample Pond 3-SW, the sample exceeds Nevada water quality standards for arsenic (87-fold), cadmium (772-fold), chromium (350-fold), copper (989-fold), iron, manganese (6,000-fold), nickel, and zinc (5083-fold). Poned water such as this is unlikely to be consumed by humans, but if it is consumed, it will pose a potential health threat. It may also cause injury or death to wildlife that may consume it. Additionally, the water has a pH of less than 2.0 and represents a dermal contact threat as well.

Water quality in Meadow Valley Wash down-gradient of Caselton Wash met Nevada water quality standards during site activities in 2000. Failure of the diversion channel could result in the release of tailings from tailings dam failures that could severely and intensively impact water quality in Meadow Valley Wash and downstream users. Visual evidence of historic tailings releases and deposits is found in Caselton Wash more than 10 miles downstream, almost to the confluence with Meadow Valley Wash.

B Actual or potential contamination of drinking water supplies  
None

C High levels of hazardous substance or pollutants or contaminants in soils at or near the surface that may migrate  
As described in ILA 3, and IILA, high concentrations of arsenic, lead, manganese, and zinc are found in the tailings that are migrating from the tailings ponds via tailings dam failures or windborne migration.

D Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released  
Throughout the year, wind storms are common and entrain particulates from the tailings ponds. The existing diversion channel is exhibiting rilling and other erosion that is impacting the ability of the diversion channel to withstand a significant precipitation/flood event. In addition, a year of high rainfall or a significant precipitation/flood event could significantly worsen the situation by breaching the walls of the diversion channel permitting surface water to enter the tailings impoundments which could result in further breaching the Prince Tailings dam and carrying thousands of cubic yards of tailings into Little Red Wash and Caselton Wash towards Meadow Valley Wash, which is used for residential and agricultural land uses. It is also possible that flood waters could saturate the tailings impoundments to the point of failure.

Some or all of the tailings ponds at the site are being proposed for reprocessing under the mining law of 1872. The mining law requires a claimant to submit a plan of operations under BLM's

surface mining regulations found in 43 c P R subpart 3809 BLM is awaiting more information from the proponent before continuing with the non-time critical removal actions described in the EE/CA In light of the delay in the implementation of a permanent, long-term response, a timecritical response is necessary to address the immediate risks associated with the stability of the diversion channel If a six-month planning period were allowed to elapse, no work activity could take place in this field season and subsequent actions would be delayed further into the future Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the time-critical response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment

A. Proposed Actions

Time-Critical Removal Action

The time-critical response actions described below will stabilize the primary off-site migration pathways and reduce risk associated with exposure of humans and wildlife to the hazardous substances in the tailings These actions will not reduce risk associated with on-site exposure, which will be addressed in a future action

1 Proposed Action Description

The currently planned effort to armor the diversion channel is a portion of Alternative 2 from the EE/CA (Institutional Controls and Surface Water Diversion) and is the planned time-critical action with the exception that the Prince Tailings will not be moved at this time This alternative is effective in ensuring that the redirection of surface water away from the tailings by the diversion channel will continue to prevent off-site transport of contaminants via the surface water pathway It does not address the volume or toxicity of the contaminants found in the tailings

B. Project Schedule and Estimated Costs

Table 1: Estimated Costs and Schedule for Proposed Removal Actions at the Caselton Tailings Site

Proposed Removal Action	Estimated Cost	Anticipated Schedule
Install diversion channel armoring	\$418,200	ASAP, fall 2006
Project Contingency (10%)	\$ 41,800	
Total Project Ceiling	\$460,000	

Methodology

Reviewed source document.

Submission: Submitted William McMullen 01/11/2008 09:56:06 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 04/28/2008 12:55:10 PM

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Purpose:

Document BLM Action Memorandum for mitigation actions at Caselton.

Scope:

Caselton AML site.

Source:

Action Memo dated 11/1/06 copied from BLM files in Ely Field Office by OIG during site visit and attached:



Action Memo.pdf

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None

C. High levels of hazardous substance or pollutants or contaminants in soils at or near the surface that may migrate  
As described in ILA 3, and IILA, high concentrations of arsenic, lead, manganese, and zinc are found in the tailings that are migrating from the tailings ponds via tailings dam failures or windborne migration.

D. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released  
Throughout the year, wind storms are common and entrain particulates from the tailings ponds. The existing diversion channel is exhibiting rilling and other erosion that is impacting the ability of the diversion channel to withstand a significant precipitation/flood event. In addition, a year of high rainfall or a significant precipitation/flood event could significantly worsen the situation by breaching the walls of the diversion channel permitting surface water to enter the tailings impoundments which could result in further breaching the Prince Tailings dam and carrying thousands of cubic yards of tailings into Little Red Wash and Caselton Wash towards Meadow Valley Wash, which is used for residential and agricultural land uses. It is also possible that flood waters could saturate the tailings impoundments to the point of failure.

Some or all of the tailings ponds at the site are being proposed for reprocessing under the mining law of 1872. The mining law requires a claimant to submit a plan of operations under BLM's surface mining regulations found in 43 c P R subpart 3809. BLM is awaiting more information from the proponent before continuing with the non-time critical removal actions described in the EE/CA. In light of the delay in the implementation of a permanent, long-term response, a time-critical response is necessary to address the immediate risks associated with the stability of the diversion channel. If a six-month planning period were allowed to elapse, no work activity could take place in this field season and subsequent actions would be delayed further into the future. Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the time-critical response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

A. Proposed Actions  
Time-Critical Removal Action

The time-critical response actions described below will stabilize the primary off-site migration pathways and reduce risk associated with exposure of humans and wildlife to the hazardous substances in the tailings. These actions will not reduce risk associated with on-site exposure, which will be addressed in a future action.

1. Proposed Action Description

The currently planned effort to armor the diversion channel is a portion of Alternative 2 from the

EE/CA (Institutional Controls and Surface Water Diversion) and is the planned time-critical action with the exception that the Prince Tailings will not be moved at this time. This alternative is effective in ensuring that the redirection of surface water away from the tailings by the diversion channel will continue to prevent off-site transport of contaminants via the surface water pathway. It does not address the volume or toxicity of the contaminants found in the tailings.

**B. Project Schedule and Estimated Costs**

**Table 1: Estimated Costs and Schedule for Proposed Removal Actions at the Caselton Tailings Site**

Proposed Removal Action	Estimated Cost	Anticipated Schedule
Install diversion channel armoring	\$418,200	ASAP, fall 2006
Project Contingency (10%)	\$ 41,800	
Total Project Ceiling	\$460,000	

Methodology:  
Reviewed source document.

**History**

**Status:** Approved **Request Review:**

**In Progress Edit:** William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 11/02/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Caselton.05

Subsection:

Program Name: BLM (Site Visits)

Subject: Reprocessing Negotiations

Origination Doctlink: 

### Purpose

Document BLM answers to OIG questions regarding reprocessing of Caselton tailings.

### Scope

### Source

Email from BLM ELY Field Office manager responding to OIG email (emails copied below in Details section).

### Conclusion

- Lintail contacted the BLM NV State Office who then notified the Solicitor's Office of interest in reprocessing the Caselton tailings.
- It is unclear at what point, or whether, the BLM Ely Field Office has been involved in negotiations.
- BLM has not conducted nor does it plan to conduct feasibility studies of reprocessing of the Caselton tailings.
- BLM will review and technically evaluate the processes proposed by Lintail for such reprocessing.
- BLM believes an agreement with Lintail could save taxpayer dollars and is consistent with the Department's goal of cooperative conservation.

### Details

John Ruhs@blm.gov

11/01/2007 07:19 PM

To William\_McMullen@oig.doi.gov, John\_Illson@oig.doi.gov

cc Miyoshi\_Stith@blm.gov, @yahoo.com, Penny\_Woods@nv.blm.gov, Robert\_Kelso@nv.blm.gov, Dan\_Netcher@nv.blm.gov

Subject Re: Fw: Caselton "brownfields" alternative

Below are the responses to the questions which you submitted to Dan Netcher. Please, let us know if you need additional information or have additional questions. Thanks.

Here are the documents referenced .

John F. Ruhs  
Field Manager  
Ely Field Office  
NV BLM  
(775)289-1990 - Office  
(775)293-2109 - Cell



(775)289-1918 - FAX OIG response.doc Final Memo from Solicitor to DOJ.doc Final Memo from DLW to Solicitor.doc

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William McMullen/DEN/OIG/DOI

10/22/2007 09:33 AM

To Dan Netcher/EYFO/NV/BLM/DOI@BLM

cc John Illson/DEN/OIG/DOI@OIG

Subject Caselton "brownfields" alternative

Dan, I had some questions regarding what is going on at Caselton:

- Has any preliminary technical feasibility study been done to validate the economic potential of reprocessing the tailings using currently viable technology?
- What prompted the Solicitor to begin negotiations with Lintail (was it at BLM's request and is there documentation of this or was there some other motivating action that is documented?)

- Is there any documentation that leads BLM to conclude that Lintail is serious and technically capable of reprocessing the tailings?
- Is there a point before negotiations proceed too far and too much money is spent where BLM has or will critically evaluate the feasibility of any Lintail-proposed reprocessing actions?

If you have any documentation supporting answers to these questions, that would be most helpful. Thanks much.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

Specific answers provided to OIG questions are in Ruhs email attachment OIG response doc shown below:

#### Answers to OIG Questions

##### 1. Has any preliminary technical feasibility study been done to validate the economic potential of reprocessing the tailings using currently viable technology?

BLM has not conducted a feasibility study of the economic potential of reprocessing. Lintail proposes to use conventional, proven technology to remove metals from tailings. BLM understands generally that Lintail has gathered information, based on prior work by former operators, indicating that it can reprocess profitably at least some of the tailings and, at the same time, significantly mitigate environmental conditions. As indicated in Lintail's proposed work plan for the Site, Lintail proposes first to construct a pilot scale processing facility at the Mill site (capable of processing up to 300 tons of tailings/day) to test the effectiveness of the processing and confirm its commercial viability. The scope of work provides for an interim work plan for the development and operation of the pilot scale program. Because BLM will insist on engaging in active oversight of the operations, (and will be recovering its costs of oversight under the administrative order on consent), BLM can itself evaluate the effectiveness of the project early on, and as the project proceeds through subsequent stages.

##### 2. What prompted the Solicitor to begin negotiations with Lintail (was it at BLM's request and is there documentation of this or was there some other motivating action that is documented)?

Lintail initially approached the NV BLM State Office to propose re-processing the tailings. The NV BLM State Office notified the Solicitor's Office of Lintail's proposal. The NV BLM State Office and the Office of the Solicitor then convened several conference calls with Lintail to better understand the proposal, and to evaluate legal vehicles under which the work could be performed, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), so as to provide Lintail with protection from liability from pre-existing contamination, while at the same time promoting environmental cleanup consistent with CERCLA. I have attached a memorandum from the Solicitor's Office dated June 24, 2007 and a referral to the Department of Justice dated the same day (June 24, 2007) in which the Office of the Solicitor notes BLM's interest in negotiating a bona fide prospective purchaser agreement (BFPP) with Lintail that could -- if effectuated -- expedite cleanup of the site and save substantial taxpayer resources. The Office has requested legal support from the Department of Justice's Environmental Enforcement Section, which has assigned an attorney to help with the matter.

##### 3. Is there any documentation that leads BLM to conclude that Lintail is serious and technically capable of reprocessing the tailings?

Lintail has submitted to BLM a draft scope of work that describes, preliminarily, how it proposes to reprocess the tailings. Lintail proposes to use conventional metals recovery technology. Lintail will also be required to invest considerable funds to obtain Clean Water Act permits from the State of Nevada and to construct a pilot processing facility. As discussed above, BLM understands generally that Lintail has been in discussions with previous re-processors and thus understands the technical hurdles at the site, the quality of the tailings, and the likely costs associated with reprocessing. At the same time, the administrative order on consent will require the posting of a bond for performance, and will also propose stipulated penalties in the event of non-compliance. Lintail's commitment of resources, together with the incentives for performance and disincentives for violations in the administrative order on Consent (AOC), provide some indication of Lintail's "seriousness" and commitment to work at the Site.

##### 4. Is there a point before negotiations proceed too far and too much money is spent where BLM has or will critically evaluate the feasibility of any Lintail-proposed reprocessing actions.

BLM does not propose at this time to evaluate formally the feasibility of Lintail's approach before execution of an AOC. That is, BLM does not propose any external peer review of Lintail's proposed technology, or validity examination of the tailings, or other evaluation of feasibility/commercial viability of the Lintail proposal. Rather, BLM will review the scope of work with some care to ensure that Lintail's approach, as outlined in that document and in Lintail's response to comments, is technically justifiable. In its comments on the scope of work, BLM will also raise with Lintail its own concerns about ensuring, to the extent possible, that the approach is feasible and viable, and will ask for supporting documentation. Moreover, as noted above, BLM will engage in active oversight under the AOC, and will periodically meet with Lintail to discuss the site progress, including -- as a matter of course -- the feasibility of the reprocessing. Finally, the AOC itself will provide for the construction of a pilot plant, during which the proposal will be subject to formal evaluation. Under the draft BFPP agreement, BLM will recover its oversight costs. Thus, BLM can -- without cost to itself -- engage in ongoing evaluations of the effectiveness of the system as it is implemented. The draft BFPP agreement also provides for financial assurances to guarantee performance as well as stipulated penalties for violations of its conditions.

As you know, BLM believes that -- even if there are some technical uncertainties about the approach -- serious consideration to re-processing of abandoned mill tailings, with a potential significant net environmental improvement at Caselton, is in the public interest. Partnering with commercial entities not only promotes the Department's goal of engaging in cooperative conservation, but it can help promote general economic growth by facilitating the recovery of precious metals for commercial use, while reducing on-site pollutants. Thus, BLM believes that consideration of the approach, and negotiation of an agreement (providing for incentives for performance) may ultimately save the federal taxpayer considerable monies. Given the relative scarcity of dedicated appropriations to address Caselton, some time and investment in alternative approaches to address this orphan mine site seems, to BLM, justifiable. In the event that reprocessing proves unsuccessful and unprofitable, BLM will -- at that point -- have no alternative but to address the site using public funds. As we have indicated, however, this approach is -- to BLM's knowledge -- unprecedented, and thus BLM and the Department as a whole are proceeding with deliberation and care. If successful, this approach might promote partnering at other mining sites nationwide. If unsuccessful, it could deter the BLM State Office from pursuing other partnerships in the future.

**Methodology**

Reviewed BLM response.

Submission: Submitted William McMullen 01/11/2008 09:56:32 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 04/28/2008 12:55:22 PM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 05/16/2008 10 29 24 AM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Fri 05/16/2008 10:29 AM. For original text, refer to the field(s) above.

**Purpose:**

Document BLM answers to OIG questions regarding reprocessing of Caselton tailings.

**Scope:**

**Source:**

Email from BLM ELY Field Office manager responding to OIG email (emails copied below in Details section).

**Conclusion:**

Lintail contacted the BLM NV State Office who then notified the Solicitor's Office of interest in reprocessing the Caselton tailings.

- It is unclear at what point, or whether, the BLM Ely Field Office has been involved in negotiations.
- BLM has not conducted nor does it plan to conduct feasibility studies of reprocessing of the Caselton tailings.
- BLM will review and technically evaluate the processes proposed by Lintail for such reprocessing.
- BLM believes an agreement with Lintail could save taxpayer dollars and is consistent with the Department's goal of cooperative conservation.

**Details:**

**John Ruhs@blm.gov**

11/01/2007 07:19 PM

To William\_McMullen@oig.doi.gov, John\_Illson@oig.doi.gov

cc Miyoshi\_Stith@blm.gov, [REDACTED] Penny\_Woods@nv.blm.gov, Robert\_Kelso@nv.blm.gov, Dan\_Netcher@nv.blm.gov

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10/22/2007 09:33 AM

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cc John Illson/DEN/OIG/DOI@OIG

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Methodology:  
Reviewed BLM response.

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**History**

**Status:** Approved **Request Review:**

**In Progress Edit:** William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI



All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

K BLM.Caselton.06 Ely Field Office Exit Conference

McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 10/24/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Nevada.01  
Program Name: BLM (Site Visits)  
Subject: Site Visits

Subsection:

Origination Doclink: 

### Purpose

Document AML sites in NV during OIG site visit on 8/28 - 30/07.

### Scope

BLM NV AML Program.

### Source

Photos taken of sites during OIG visit in August 2007.

Basic information on Golden Butte and Ward provided by email from Lynn Bjorkland, BLM Ely and attached:



goldenbutte\_ward info.doc

### Conclusion

- None of these sites presented hazards as dangerous as those OIG observed at Randsburg, Caselton or Virginia City.
- The King Midas millsite is on BLM land just west of Cherry Creek; BLM did not recognize that the tailings were on BLM land and had never opened a case file on the mill claim since it was pre-FLPMA.

### Details

OIG (Illson and McMullen) visited Tuscarora with Deb McFarlane, BLM Elko, on 8/28/07, Spruce Mountain on 8/28/07, Golden Butte with Lynn Bjorkland, BLM Ely, on 8/29/07, and Ward with Lynn Bjorkland on 8/30/07. We selected these sites based on coordination with Chris Ross, BLM State AML lead using a prioritized list of sites (dated 2006) provided by Ross. We tried to concentrate on those sites that were rated High Priority on that list (see attachment "List of Prioritized Sites.pdf" in [J.BLM.06.01 Response to OIG Questionnaire](#) ). One high priority site was so difficult to access that Ross recommended we not visit that site (Johnston Mill).

We did not observe any open shafts or adits at Tuscarora and saw no evidence of OHV activity.  There was a significant amount of illegal dumping on BLM land as shown below that presents health and safety hazards.

#### Tuscarora photos



garbage dumping.JPG

 We observed several AML sites that had been mitigated by the State. We did observe an old town site with deteriorating structures and an open adit as shown below.

#### Spruce Mountain photos



shaft 1.JPG adit.JPG deteriorating structure.JPG shaft.JPG

The Ward site has an active claim on BLM land and presents a  potential acid mine drainage problem from waste rock and the tailings which are full of iron-rich minerals. Open adits have been partially closed by the claimant but access is still relatively easy. We also observed an open adit on private land. Lynn considered Ward the most dangerous site on the Ely Field Office (she had no familiarity with Caselton).

#### Ward photos



private adit.JPG

Ward closed adits on BLM land.JPG

Lynn noted that Golden Butte is being funded through the Army Corps of Engineers Restoration of Abandoned Mine Sites (RAMS) program because when the Corps solicited potential projects, BLM was ready to proceed immediately with the Golden Butte project. The site has an active gold mine (patented) and old heap leach pads on BLM land. BLM is testing ways of drying out any water that infiltrates the pads using passive fans. On our way to Golden Butte, we noticed a mill site  (King Midas mill) just a mile upstream from Cherry Creek that was posted as no trespassing. Using [www.geocommunicator.gov](http://www.geocommunicator.gov), we determined that the site was on BLM land although Lynn thought initially that it was on private land. Since the tailings from the mill were in the channel that flowed into Cherry Creek, we were concerned whether contamination of wells in Cherry Creek was occurring. Lynn had no knowledge of this (obviously BLM had never tested soils or water for this possibility) but did email the State to determine if any sample data was available. See Lynn Email tab below. Lynn noted that about \$2 million had been spent on the site so far (\$350k from a bond and the balance from RAMS). She

noted the nearest potential human lived about 20 miles away; the site was 14 miles west of Cherry Creek.

#### Golden Butte photos



test pad.JPG heap leach pile above test pad.JPG

#### Lynn Email

Lynn, thanks for your time last week. Our visit to Caselton was quite interesting. It is certainly a large site with a variety of issues. As a followup to our visit around Cherry Creek, I got on [www.geocommunicator.gov](http://www.geocommunicator.gov) to view the area. As shown in the first photo below, the King Midas millsite is an active mill site claim; **this is the mill just south of the road at the bend to the west of Cherry Creek**. According to geocommunicator, the mill is owned by [REDACTED] and fees have been paid through 2007.



In the photo below, I used geocommunicator to overlay BLM ownership; the visible land features are on BLM land. The white areas are privately owned. If this information is correct, the mill is on BLM land, which makes sense as fees are being paid each year. I wonder if you have a plan of operations of the equivalent for this mill that shows a reclamation plan. I would think there is some potential for downstream contamination from mill tailings as the mill is situated on a streambed and Cherry Creek is only about a mile or to the east. Has BLM ever taken samples of stream sediments downstream from the mill or groundwater samples, particularly if Cherry Creek residents use wells at all? I would be interested in any information you have regarding this site, whether BLM has determined if mill tailings from the King Midas mill pose any threat to Cherry Creek, and what reclamation actions the mill owner is obligated to perform so that tailings do not pose a threat to Cherry Creek. Also, do you have any photos of the mill and any tailings it has produced? Thanks for your help.



William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

Hi Bill,

Glad that you found Castleton with no problem and had an interesting tour. As for the King Midas millsite, I believe that all your information is correct, or at least I get the same results. As far as I know, all that disturbance is pre FLPMA and we never had a BLM case file covering the work. People who know the history tell me that the material came from Exchequer mine which was a permitted mine in the early 80s and before. It is located up the valley to the north a few miles. Our geologist, Bill Wilson, believes that it is likely oxide material and not acid generating. It is unknown what sort of heavy metals may be harboring in the area. Since we have never had a case file for the site, it was never on my radar of concern. I am not aware of any water sampling that may have ever taken place. The claimant likely pays fees to keep the claim current, but has never done or proposed surface disturbing activities post FLPMA on public land that would require a plan of operation, bond, or reclamation plan. As far as I know, all disturbance was created prior to these regulations. Even so, the claimant is ultimately responsible for his claims and how they affect public health and safety.

The State does a great job tracking these sort of cases that could affect Waters of the State. I will forward this to them to see if they have any sampling data or old files on the site. We all pass by it many times in route to Golden Butte. I always assumed it was on patented ground, but apparently the main disturbance is on public. That is all the information I can give to you now. Perhaps the folks at NDEP can tell you more.

Lynn

Lynn Bjorklund  
Environmental Protection Specialist/Minerals  
Ely Field Office, Bureau of Land Management  
775 289-1893

#### Methodology

Documented photographically site visits to AML locations in NV.

Submission: Submitted William McMullen 01/11/2008 09:58:15 AM

K BLM.Nevada 01 Site Visits

Level 1 Approval:

Level 2 Approval:    Approved                    John Illson                    04/28/2008 12:55:54 PM

[Linkage Information](#)

**History**

**Status:**                    Approved                    **Request Review:**

**In Progress Edit:**        William McMullen/DEN/OIG/DOI

**Confidentiality:**         Standard

**Add Document Readers:**

**Read Authorization:**     [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 09/10/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Rip Van Winkle.01

Subsection:

Program Name: BLM (Site Visits)

Subject: Site Visit

Origination Doctlink: [REDACTED]

### Purpose

Visit abandoned mine (Rip Van Winkle) that is a priority site for Elko Field Office.

### Scope

BLM abandoned mine program.

### Source

Nevada Abandoned Mine Lands Report dated September 1999 provided to OIG by Chris Ross (extracted pages attached):



NV 1999 AML Report pages.pdf

Summary of Nevada AML Environmental Sites dated October 23, 2006 provided to OIG by Chris Ross (attached):



NV AML Priority List.pdf

Pages from USGS Bulletin 2210-E dated 2003 found at <http://pubs.usgs.gov/bul/b2210-e/> and attached:



USGS Rip Van Winkle.pdf

Photos of Rip Van Winkle site taken by OIG during site visit on August 28, 2007 and shown in Detail section.

Topographic maps of area of mine from [www.geocommunicator.gov](http://www.geocommunicator.gov) shown in Detail section below.

### Conclusion

- The Rip Van Winkle mine is ranked as a High priority site with chemical hazards.
- The site reclamation costs are about \$1 million.
- The site is being reclaimed principally for wildlife habitat purposes.
- The site is very remote and located along an intermittently flowing creek.
- USGS has stated that site conditions are such that there is little concern for acid generation or metal releases from the site.
- **[Auditor Opinion]** BLM has inappropriately prioritized this site and should not be allocating funds to reclaim this site.
- **[REDACTED]** During our trip, Deb noted she had been successful in getting claimants to mitigate safety hazards on their claims by calling them and pointing out their liabilities if someone were to be injured.

### Details

OIG visited the Rip Van Winkle mine site on August 28, 2007 accompanied by Deb McFarlane, a Geologist and Hazardous Materials Specialist in the Elko Field Office. The site is very remote on the north side of Lone Mountain northwest of Elko, Nevada and took about 2 hours to reach on a rough dirt road. The site includes various physical features that have been closed (or caved in), deteriorating structures, waste rock piles and 8 dry tailings ponds in the Coon Creek drainage. Coon Creek flows into Maggie Creek (the creek was not flowing at the time of our visit) about 10 miles downstream and then into the Humboldt River near Elko about 35 miles downstream. Apparently, there are no nearby people who could drink water from the creek or groundwater from the creek drainage. (see Topo section below). Deb was not aware of any samples of soils or groundwater taken downstream from the ponds or whether, if samples were taken, the results showed any contaminants of concern.

In response to an OIG questionnaire, **J.BLM.04.01 Response to OIG Questionnaire** [REDACTED] BLM ranked this site first for the Elko office as a site with a "chemical hazard." Deb noted that BLM planned to consolidate and relocate some of the tailings ponds and redirect Coon Creek away from the consolidated ponds. Deb noted that the total costs for this reclamation are about \$1 million. BLM's answers to OIG questions note that BLM has about half of these funds and expects the other half in FY08. Deb noted there was interest from Trout Unlimited in having Coon Creek restored as fish habitat and that wildlife considerations were the main driver for the project.

Deb noted that there had historically been some interest in re-mining the tailings but that the soil had such high clay content that it was difficult to get water to leach through the soil. The USGS report notes similar characteristics in the Section below, "although mill tailings are in contact with stream waters, the high potential for acid generation and metal release are limited by the low permeability. Poor mining practices and potentially reactive waste materials at this mine ultimately produce only slightly degraded water. Natural attenuation further minimizes metal concentrations within about a 0.5 km of the last tailings impoundment."

**During our trip, Deb noted she had been successful in getting claimants to mitigate safety hazards on their claims by calling them and pointing out their liabilities if someone were to be injured.**

**Topographic Maps**

Topo showing location of Rip Van Winkle mine in relation to Lone Mountain, Coon Creek and Maggie Creek.



Topo 1 compressed.jpg

Topo showing location of Rip Van Winkle mine in relation to Elko, NV.



Topo 2 compressed.jpg

Page 6 of the Source document "NV AML Priority List" shows the Rip Van Winkle mine ranked "H" for high.

**Site Prioritization**

Powder River Mining Co	BLM – Carson City T12N R32E Sec 33 E1/2 Mineral County	BLM Case File N37-83-005N Abandoned mill site, buildings, trailers, trash, cyanide heap leach used on sulfide area.	Heap leach, water well, pipelines, drums, trenches; unknown contamination. \$20,000 to clean?	No active claims in section	L
Red Devil Mercury Mine	BLM – Elko T31N R49E Sec. 6 Eureka County	Abandoned mercury mine, with several open shafts and adits, most fenced.	Minimal Hg sampling to date	Orphan	O
Rio Tinto	USFS T45N R53E Sec 11 Elko County	Multiple tailings impoundments in active creek	Active reclamation program being conducted by USFS, NDEP and industry; almost done?	Area has patented claims and unpatented claims	NC
Rip Van Winkle Mine	BLM – Elko T37N R53E Sec 3 Elko County Lone Mountain area	Four tailings impoundments with acid generating material. Difficult access. Mill building "blew up" during 1994 wildland fire. Debris and cupels scattered over site	Perennial stream, Coon Creek flows through tailings impoundments, then into Maggie Creek. See site BLM report.	Numerous active patented claims in section. Patented claims present at mine site	H

Photos taken by OIG show the remote area in which the site is located.

**Site Photos**



overall site.JPG OIG Photo showing tailings ponds in foreground and mine site in background



tailings ponds.JPG OIG Photo showing tailings ponds in view down the valley from the mine site

Pages from Source document "USGS Rip Van Winkle" showing the conclusion that the site presents little concern.

**USGS Report**

to accomplish natural attenuation. During this unusual spring "flood" of 1999, similar acidic waters from historical mine adits and springs were treated by Battle Mountain Gold using a temporary water-treatment plant in adjacent Iron Canyon. During normal spring runoff, the springs and adit discharges in these canyons flow on the surface for only 100-200 m.

**Coon Creek—An Unusual Example**

Coon Creek, flowing west from the Rip Van Winkle mine (photograph 16), is an example of how physical conditions control the chemistry of mine waters. The lower tunnel is dry, and no seeps come from the waste dumps. The concern here is

for stream waters flowing over, and through, mill tailings (photograph 17). Geochemical results are summarized on figure 8. Four visits to this area from 1996 to 1999 provided results that seem paradoxical on first examination. Measurements of pH of stream waters in contact with tailings showed values to be consistently in the range of 6.8 to 7.4, rising to about 8.4 west of the tailings. Laboratory leach tests (Nash, 2001) confirmed the expectation that the sulfidic tailings should create acidic, metal-rich waters, but no such surface waters were detected. Closer inspection on the third visit disclosed thin films of red FeOx precipitate along the edge of the creek next to the tailings, and depressions made by cattle hooves contained small pools of reddish water. The red seeps proved to have pH values of 1.7 to 2.1 and very high conductivity (2,000–4,000 microsiemens per centimeter). Not surprisingly, chemical analyses of the acidic seeps showed extremely high metal concentrations, especially for Cu and Zn, which were more than 40,000 and 1 million ppb, respectively. Cadmium mimics Zn, reaching more than 8,000 ppb in tailings seeps. Repeated sampling of Coon Creek shows that relatively small concentrations of metals actually enter the stream (about 200–400 ppb Zn) despite the evidence in leach tests and in the seep waters for thousands of ppb of Zn and other metals. The

discrepancy appears to be explained by high clay content in the tailings that gives them very low permeability: only small amounts of water can infiltrate, react, and exit these tailings. The conclusions for this mining area are (1) despite moderate precipitation (about 25 cm/year), little or no water from waste dumps and mine workings enters the nearby creek, and (2) although mill tailings are in contact with stream waters, the high potential for acid generation and metal release are limited by low permeability. Poor mining practices and potentially reactive waste materials at this mine ultimately produce only slightly degraded water. Natural attenuation further minimizes metal concentrations within about a 0.5 km of the last tailings impoundment.

### Attenuation Mechanisms

Three stages in a related process appear to be involved in the attenuation of metals in the areas described above (1) mixing of waters, (2) rise in pH, and (3) precipitation of Fe-Mn oxides and adsorption of trace metals. The attenuation reactions start with mixing of waters, seen clearly at the junction of tributary streams, and inferred from measure-

### Methodology

Reviewed source documents.

Submission:	Submitted	William McMullen	01/11/2008 10:00:04 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	04/28/2008 12:56:18 PM

### Linkage Information

### History

**Status:** Approved **Request Review:**  
**In Progress Edit:** William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard

#### Add Document Readers:

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 02/12/2008

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.RosamondCA.01                      Subsection:  
Program Name: BLM (Site Visits)  
Subject: Site Visit

Origination Doclink: [REDACTED]

**Purpose**  
Document OIG visit to AML sites near Rosamond, CA.

**Scope**  
BLM AML Program.

**Source**  
Observations of OIG staff during site visits.  
Discussions with BLM representatives accompanying OIG staff on site visits.  
Maps and aerial photos of sites provided to OIG by Lawler during our visits (shown in Details section).  
Topographic map of Rosamond area from [www.geocommunicator.gov](http://www.geocommunicator.gov) (shown in Details section).

**Conclusion**  
Three sites near Rosamond, CA (Golden Queen mine, Cactus mine, Tropico mine) with elevated levels of arsenic in mine waste and tailings were visited by OIG staff. All three sites have potentially responsible parties.

- The Golden Queen mine is being proposed to reopen as an open pit gold mine by a Vancouver company that is working with BLM on acceptable ways to contain contaminated tailings.
- The Cactus mine has an eroded tailings pile that is washing into a drainage; there is a potentially responsible party that BLM intends to contact regarding the site hazards.
- The Tropico mine includes a small section of BLM land onto which tailings have washed and from which tailings are washing back onto private land. BLM hopes to work with the mine owner to mitigate the hazards at the site.
- Installation of fences and signs can be delayed for up to a year pending wildlife and archeological surveys according to Linn Gum.

**Details**  
Members of OIG staff visited the Golden Queen mine, the Cactus Mine and the Tropico Mine, all located near the town of Rosamond, CA on 1/30-31/2008. We were accompanied on our visits by BLM personnel: Dave Lawler, BLM CA AML Coordinator, John Key, BLM CA Environmental Protection Specialist, Richard Grabowski, BLM CA Deputy State Director for Minerals, and Linn Gum, BLM Ridgecrest Chief, Lands and Minerals Branch.

We visited the selected (three) sites because these had been identified by BLM's Rapid Assessment Technical Team K.BLM.California.01 Rapid Assessment Technical Team [REDACTED] (see attachment to email).  
[REDACTED] All of these sites were identified as having elevated concentrations of arsenic in mine waste or tailings and were located near a growing population area. These "urban interface" areas are of concern to BLM and were the impetus for establishment of the Rapid Assessment Technical Team according to Lawler. Lawler noted that cleanup of these sites by BLM, if PRP's are not found, could cost hundreds of millions of dollars. We also discussed implementation of temporary mitigation measures with Linn Gum and questioned him as to why measures such as fences and signs were not immediately installed at dangerous AML sites with environmental or safety hazards. He stated that, as he understands the process, such measures cannot be installed until appropriate wildlife, archeological and/or cultural surveys are conducted. These surveys can take as much as a year to complete. Linn was adamant that if he placed fences or even signs at a site without these surveys being completed, he and the BLM field office could be severely criticized by environmental groups and upper management. [REDACTED]

### Topographic map of Rosamond, CA area

The aerial photo below provided by Lawler shows BLM land highlighted around the Golden Queen mine. Some of the tailings, reported by Lawler to have elevated levels of arsenic, are on BLM land and have washed onto private land. During our visit, we observed numerous open shafts, adits and stopes on BLM land as well as deteriorating structures. BLM is negotiating with a mining firm from Vancouver to reclaim the site through an open pit mining operation which would use the existing tailings as a liner barrier in a heap leach pad. If the mine is not developed, BLM hopes to get the company to recontour and cap the existing tailings to prevent further erosion. The company representative available during our visit stated that they had been working on approval for the new mine at the federal, state and county level for 5 years and were hopeful that success was imminent.

### Golden Queen Mine photos

The aerial photo below provided by Lawler shows BLM land highlighted at the Cactus mine. Much of the approximately 1 mile long tailings pile (white area on BLM land) is on BLM land. During our visit, we observed that this pile, which had been contoured and faced with rock rip-rap, had eroded. Some of the rock had fallen into a drainage and there was evidence that tailings were also being washed into the drainage. The tailings pile was constructed by the mine operator, Hecla Mining, who is therefore a potentially responsible party that BLM intends to contact for repair and mitigation of the hazards presented by the pile.

### Cactus Mine photos

The following aerial photo provided by Lawler shows BLM land highlighted around the Tropico mine. In the BLM section at the lower left, it is clear that some tailings have washed from the Tropico site onto BLM land and then eroded from there back onto private land. During our site visit, we heard from the owner of the Cactus mine (Cliff Burton) and members of the local Rosamond Community Services District (water supplier). Both Burton and the District have drinking water wells downstream from the Tropico site that have been tested, according to them, since the 1980's and have shown no elevated levels of arsenic in the water. Lawler, however, is also concerned about airborne dispersal of arsenic which can be inhaled and ingested by nearby residents. BLM hopes to work with Burton to affect some kind of land transfer or to get Burton to remove the tailings from BLM land and areas downstream where tailings from BLM land have been deposited.

### Tropico Mine photos

**Methodology**  
Documented discussions with BLM staff, observed and photographed sites.

Submission: Submitted William McMullen 05/05/2008 03:00:12 PM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 06/02/2008 02:08:31 PM

**Linkage Information**

**History**

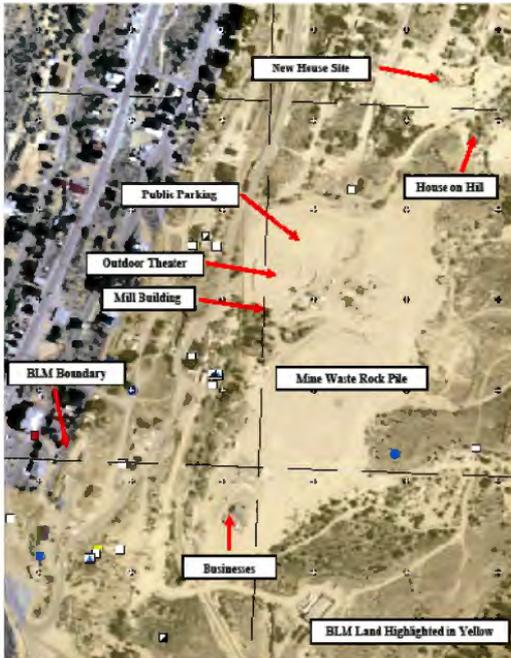
**Status:** Approved **Request Review:**  
**In Progress Edit:** William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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The Source photos show the features illustrated in the aerial photo above. The commercial businesses and residences are clearly on BLM land according to the information provided by BLM/Las Cruces. ■ Some of the residences are newly constructed and some lots are being offered for sale. The mill tour business is located inside a dilapidated old mill where the public pays to visit. Trespass at the mill and in the residential areas is exposing the public to potential health and safety issues which could increase BLM's liability. Increased injuries or deaths due to safety or environmental hazards could result [Auditor Opinion]. The land ownership status in this area was verified by Dave Mortan, BLM NV State Office, Chief Cadastral Surveyor of Nevada, from a cadastral survey of the land section that includes the mill and Mine Waste Rock Pile in the photo K.BLM.Virginia City.02 Cadastral Survey ■.

The photo in the Section below from geocommunicator shows an aerial photo with active claims on the area of the Mine Waste Rock Pile in the above photo. The claims are labeled "Mint # 1 and Mint # 2". According to the legend, these are active placer claims. To investigate the issue of claims and BLM ownership of the area of the Mine Waste Rock Pile and mill, OIG emailed Terry Neumann, the Solid Minerals BLM lead and AML lead in the Carson City Field Office. The emails are shown in the Section below. Terry Neumann noted that BLM has no Notice or Plan of Operations for these claims and nothing apparently covers the operation of a commercial mill tour business.

#### Claims on Mine Waste Rock Pile



Terry Neumann/CCFO/NV/BLM/DOI@BLM

08/13/2007 03:21 PM

To William McMullen/DEN/OIG/DOI@OIG@DOI

cc Linda Kinkead/CCFO/NV/BLM/DOI@BLM, Carla James/CCFO/NV/BLM/DOI@BLM

Subject Re: Info on active claims in Virginia City

Mint #1, #2 are currently claimed by [REDACTED] (location date 11/01/2003). He has never submitted a NOI or POO. Therefore, no casefile, no bond, no inspection. These claims have changed hands many times over the years (usually bought and sold using a "quitclaim deed" as title). A previous operator submitted a Notice in the mid-1980's, and the case was closed in 1993. That casefile is archived at the state office or some other repository. Please direct any further inquiries relating to active claims to resource assistant Linda Kinkead or the minerals lead Carla James. FYI--- claim information is readily available online through the BLM LR2000 system.

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG

08/07/2007 08:24 AM

To Terry Neumann/CCFO/NV/BLM/DOI@BLM

cc John Illson/DEN/OIG/DOI@OIG

Subject Info on active claims in Virginia City

As a followup to our visit, do you have information on active claims named Mint # 1 and Mint # 2 in Virginia City? These claims cover part of the first site we visited last week. Particularly, what is the claimant's status (notice, plan of ops, etc), do you have a copy of the approved notice or plan of ops and could you send me a copy? Is there any bond associated with these claims and how much? When was the last time these claims were inspected and is there an inspection report that you could provide? Thanks for your help.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

Terry Neumann/CCFO/NV/BLM/DOI@BLM

08/15/2007 04:36 PM

To William McMullen/DEN/OIG/DOI@OIG@DOI  
cc Carla James/CCFO/NV/BLM/DOI@BLM  
Subject Re: Info on active claims in Virginia City

Bill--Illegal occupancy/trespassing on unpatented mining claims is a widespread problem throughout the West. In Virginia City and in a hundred old mining towns from Telluride, CO to Baker City, OR, unpatented mining claims have been bought and sold since the 1870's. Even though building a home or business on an unpatented mining claim has always been against the rules (even the Mining Law of 1872) there was no one around to enforce these regulations until the 43 CFR 3809 regs came out in the early 1980's. By that time people had built up huge equities on the properties by building homes, wells, hotels, trailer parks, etc, and the local municipalities tax the value of the structures to increase their tax base (especially in sparsely populated states like Nevada). About one-third of the homes you saw in VC are on public land and the median home price is probably well over \$300K. For the Feds to go up there and tell them they are in trespass and that they must demolish their home or business would be politically, socially, and economically untenable.

Someone probably should go up to this guy's mill and tell him that he should not be conducting paying tours of a mill that is probably unsafe and contaminated. Should it be a geologist like myself, or law enforcement, or realty? The guy will show you a title (Quitclaim deed or title document from Storey Co.), tell you to go screw yourself, and then call the Storey Co. Sheriffs Dept who would dearly love to escort a federal employee out of town. If someone tries to build a home or business on the public lands these days, we can use our 3715 regulations to put a halt to it, but for these historic mining claims that have been bought and sold for decades or been in families for generations, its a very tough row to hoe. Probably best to sell the land at market price and walk away. And even if we did this, the homeowners would scream all the way to the legislature in Carson City and beyond.

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG

08/15/2007 08:09 AM

To Terry Neumann/CCFO/NV/BLM/DOI@BLM@DOI  
cc Linda Kinkead/CCFO/NV/BLM/DOI@BLM, Carla James/CCFO/NV/BLM/DOI@BLM  
Subject Re: Info on active claims in Virginia City

Thanks for the info. I did check out LR2000 and found the same name as you did. I still find it curious that there is a public mill tour business at this site on BLM land, according to the latest cadastral survey and I wonder is this business is owned by the claimant; I am not sure whether the claim boundaries include the mill site. It would seem BLM has some liability if a member of the public is injured during a tour on BLM land and I wonder how BLM regulates such commercial enterprises on federal lands. Perhaps I do not understand the process but I would appreciate any further information you could provide on this matter.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

During our visit to the area shown in the above photo and others in Virginia City classified as owned by BLM in geocommunicator, representatives from BLM State Office and Carson City Field Office refused to acknowledge that these areas were owned by BLM and would not enter these sites. Areas shown clearly on BLM's latest cadastral survey as owned by BLM K.BLM.Virginia City.02 Cadastral Survey were only very hesitantly accepted by BLM representatives from the State and Carson City Offices who accompanied us. Further, in discussions with the Carson City BLM staff, they noted that they rarely visited Virginia City and paid little or no attention to either trespass issues or abandoned mine safety or environmental issues in Virginia City. During our visit, BLM staff from the State and Carson City Field Office had difficulty locating sites of interest to OIG shown on maps generated by OIG using www.geocommunicator.gov.

BLM representatives did note that it was their view that many lands owned by BLM were also claimed as owned by Storey County, NV and subsequent private owners. These representatives had no idea how such properties were titled other than by quitclaim deeds.

#### Methodology

Reviewed source documents and used www.geocommunicator.gov to prepare maps of Virginia City, BLM ownership status and active mining claims.

Submission: Submitted William McMullen 01/11/2008 10:01:58 AM

Level 1 Approval:

Linkage Information Set By William McMullen/DEN/OIG/DOI On 04/29/2008 03 55 18 PM

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Tue 04/29/2008 03:55 PM. For original text, refer to the field(s) above.

Purpose:

Document instances of ongoing and new trespass on abandoned mine lands in Virginia City, NV.

Scope:

Commercial and new trespass on BLM land.

Source:

Map of Virginia City provided by BLM/Las Cruces office showing features in aerial photo and BLM ownership in yellow shading:



Map with Labels.pdf

Photos of sites in trespass taken by OIG during site visit in August 2007:



New house small.JPG



lot and house on BLM land small.JPG



Parking sign small.JPG



Parking area small.JPG



mill on BLM land small.JPG



mill tour business site small.JPG



mill tour small.JPG



mill tour sign small.JPG



business on BLM land small.JPG



materials on BLM land small.JPG

Conclusion:

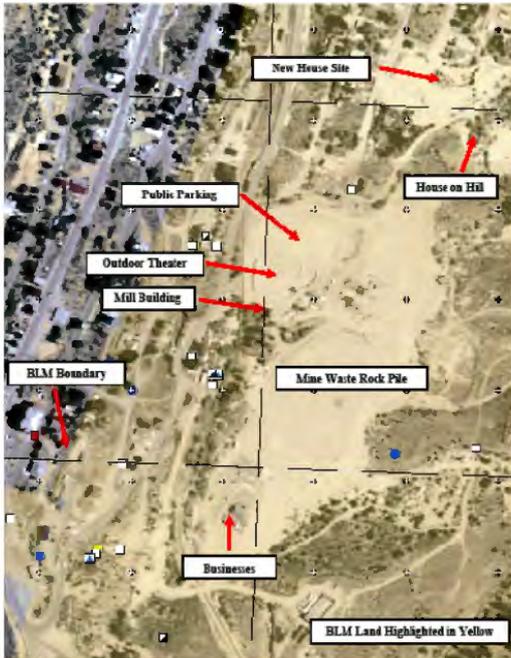
Existing historic and new commercial and residential trespass is occurring on BLM land in Virginia City.

- Commercial business are in trespass on BLM land.
- The mill tour business is located inside a dilapidated old mill where the public pays to visit. Trespass at the mill and in the residential areas is exposing the public to potential health and safety issues which could increase BLM's liability. Increased injuries or deaths due to safety or environmental hazards could result.
- The public in being invited to tour an old mill site by a commercial enterprise on BLM land.
- BLM State and Carson City representatives do not actively visit Virginia City and have taken no action regarding trespass issues.
- BLM Carson City representative acknowledges that some action should be taken particularly regarding commercial businesses and new homes in trespass.
- There is disputed ownership in the area between BLM, Storey County and private individuals but BLM has taken no action to resolve these disputes.

[Auditor Recommendation]: Based on our findings regarding trespass in Virginia City and the Rand Mining District F.02.01 Red Mountain land conveyances , we believe BLM should: Identify and resolve trespass on AML sites and assess and mitigate hazards associated with these sites.

Details:

Labels were added to the Source Map based on observations by OIG during site visit in August 2007.



■ The Source photos show the features illustrated in the aerial photo above. The commercial businesses and residences are clearly on BLM land according to the information provided by BLM/Las Cruces. ■ Some of the residences are newly constructed and some lots are being offered for sale. The mill tour business is located inside a dilapidated old mill where the public pays to visit. Trespass at the mill and in the residential areas is exposing the public to potential health and safety issues which could increase BLM's liability. Increased injuries or deaths due to safety or environmental hazards could result [Auditor Opinion]. The land ownership status in this area was verified by Dave Morlan, BLM NV State Office, Chief Cadastral Surveyor of Nevada, from a cadastral survey of the land section that includes the mill and Mine Waste Rock Pile in the photo K.BLM.Virginia City.02 Cadastral Survey ■.

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08/13/2007 03:21 PM

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cc Linda Kinkead/CCFO/NV/BLM/DOI@BLM, Carla James/CCFO/NV/BLM/DOI@BLM

Subject Re: Info on active claims in Virginia City

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cc Carla James/CCFO/NV/BLM/DOI@BLM  
Subject Re: Info on active claims in Virginia City

Bill-- Illegal occupancy/trespassing on unpatented mining claims is a widespread problem throughout the West. In Virginia City and in a hundred old mining towns from Telluride, CO to Baker City, OR, unpatented mining claims have been bought and sold since the 1870's. Even though building a home or business on an unpatented mining claim has always been against the rules (even the Mining Law of 1872) there was no one around to enforce these regulations until the 43 CFR 3809 regs came out in the early 1980's. By that time people had built up huge equities on the properties by building homes, wells, hotels, trailer parks, etc, and the local municipalities tax the value of the structures to increase their tax base (especially in sparsely populated states like Nevada). About one-third of the homes you saw in VC are on public land and the median home price is probably well over \$300K. For the Feds to go up there and tell them they are in trespass and that they must demolish their home or business would be politically, socially, and economically untenable.

Someone probably should go up to this guy's mill and tell him that he should not be conducting paying tours of a mill that is probably unsafe and contaminated. Should it be a geologist like myself, or law enforcement, or realty? The guy will show you a title (Quitclaim deed or title document from Storey Co.), tell you to go screw yourself, and then call the Storey Co. Sheriffs Dept who would dearly love to escort a federal employee out of town. If someone tries to build a home or business on the public lands these days, we can use our 3715 regulations to put a halt to it, but for these historic mining claims that have been bought and sold for decades or been in families for generations, its a very tough row to hoe. Probably best to sell the land at market price and walk away. And even if we did this, the homeowners would scream all the way to the legislature in Carson City and beyond.

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG

08/15/2007 08:09 AM

To Terry Neumann/CCFO/NV/BLM/DOI@BLM@DOI  
cc Linda Kinkead/CCFO/NV/BLM/DOI@BLM, Carla James/CCFO/NV/BLM/DOI@BLM  
Subject Re: Info on active claims in Virginia City

Thanks for the info. I did check out LR2000 and found the same name as you did. I still find it curious that there is a public mill tour business at this site on BLM land, according to the latest cadastral survey and I wonder is this business is owned by the claimant; I am not sure whether the claim boundaries include the mill site. It would seem BLM has some liability if a member of the public is injured during a tour on BLM land and I wonder how BLM regulates such commercial enterprises on federal lands. Perhaps I do not understand the process but I would appreciate any further information you could provide on this matter.

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

During our visit to the area shown in the above photo and others in Virginia City classified as owned by BLM in geocommunicator, representatives from BLM State Office and Carson City Field Office refused to acknowledge that these areas were owned by BLM and would not enter these sites. Areas shown clearly on BLM's latest cadastral survey as owned by BLM K.BLM.Virginia City.02 Cadastral Survey were only very hesitantly accepted by BLM representatives from the State and Carson City Offices who accompanied us. Further, in discussions with the Carson City BLM staff, they noted that they rarely visited Virginia City and paid little or no attention to either trespass issues or abandoned mine safety or environmental issues in Virginia City. During our visit, BLM staff from the State and Carson City Field Office had difficulty locating sites of interest to OIG shown on maps generated by OIG using www.geocommunicator.gov.

BLM representatives did note that it was their view that many lands owned by BLM were also claimed as owned by Storey County, NV and subsequent private owners. These representatives had no idea how such properties were titled other than by quitclaim deeds.

Methodology:

Reviewed source documents and used www.geocommunicator.gov to prepare maps of Virginia City, BLM ownership status and active mining claims.

**History**

**Status:** Approved **Request Review:**

**In Progress Edit:** William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 09/07/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.Virginia City.02

**Subsection:**

**Program Name:** BLM (Site Visits)

**Subject:** Cadastral Survey

**Origination Doctlink:** ■

### Purpose

Document correspondence between cadastral survey and geocommunicator maps of Virginia City.

### Scope

BLM land ownership in Virginia City

### Source

Master Title Plat of Township 17 North, Range 21 East, Section 29 provided by Dave Morlan, BLM Cadastral Surveyor of Nevada to OIG during site visit in August 2007 and shown in the Detail section. Maps from [www.geocommunicator.gov](http://www.geocommunicator.gov) showing aerial photo of Section 29 overlaid with BLM ownership as shown in Detail section.

### Conclusion

■ The Master Title Plat for an area of Virginia City visited by the OIG (mill tour business and other commercial businesses in trespass) agrees with the BLM ownership overlay shown in [www.geocommunicator.gov](http://www.geocommunicator.gov) and shows the site of interest is on BLM land. The Nevada BLM State Cadastral Surveyor agreed that the maps were accurate.

### Details

The Master Title Plat for Section 29 shows BLM ownership in crosshatched orange below.





**Methodology**

Used source documents to determine that a site visited in Virginia City (site of mill tour business, other commercial businesses) **K.BLM.Virginia City.01 Trespass Issues** was on BLM according to the latest BLM State cadastral survey.

Submission:	Submitted	William McMullen	01/11/2008 10:03:30 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	04/28/2008 12:57:45 PM

[Linkage Information](#)

**History**

Status:	Approved	Request Review:
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**In Progress Edit:** William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: William McMullen 09/07/2007

Assignment Number: C-IN-MOA-0004-2007  
Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.Virginia City.03  
Program Name: BLM (Site Visits)  
Subject: AML deaths

Subsection:

Origination Doctlink: 

### Purpose

Document two deaths that occurred in an abandoned mine in Virginia City.

### Scope

AML Physical Safety Hazards.

### Source

Newspaper articles provided by Mike Visher, Nevada State Division of Minerals on 8/22/2007 and attached:



Virginia City AML deaths.pdf

Newspaper article from Arizona Daily Star dated September 3, 1996 shown in Detail section.

Photos of site where deaths occurred taken by OIG during site visit in September 2007 and shown in Detail section.

Maps of area where deaths occurred provided by BLM/Las Cruces and shown in Detail section.

Aerial photo showing site location provided by Mike Visher, Nevada State Division of Minerals, in email to OIG dated 8/10/2007 and shown in Detail section.

Nevada State Hazard Inventory sheet documenting mitigation of site after the deaths. Provided by Mike Visher to OIG during visit in August 2007 and attached:



Hazard Inventory Sheet.PDF

### Conclusion

-  Site of two fatalities in Virginia City in 1996 was an adit  of the New Savage Mine that ceased operation in 1983 according to the Arizona Daily Star.
- Site is on BLM land (see Aerial Photo and Map Section below) and was signed with a fence that was bypassed by the victims (Arizona Daily Star Article).
- Site is securely closed currently.
- Signs and fences are not permanent remedies for physical safety hazards and will not adequately protect the public if they are ignored; however, they are a minimum precaution that BLM should take to try to eliminate injuries and fatalities [Auditor opinion].

### Details



Arizona Daily Star

## Arizona Daily Star, The (AZ)

The Arizona Daily Star

September 3, 1996

### CO2 concentrations kill trespassers in Nev. mine

Author: Associated Press

Section: METRO/REGION

Page: 4B

Dateline: VIRGINIA CITY, Nev.

### Index Terms:

HAZARDOUS MATERIAL

MINING

Estimated printed pages: 1

Article Text:

Two men suffocated after entering an abandoned silver mine that was marked with a large sign that read: "Keep Out - Bad Air."

The two bodies were found Sunday about 75 feet inside the tunnel of the New Savage Mine, one of the maze of shafts beneath this city that are notorious for their large pockets of carbon dioxide due to stale air.

"What happened is they got into one of these concentrated pockets, they can't smell it, it disoriented them and they simply went to sleep," said sheriff's spokesman John Tyson.

Dead were [REDACTED]

In addition to ignoring the sign, they also went around a fence to get inside the mine, Tyson said.

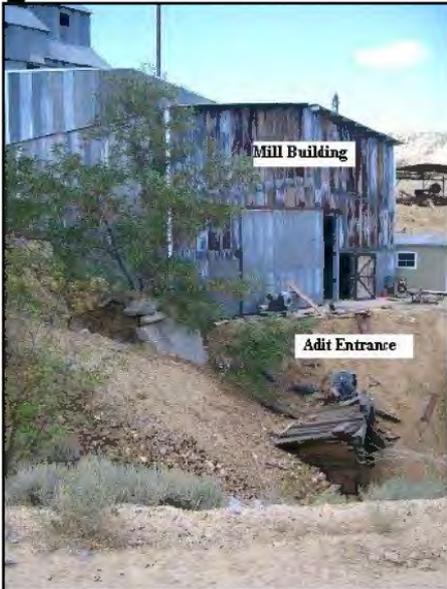
"Unfortunately, there's not a heck of a lot that can be done to stop this kind of thing," he said. "They knew it was dangerous and clearly marked and still chose to go into it."

The New Savage Mine, about 30 miles southeast of Reno, operated between 1978 and 1983. It's one of hundreds of mines on the Comstock Lode silver vein.

Copyright 1996, 1999 The Arizona Daily Star

Record Number: arch\_2136

Photos



Adit permanently closed (OIG photo)



Adit C



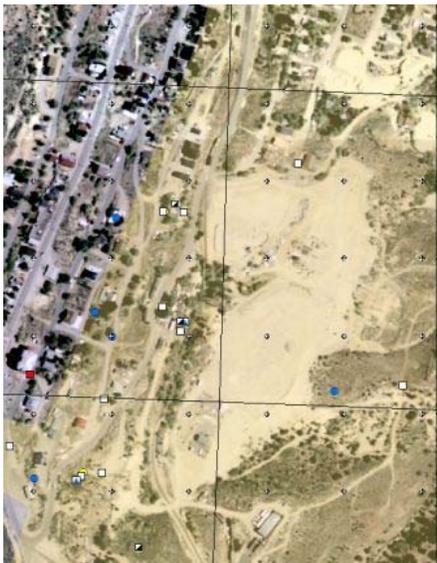
bad air sign at New Savage Mine adit where deaths occurred (OIG photo)

**Aerial Photo and Map**

Photo from Mike Visher showing site of deaths (note ST-84 and arrow in Black).



Map from BLM/Las Cruces **K.BLM.Virginia City.01 Trespass Issues** showing area where deaths occurred (different scale from photo above). Yellow highlighting is land owned by BLM. In comparing the two images, it is clear that the site of the deaths was on BLM land.



**Methodology**

Reviewed source documents and compared OIG photos to State photos to correctly determine that site of deaths was on BLM land.

Submission: Submitted William McMullen 05/05/2008 02:59:08 PM

Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:09:57 PM

**Linkage Information**

**History**

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Division of Environmental Protection (NDEP), University of Nevada researchers, and others have carried out studies to determine the extent of contamination, evaluate the human health and ecological risks, and better understand the processes that govern the movement and toxicity of the mercury.

### Response Action Status

In 1991, concerns over the possible exposure of vehicle users to contaminated materials prompted the removal of mercury-contaminated tailings near Dayton, NV. Also in 1991, a second removal action was completed at a park in Dayton. The contaminated materials were transported to a mineral resource recovery facility.

After the site was listed on the Superfund National Priorities list, EPA began the Remedial Investigation and Feasibility Study (RI/FS) at the site. The initial phase of the investigation, which lasted from 1993 to 1995, involved the collection and laboratory analysis of hundreds of samples including surface and sub-surface soils, sediments, groundwater, vegetation, garden crops, and indoor air. The resulting report, entitled *Revised Draft, Human Health Assessment and Remedial Investigation Report* (December 1994) evaluates the potential risk to human health from the mercury, arsenic, and lead present in the soil, sediments, surface water, groundwater, and vegetation in the area.

As part of the assessment, EPA established a site-specific cleanup level of 80 ppm mercury for contaminated soils in residential areas. The 80 ppm cleanup level is based on site-specific assumptions about the form of mercury in the soil.

Four areas in Dayton and Silver City, Nevada were found to exceed the 80 ppm soil cleanup level. Approximately 12 homes were located on or adjacent to the contaminated soils. In 1994, EPA developed a proposal to address the risks posed by the contaminated soils in the four areas and asked the public to evaluate the proposal. After considering public comments provided before, during, and after a public meeting held in 1995, EPA adopted its final cleanup plan (i.e., the "Record of Decision"). The plan called for excavation of the contaminated soils to a maximum depth of two feet, backfilling with clean soil, and offsite disposal of the contaminated soil. In one of the four areas, the remedy also included placement of clean soil on top of the contaminated soil in lieu of excavation and backfilling. Both approaches reduce risks by limiting contact with soils containing elevated levels of mercury. The remedy also included restoration and landscaping of contaminated areas after excavation and backfilling.

### Samples

During the OIG exit conference with BLM NV state officials [K.BLM.05 BLM Nevada State Office Exit Conference](#), Chris Ross and Bob Kelso produced a copy of the Carson River Superfund Project Record of Decision (ROD) published in 1995. They noted that the ROD described EPA's sampling effort in and around the mills in Virginia City and the fact that the ROD did not identify any sites in Virginia City as needing remediation based on EPA's action levels for mercury. As the following information shows, EPA did find sites in Virginia City that exceeded their action levels for residential occupancy, but that, at the time, there were no residents living on or near these sites. During our visit, we noted commercial businesses, existing and new residential construction, and lots for sale on abandoned mine lands [K.BLM.Virginia City.01 Trespass Issues](#). We could not determine if such occupancy was occurring in the exact locations (MS-034 and MS-036) where EPA found high levels of mercury, but BLM's use of the ROD (supported by the Human Health Risk Assessment) published over ten years ago seems problematic given the expanding commercial and residential occupancy in Virginia City. **Reliance on the EPA to determine if BLM has contaminated land that needs remediation is another example of "Don't Ask, Don't Tell."** BLM has taken no soil samples to verify or invalidate EPA's results and to determine if remediation of soils near residential properties is warranted.



VC Risk Assessment table.pdf



Virginia City.pdf



Carson River ROD.pdf

Pages from the attached documents are shown below. Table 1a and Figure 20 were copied from the Human Health Risk Assessment and Remedial Investigation Report (cover sheet shown below). Annotations to Figure 20 were made by OIG and refer to areas on the map that exceeded 80 parts per million (ppm) Mercury per EPA sample results. The annotation also notes the maximum values of sample results in the area noted as MS-034 as 1300 ppm Lead and 1800 ppm Mercury (values shown in Table 1a below). Note that the table shows values in mg/kg which are equivalent to ppm. The MS refers to a millsite location (see Praskins email tab below).



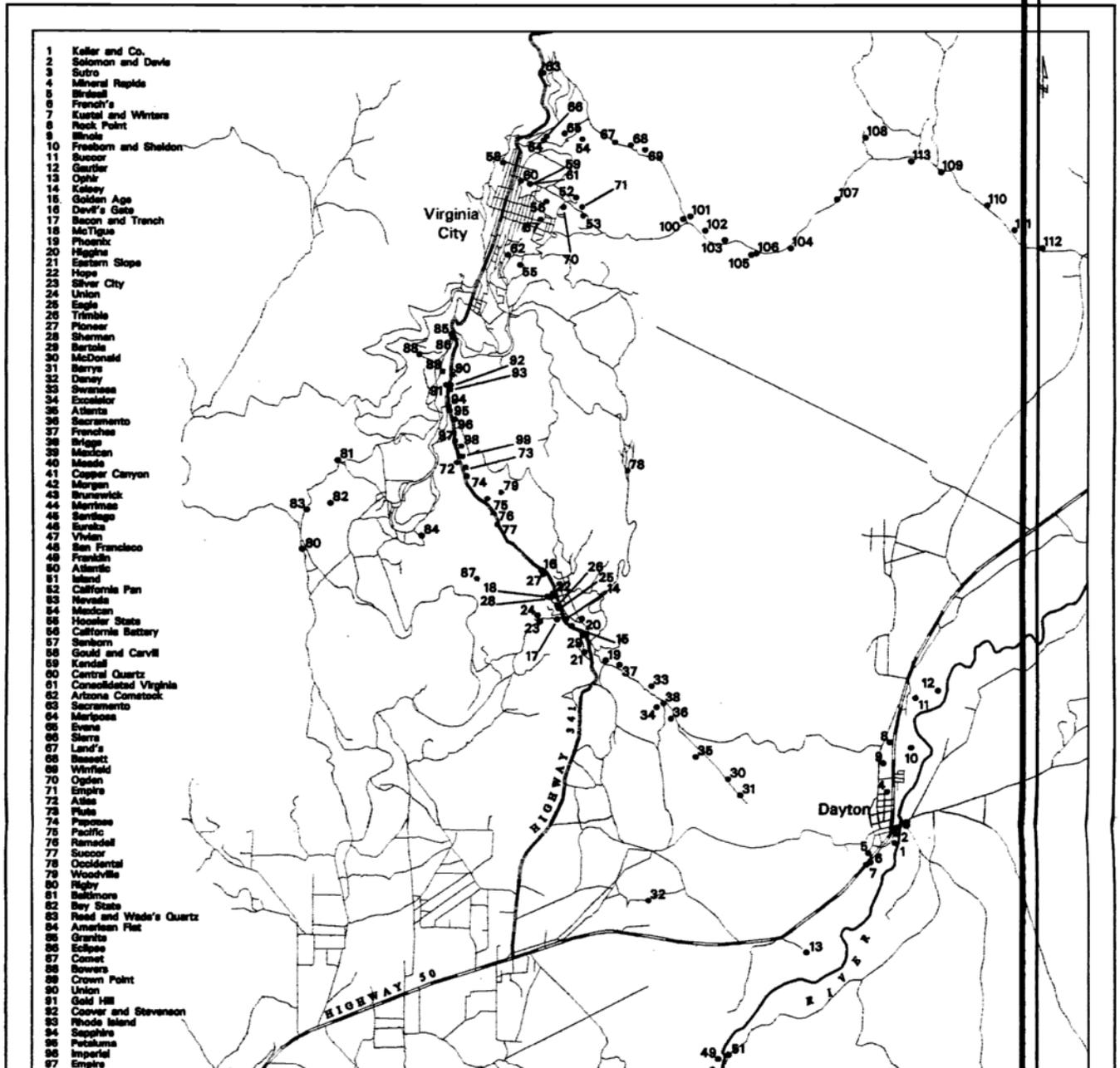
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

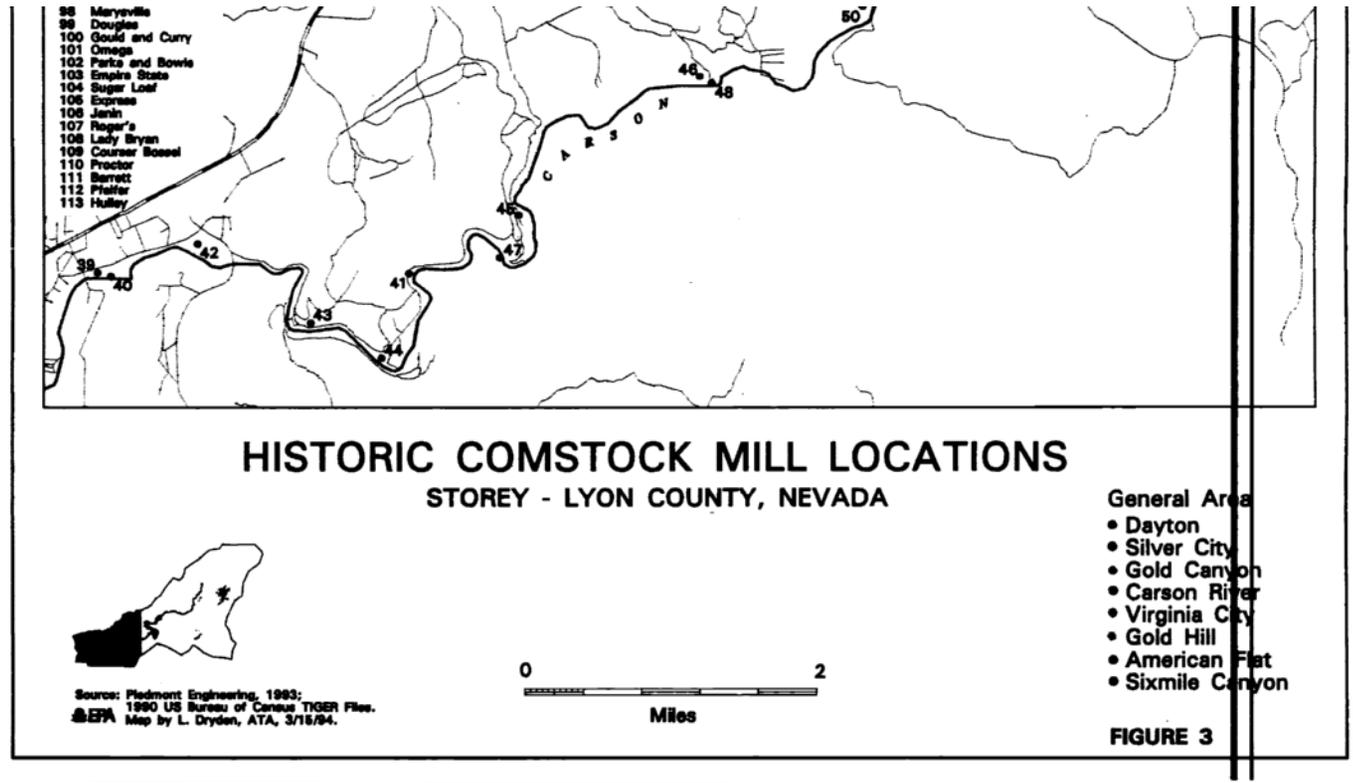
AR0173

REVISED DRAFT  
HUMAN HEALTH RISK ASSESSMENT AND  
REMEDIAL INVESTIGATION REPORT  
CARSON RIVER MERCURY SITE

Prepared by  
Sean Hogan, EPA Project Manager  
and  
Stanford Smucker, Ph.D., EPA Toxicologist  
U.S. Environmental Protection Agency, Region 9  
December 1994

Figure 3 from the Carson River ROD shows the historic mill sites around Virginia City.





ANALYTICAL RESULTS  
TABLE 1A

Case No.: 20744 Memo #01  
Site: Carson River  
Lab.: Weyerhaeuser Analytical & Testing Services (WEYER)  
Reviewer: ██████████ ESAT/ICE Technology, Inc.  
Date: November 9, 1993

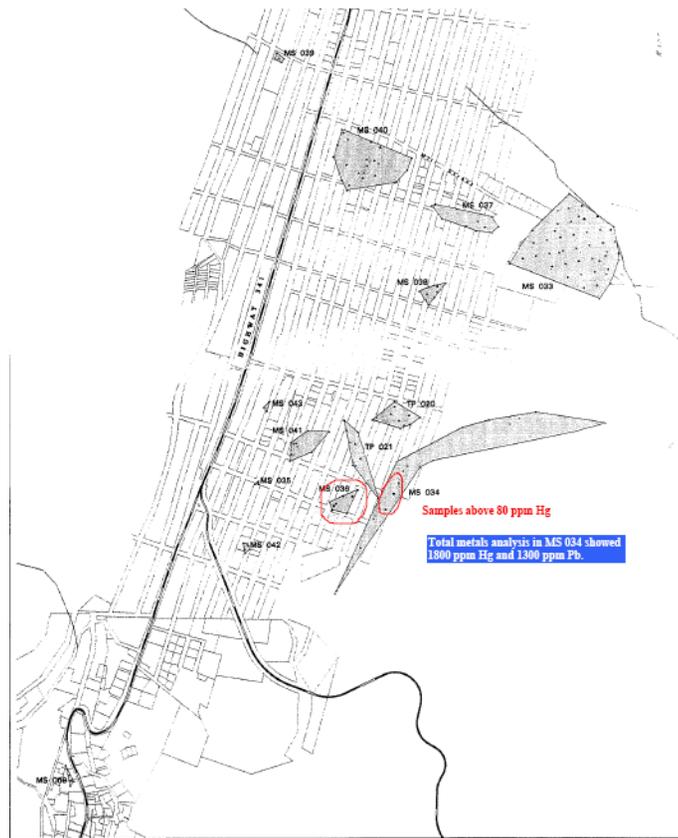
Analysis Type: Low Concentration Soil Samples  
for RAS Total Metals

Concentration in mg/kg

Station Location Sample I.D. Date of Collection	MS-011-SD-09-A MYM407 D1 09/02/93			MS-011-SD-09-A MYM408 D2 09/02/93			MS-011-SD-20-A MYM409 09/03/93			MS-011-SD-30-A MYM410 09/07/93			MS-014-SD-15-A MYM411 09/08/93			MS-011-SD-39-A MYM451 09/09/93			MS-011-SD-02-A MYM452 09/09/93		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Aluminum	23800			31200			28900			17200			1760			18500			4100		
Antimony	4.9 U R A			4.8 U R A			4.4 U R A			8.2 L J BC			4.1 L J BC			3.9 U R A			4.6 J B		
Arsenic	8.5			7.6			13.3			11.2			10.6			8.6			2.9		
Barium	194			218			294			109			11.9			11.9			14.9		
Beryllium	0.38 L J C			0.48 L J C			0.69 L J C			0.33 L J C			0.06 U			0.35 L J C			0.06		
Cadmium	5.6			4.8			3.3			13.6			0.94 L J C			0.78 U			0.92		
Calcium	3960			4610			5720			16800			61.4 L J C			3360			612		
Chromium	9.4			11.0			22.0			20.6			2.0			15.3			5.6		
Cobalt	10.8			12.8			16.9			9.5			3.5 L J C			9.3			0.59		
Copper	203			213			204			169			221			91.3			58.5		
Iron	28000			34000			34000			24100			28900			27600			7160		
Lead	332			370			650			461			1300			127			217		
Magnesium	8133			8900			7780			6340			144 L J C			8540			2530		
Manganese	749			831			942			743			4.4			591			174		
Mercury	5.8			5.6			24.0			2.9			1800			15.7			0.08		
Nickel	15.9			15.1			16.6			12.3			5.9 L J C			11.2			6.2		
Potassium	2452			3710			4870			1760			2900			1710			410		
Selenium	2.7 J B			3.0 J BCF			2.5 L J BCF			5.1 L J BCF			13.0 J B			0.52 L J BCD			0.96 L J BC		
Silver	76.7 J E			82.4 J E			42.4 J E			118 J E			121 J E			18.3 J E			24.9 J E		
Sodium	325 L J C			443 L J C			240 L J C			237 L J C			235 L J C			125 L J C			37.4		
Thallium	0.17 L J C			0.17 U			0.17 L J C			0.15 U			0.18 L J C			0.18 U			0.15		
Vanadium	42.6			51.6			56.8			43.2			3.2 L J C			47.5			12.0		
Zinc	374			399			435			3610			44.0			142			92.6		
Percent Solids	97.1 %			97.1 %			97.1 %			94.6 %			95.1 %			95.3 %			98.1 %		

Val-Validity Refer to Data Quality in Table 1B  
Com-Comments Refer to the Corresponding Section in the Narrative for each letter.  
IDL-Instr- Detection Limit for Waters, MDL-Method Detection Limit for Soils.

D1, D2, etc.-Field Duplicate Pairs  
FB-Field Blank, EB-Equipment Blank, TB-Travel Blank, BC-Background  
CRDL-Contract Required Detection Limit



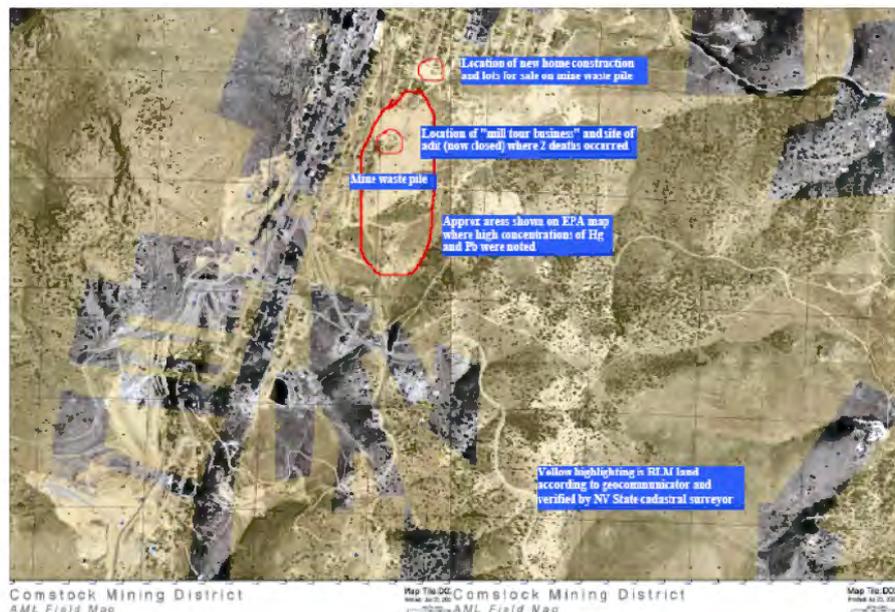
**SURFACE SOIL SAMPLING LOCATIONS**  
VIRGINIA CITY



- Total Mercury Concentration in mg/kg (0 - 6 inches)
- Less than 25
  - 25 - 79
  - 80 and Higher
  - Sample ID Area
  - River Reach

FIGURE 20

Areas annotated below by OIG based on observations during site visits. Approximate area shown corresponding to MS-034 and MS-036 highlighted in Figure 20 above.



The sample efforts undertaken by EPA during the early 1990's were discussed with EPA staff involved in the project (Stan Smucker, Toxicologist and Wayne Praskins, Project Leader).

Under the Toxic Substances Control Act (TSCA) Section 403, EPA has defined the following standard for lead exposure. In residential children's play areas, lead is considered a hazard when concentrations exceed 400 ppm in bare soil. In other areas of bare soil in residential yards, the level is established at 1200 ppm.

#### Lead in Soil

## Residential Lead Hazard Standards - TSCA Section 403

As part of EPA's ongoing efforts to protect children from lead poisoning, the Agency announces, new standards to identify dangerous levels of lead in paint, dust and soil. These new national standards are more protective than previous EPA guidance and will, for the first time, provide home owners, school and playground administrators, childcare providers and others with standards to protect children from hazards posed by lead, including children in federally-owned housing.

Under these new standards, federal agencies, including Housing and Urban Development, as well as state, local and tribal governments will have new uniform benchmarks on which to base remedial actions taken to safeguard children and the public from the dangers of lead. These standards will also apply to other Federal lead provisions, such as EPA's real estate disclosure requirements presently in place for people selling or renting a home or apartment. These hazard standards will also serve as general guidance for other EPA programs engaged in toxic waste cleanups. In addition, these standards will provide landlords, parents, and childcare providers with specific levels on which to make informed decisions regarding lead found in their homes, yards, or play areas.

Health problems from exposure to lead can include profound developmental and neurological impairment in children. Lead poisoning has been linked to mental retardation, poor academic performance and juvenile delinquency. Nearly one million children in America today have dangerously elevated levels of lead in their blood. Because of the potential dangers, any exposure to deteriorated lead-based paint presents a hazard.

Under the new standards, lead is considered a hazard when equal to or exceeding: 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard.

Identifying lead hazards through these standards will allow inspectors and risk assessors to assist property owners in deciding how to address problems which may include lead paint abatement, covering or removing soil or professional cleaning of lead dust.

This action appears in the [January 5, 2001 Federal Register \(PDF\)](#) (36 pp, 357 KB, [About PDF](#)).

[Contact the National Lead Information Center \(NLIC\)](#) to speak with an information specialist.

Praskins Email

Attachments to Praskins email

Discussions

Telephone call with Stan Smucker, EPA on 10/10/07.

- Stan noted that 80 ppm was established as an action threshold for mercury contamination in residential areas based on ingestion exposure of a child.
- Stan confirmed that several of the dark dots shown on Figure 20 did in fact mean that samples higher than 80 ppm were obtained at those locations.

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- He noted that the 80 ppm mercury threshold assumed someone was living on or next to soil with that concentration of mercury.
- At the time of EPA's Superfund actions in the area, no areas in Virginia City were found to exceed EPA thresholds, i.e., while some sites had samples of mercury greater than 80 ppm, these were not associated with residential occupancy.
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- Wayne noted that cleanup threshold levels were not established for areas where there was no human exposure.
- Wayne noted that Storey County officials were unhelpful in the process and did not consider contamination to be an issue in the county.
- Wayne was surprised that some of the sample areas apparently are on BLM land (see map with yellow highlights Samples tab above).

Methodology

Reviewed source documents, compiled site visit information and followed up with emails and phone calls to relevant parties.

Submission:	Submitted	William McMullen	01/11/2008 10:07:47 AM
Level 1 Approval:			
Level 2 Approval:	Approved	John Ilson	04/28/2008 12:59:16 PM

Linkage Information Set By William McMullen/DEN/OIG/DOI On 04/29/2008 04 07 38 PM

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Tue 04/29/2008 04:07 PM. For original text, refer to the field(s) above.

Purpose:

Document previous sample results of environmental contaminants in Virginia City.

Scope:

AML issues in Virginia City

Source:

Carson River Superfund Project basic information found at <http://yosemite.epa.gov/r9/sfund/overview.nsf/ef81e03b0f6bcd828825650f005dc4c1/82004c6c4169ae528825660b007ee640?OpenDocument#descr> and summarized in Background tab below.

Pages extracted by OIG from Carson River Superfund Project Human Health Risk Assessment (hardcopy in Nevada State Library Archive, Carson City, NV) and shown in Samples tab below.

Map of Virginia City area where EPA samples were taken was provided by BLM Las Cruces Office with BLM land ownership shown in yellow highlighting (Sample tab below).

Telephone discussions with Stan Smucker and Wayne Praskins, EPA on 10/10/07 summarized in Discussions tab below.

Email from Wayne Praskins, EPA, dated 10/15/07 and shown in Praskins Email tab below.

Attachments to Praskins email (dbf files) that were converted to Excel files by H. Snow, OIG.

EPA's residential soil standard for lead found at <http://www.epa.gov/oppt/lead/pubs/leadhaz.htm> and shown in Lead in Soil tab below.

Conclusion:

- Previous sampling efforts by EPA in Virginia City found levels of mercury that exceeded residential occupancy as well as elevated levels of lead in soils that exceed EPA's standards for exposure to children.
- Lack of residential occupants on these sites in 1994 precluded them from being included in EPA's remediation activities under the Carson River Superfund Project.
- Residential, as well as commercial, occupancy is increasing on BLM land in Virginia City.
- BLM has not taken action to sample soils on BLM land near residents (who are trespassing) to determine if remediation is warranted.
- BLM is using EPA data collected over 10 years ago as an excuse to not sample and evaluate potential environmental contamination in Virginia City.

Details:

Background

**SOURCE:**

<http://yosemite.epa.gov/r9/sfund/overview.nsf/ef81e03b0f6bcd828825650f005dc4c1/82004c6c4169ae528825660b007ee640?OpenDocument#descr>

**SITE DESCRIPTION AND HISTORY**

**Description:** As of June 2004, the Carson River Mercury Site is the only site in Nevada listed on the Superfund National Priorities List (the list of the nation's worst toxic waste sites). The site includes mercury-contaminated soils at former mill sites, mercury contamination in waterways adjacent to the mill sites, and mercury contamination in sediments, fish and wildlife over more than a 50 mile length of the Carson River, beginning near Carson City, Nevada and extending downstream to the Lahontan Valley. Contamination at the site is a legacy of the Comstock mining era of the late 1800s, when mercury was imported to the area for processing of gold and silver ore. Ore mined from the Comstock Lode was transported to mill sites, where it was crushed and mixed with mercury to amalgamate the precious metals. The mills were located in Virginia City, Silver City, Gold Hill, Dayton, Six Mile Canyon, Gold Canyon, and adjacent to the Carson River between New Empire and Dayton. During the mining era, an estimated 7,500 tons of mercury were discharged into the Carson River drainage, primarily in the form of mercury-contaminated tailings (i.e., waste rock).

Today, the mercury is in the sediments and adjacent flood plain of the Carson River and in the sediments of Lahontan Reservoir, Carson Lake, Stillwater Wildlife Refuge, and Indian Lakes. In addition, tailings with elevated mercury levels are still present at and around the historic mill sites, particularly in Six Mile Canyon. EPA, the U.S. Geological Survey, the U.S. Fish and Wildlife Service, the Nevada Division of Environmental Protection (NDEP), University of Nevada researchers, and others have carried out studies to determine the extent of contamination, evaluate the human health and ecological risks, and better understand the processes that govern the movement and toxicity of the mercury.

**Response Action Status**

In 1991, concerns over the possible exposure of vehicle users to contaminated materials prompted the removal of mercury-contaminated tailings near Dayton, NV. Also in 1991, a second removal action was completed at a park in Dayton. The contaminated materials were transported to a mineral resource recovery facility.

After the site was listed on the Superfund National Priorities list, EPA began the Remedial Investigation and Feasibility Study (RI/FS) at the site. The initial phase of the investigation, which lasted from 1993 to 1995, involved the collection and laboratory analysis of hundreds of samples including surface and sub-surface soils, sediments, groundwater, vegetation, garden crops, and indoor air. The resulting report, entitled *Revised Draft, Human Health Assessment and Remedial Investigation Report* (December 1994) evaluates the potential risk to human health from the mercury, arsenic, and lead present in the soil, sediments, surface water, groundwater, and vegetation in the area.

As part of the assessment, EPA established a site-specific cleanup level of 80 ppm mercury for contaminated soils in residential areas. The 80 ppm cleanup level is based on site-specific assumptions about the form of mercury in the soil.

Four areas in Dayton and Silver City, Nevada were found to exceed the 80 ppm soil cleanup level. Approximately 12 homes were located on or adjacent to the contaminated soils. In 1994, EPA developed a proposal to address the risks posed by the contaminated soils in the four areas and asked the public to evaluate the proposal. After considering public comments provided before, during, and after a public meeting held in 1995, EPA adopted its final cleanup plan (i.e., the "Record of Decision"). The plan called for excavation of the contaminated soils to a maximum depth of two feet, backfilling with clean soil, and offsite disposal of the contaminated soil. In one of the four areas, the remedy also included placement of clean soil on top of the contaminated soil in lieu of excavation and backfilling. Both approaches reduce risks by limiting contact with soils containing elevated levels of mercury. The remedy also included restoration and landscaping of contaminated areas after excavation and backfilling.

**Samples**

During the OIG exit conference with BLM NV state officials [K.BLM.05 BLM Nevada State Office Exit Conference](#), Chris Ross and Bob Kelso produced a copy of the Carson River Superfund Project Record of Decision (ROD) published in 1995. They noted that the ROD described EPA's sampling effort in and around the mills in Virginia City and the fact that the ROD did not identify any sites in Virginia City as needing remediation based on EPA's action levels for mercury. As the following information shows, EPA did find sites in Virginia City that exceeded their action levels for residential occupancy, but that, at the time, there were no residents living on or near these sites. During our visit, we noted commercial businesses, existing and new residential construction, and lots for sale on abandoned mine lands [K.BLM.Virginia City.01 Trespass Issues](#). We could not determine if such occupancy was occurring in the exact locations (MS-034 and MS-036) where EPA found high levels of mercury, but BLM's use of the ROD (supported by the Human Health Risk Assessment) published over ten years ago seems problematic given the expanding commercial and residential occupancy in Virginia City. Reliance on the EPA to determine if BLM has contaminated land that needs remediation is another example of "Don't Ask, Don't Tell." BLM has taken no soil samples to verify or invalidate EPA's results and to determine if remediation of soils near residential properties is warranted.



VC Risk Assessment table.PDF



Virginia City.pdf



Carson River ROD.pdf

Pages from the attached documents are shown below. Table 1a and Figure 20 were copied from the Human Health Risk Assessment and Remedial Investigation Report (cover sheet shown below). Annotations to Figure 20 were made by OIG and refer to areas on the map that exceeded 80 parts per million (ppm) Mercury per EPA sample results. The annotation also notes the maximum values of sample results in the area noted as MS-034 as 1300 ppm Lead and 1800 ppm Mercury (values shown in Table 1a below). Note that the table shows values in mg/kg which are equivalent to ppm. The MS refers to a millsite location (see Praskins email tab below).



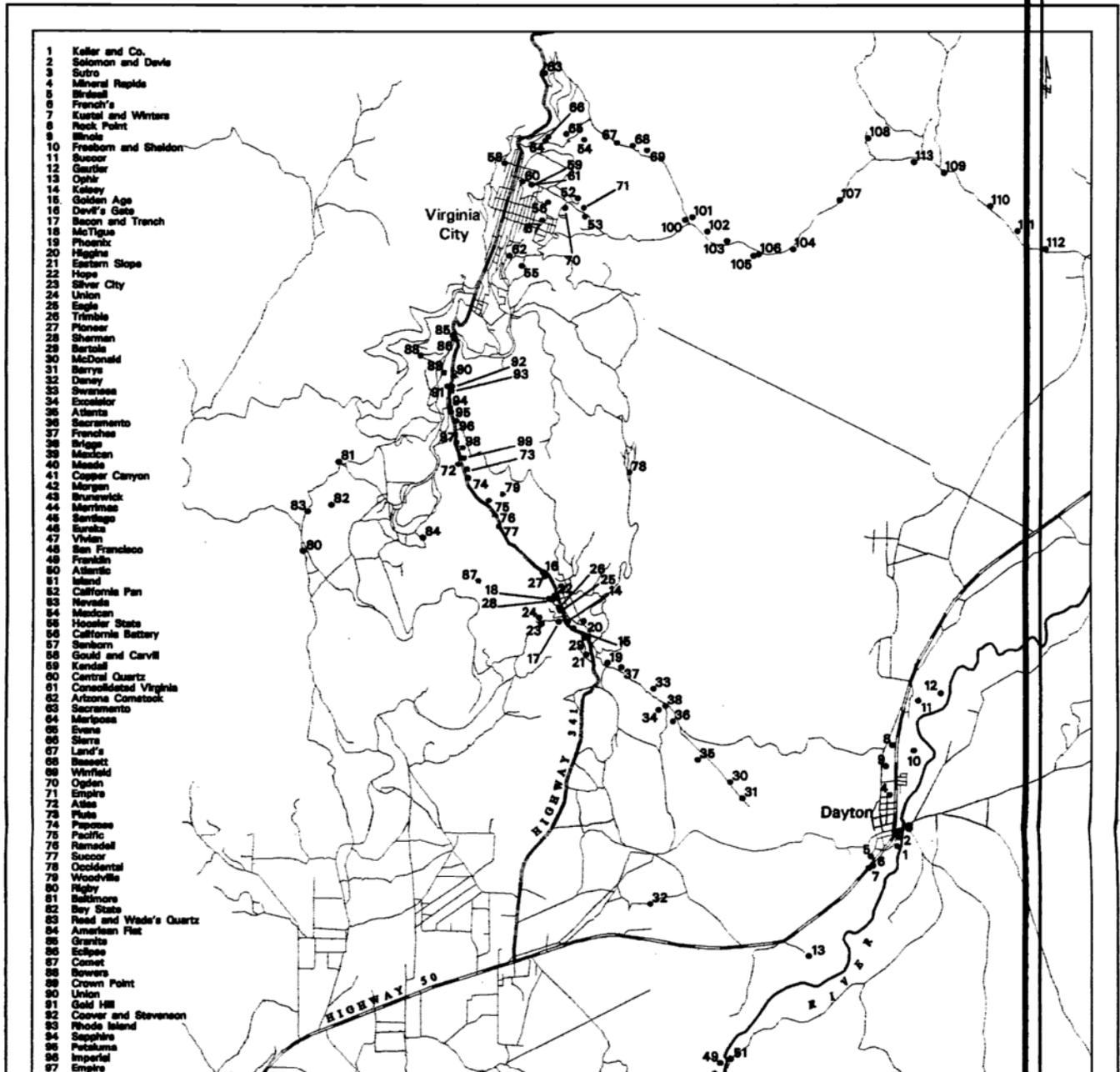
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

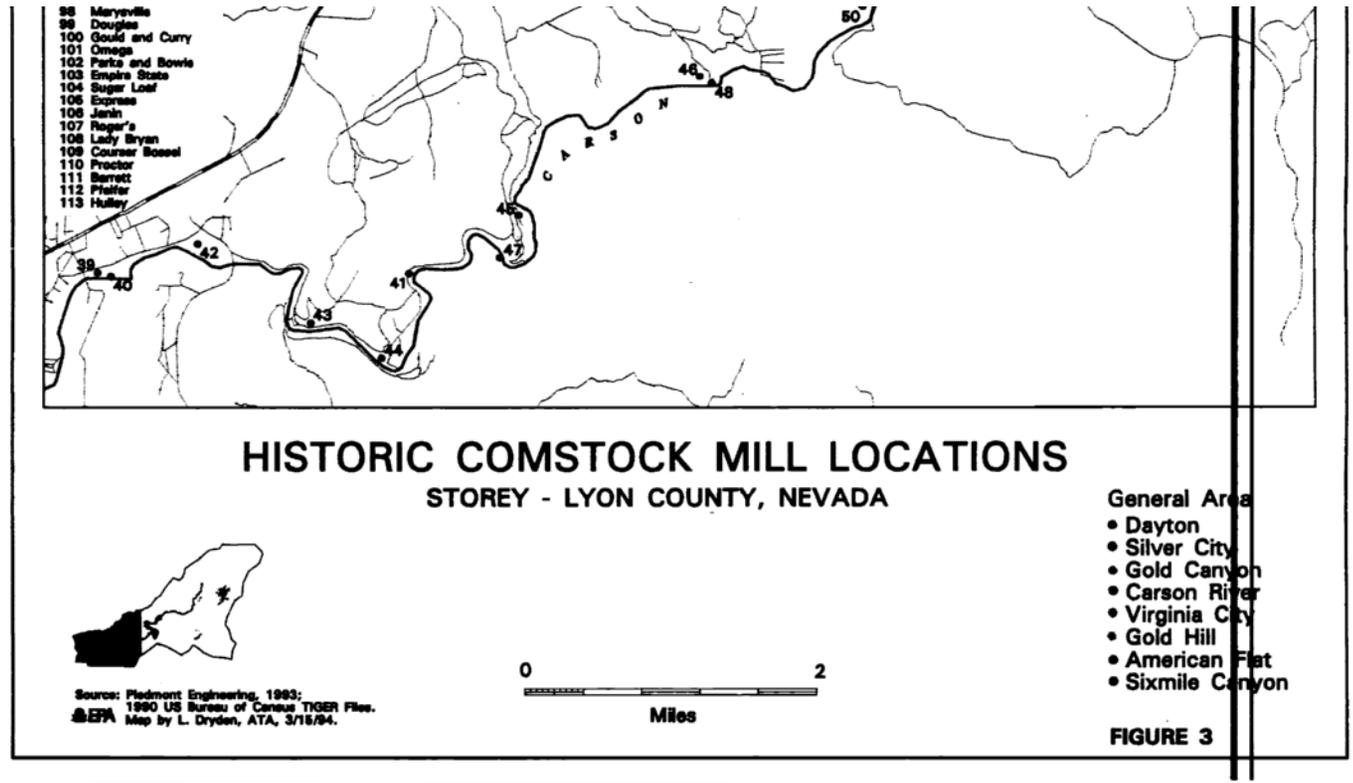
ARO173

REVISED DRAFT  
HUMAN HEALTH RISK ASSESSMENT AND  
REMEDIAL INVESTIGATION REPORT  
CARSON RIVER MERCURY SITE

Prepared by  
Sean Hogan, EPA Project Manager  
and  
Stanford Smucker, Ph.D., EPA Toxicologist  
U.S. Environmental Protection Agency, Region 9  
December 1994

Figure 3 from the Carson River ROD shows the historic mill sites around Virginia City.





ANALYTICAL RESULTS  
TABLE 1A

Case No.: 20744 Memo #01  
Site: Carson River  
Lab.: Weyerhaeuser Analytical & Testing Services (WEYER)  
Reviewer: ██████████, ESA/ICE Technology, Inc.  
Date: November 9, 1993

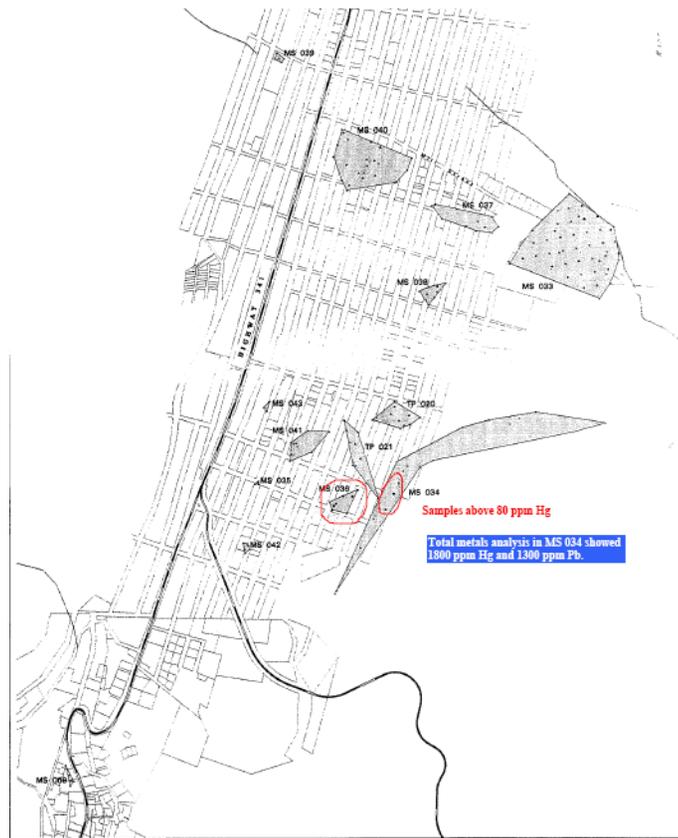
Analysis Type: Low Concentration Soil Samples  
for RAS Total Metals

Concentration in mg/kg

Station Location Sample I.D. Date of Collection	MS-011-SD-09-A MYM407 D1 09/02/93			MS-011-SD-09-A MYM408 D2 09/02/93			MS-011-SD-20-A MYM409 09/02/93			MS-011-SD-30-A MYM410 09/02/93			MS-011-SD-15-A MYM411 09/02/93			MS-011-SD-39-A MYM451 09/09/93			MS-011-SD-02-A MYM452 09/09/93		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Aluminum	23800			31200			28900			17200			1760			18500			4100		
Antimony	4.9 U R A			4.8 U R A			4.4 U R A			8.2 L J BC			4.1 L J BC			3.9 U R A			4.6 J B		
Arsenic	8.5			7.6			13.3			11.2			10.6			8.6			2.9		
Barium	194			218			294			109			81.9			81.9			14.9		
Beryllium	0.38 L J C			0.48 L J C			0.69 L J C			0.33 L J C			0.06 U			0.35 L J C			0.06		
Cadmium	5.6			4.8			3.3			13.6			0.94 L J C			0.78 U			0.92		
Calcium	3960			4610			3720			16800			61.4 L J C			3360			612		
Chromium	9.4			11.0			22.0			20.6			2.0			15.3			5.6		
Cobalt	19.8			12.8			16.9			9.5			3.5 L J C			9.3			0.59		
Copper	203			213			204			169			221			91.3			58.5		
Iron	28000			34000			34000			24100			28900			27600			7160		
Lead	332			370			650			461			1300			127			217		
Magnesium	8133			8900			7780			6340			144 L J C			8540			2530		
Manganese	749			831			942			743			4.4			591			174		
Mercury	5.8			5.6			24.0			2.9			1800			15.7			0.08		
Nickel	15.9			15.1			16.6			12.3			5.9 L J C			11.2			6.2		
Potassium	2452			3710			4870			1760			2900			1710			410		
Selenium	2.7 J B			3.0 J BCF			2.5 L J BCF			5.1 L J BCF			13.0 J B			0.52 L J BCD			0.96 L J BC		
Silver	76.7 J E			82.4 J E			42.4 J E			118 J E			121 J E			18.3 J E			24.9 J E		
Sodium	325 L J C			443 L J C			240 L J C			237 L J C			235 L J C			125 L J C			37.4		
Thallium	0.17 L J C			0.17 U			0.17 L J C			0.15 U			0.18 L J C			0.18 U			0.15		
Vanadium	42.6			51.6			56.8			43.2			3.2 L J C			47.5			12.0		
Zinc	374			399			435			3610			44.0			142			92.6		
Percent Solids	97.1 %			97.1 %			97.1 %			94.6 %			95.1 %			95.3 %			98.1 %		

Val-Validity Refer to Data Quality in Table 1B  
Com-Comments Refer to the Corresponding Section in the Narrative for each letter.  
IDL-Instr- Detection Limit for Waters, MDL-Method Detection Limit for Soils.

D1, D2, etc.-Field Duplicate Pairs  
FB-Field Blank, EB-Equipment Blank, TB-Travel Blank, BC-Background  
CRDL-Contract Required Detection Limit



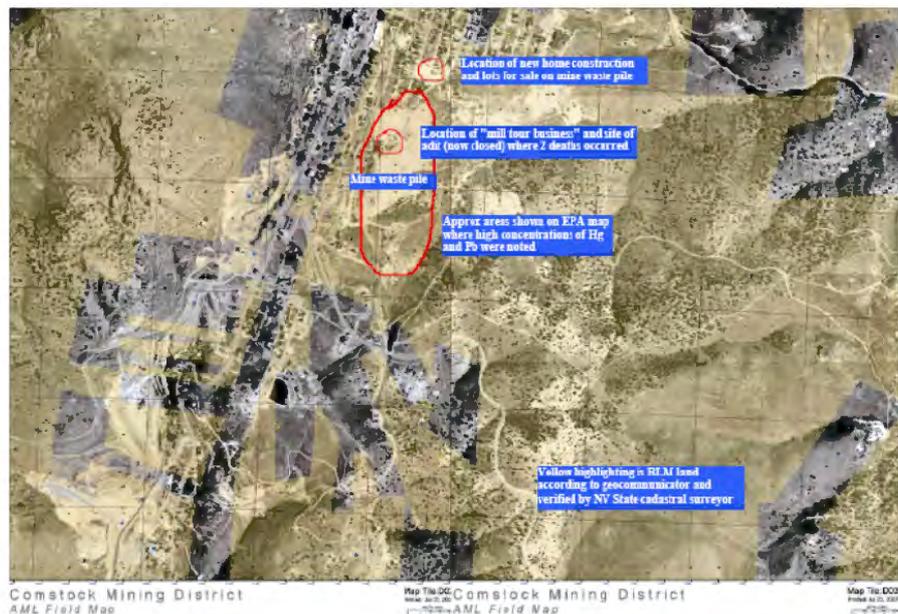
**SURFACE SOIL SAMPLING LOCATIONS**  
VIRGINIA CITY



- Total Mercury Concentration in mg/kg (0 - 6 inches)
- Less than 25
  - 25 - 79
  - 80 and Higher
  - Sample ID Area
  - River Reach

FIGURE 20

Areas annotated below by OIG based on observations during site visits. Approximate area shown corresponding to MS-034 and MS-036 highlighted in Figure 20 above.



The sample efforts undertaken by EPA during the early 1990's were discussed with EPA staff involved in the project (Stan Smucker, Toxicologist and Wayne Praskins, Project Leader).

Under the Toxic Substances Control Act (TSCA) Section 403, EPA has defined the following standard for lead exposure. In residential children's play areas, lead is considered a hazard when concentrations exceed 400 ppm in bare soil. In other areas of bare soil in residential yards, the level is established at 1200 ppm.

#### Lead in Soil

## Residential Lead Hazard Standards - TSCA Section 403

As part of EPA's ongoing efforts to protect children from lead poisoning, the Agency announces, new standards to identify dangerous levels of lead in paint, dust and soil. These new national standards are more protective than previous EPA guidance and will, for the first time, provide home owners, school and playground administrators, childcare providers and others with standards to protect children from hazards posed by lead, including children in federally-owned housing.

Under these new standards, federal agencies, including Housing and Urban Development, as well as state, local and tribal governments will have new uniform benchmarks on which to base remedial actions taken to safeguard children and the public from the dangers of lead. These standards will also apply to other Federal lead provisions, such as EPA's real estate disclosure requirements presently in place for people selling or renting a home or apartment. These hazard standards will also serve as general guidance for other EPA programs engaged in toxic waste cleanups. In addition, these standards will provide landlords, parents, and childcare providers with specific levels on which to make informed decisions regarding lead found in their homes, yards, or play areas.

Health problems from exposure to lead can include profound developmental and neurological impairment in children. Lead poisoning has been linked to mental retardation, poor academic performance and juvenile delinquency. Nearly one million children in America today have dangerously elevated levels of lead in their blood. Because of the potential dangers, any exposure to deteriorated lead-based paint presents a hazard.

Under the new standards, lead is considered a hazard when equal to or exceeding: 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard.

Identifying lead hazards through these standards will allow inspectors and risk assessors to assist property owners in deciding how to address problems which may include lead paint abatement, covering or removing soil or professional cleaning of lead dust.

This action appears in the [January 5, 2001 Federal Register \(PDF\)](#) (36 pp, 357 KB, [About PDF](#)).

[Contact the National Lead Information Center \(NLIC\)](#) to speak with an information specialist.

Praskins Email

Attachments to Praskins email

Discussions

Telephone call with Stan Smucker, EPA on 10/10/07.

- Stan noted that 80 ppm was established as an action threshold for mercury contamination in residential areas based on ingestion exposure of a child.
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Methodology:

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History

Status: Approved Request Review:

In Progress Edit: Greta Bloomfield/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

Confidentiality: Standard

Add Document Readers:

Read Authorization: [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Petterson/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazill/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 10/25/2007

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.VirginiaCity.05

Subsection: Audit Step K.1

Program Name: BLM (Site Visits)

Subject: Comstock Lode

Origination Doctlink: 

### Purpose

Provide background on mining in Virginia City area

### Scope

Virginia City, NV historic mining activity.

### Source

Pages from "Mining Districts and Mineral Resources of Nevada" by Francis Church Lincoln, 1923, photographic version published by Stanley Paher, Nevada Publications, 1982 and attached:



Mining Districts and Mineral Resources of Nevada.pdf

Description of Comstock Lode found at <http://print.infoplease.com/ce6/history/A0813138.html%20> and attached:



Comstock lode\_infoplease.pdf

USGS 1 24,000 scale topographic map of Virginia City, NV shown below.

### Conclusion

- Comstock Lode in the area of Virginia City was the richest silver deposit in the U.S. and was worked from 1859 to 1921.
- Over \$386 million of gold and silver was produced during this time.
- There are hundreds of mines and tunnels (169 mines, 31 tunnels) around Virginia City as well as numerous mine features as shown on the USGS topographic map of the Virginia City area shown below.

### Details

Infoplease description of Comstock Lode:

## Comstock Lode

**Comstock Lode**, richest known U.S. silver deposit, W Nevada, on Mt. Davidson in the Virginia Range. It is said to have been discovered in 1857 by Ethan Allen Grosh and Hosea Ballou Grosh, sons of a Pennsylvania minister and veterans of the California gold fields who died under tragic circumstances before their claims were recorded. Henry T. P. Comstock, known as Old Pancake, was a sheepherder and prospector who took possession of the brothers' cabin and tried to find their old sites. He and others searching for gold laid claim to sections of the Comstock (1859) but soon sold them for insignificant sums. The lode did not become really profitable until its bluish sand was assayed as silver. News of the discovery then spread rapidly, attracting promoters and traders as well as miners, and the lode was the scene of feverish activity. Among early arrivals was William Morris Stewart, who later became one of Nevada's first senators. Camps and trading posts in the area became important supply centers, and Virginia City, a mining camp on the mountain, was for several decades the "capital" of the lode and a center of fabulous luxury. Great fortunes were made by the "silver kings," John W. Mackay, James Graham Fair, James C. Flood, and William S. O'Brien, and by Adolph Sutro, George Hearst, and Eilley Orrum Bowers. Silver determined the economy and development of Nevada until exhaustion of the mines by wasteful methods of mining and the demonetization of silver started a decline in the 1870s. By 1898 the Comstock was virtually abandoned.

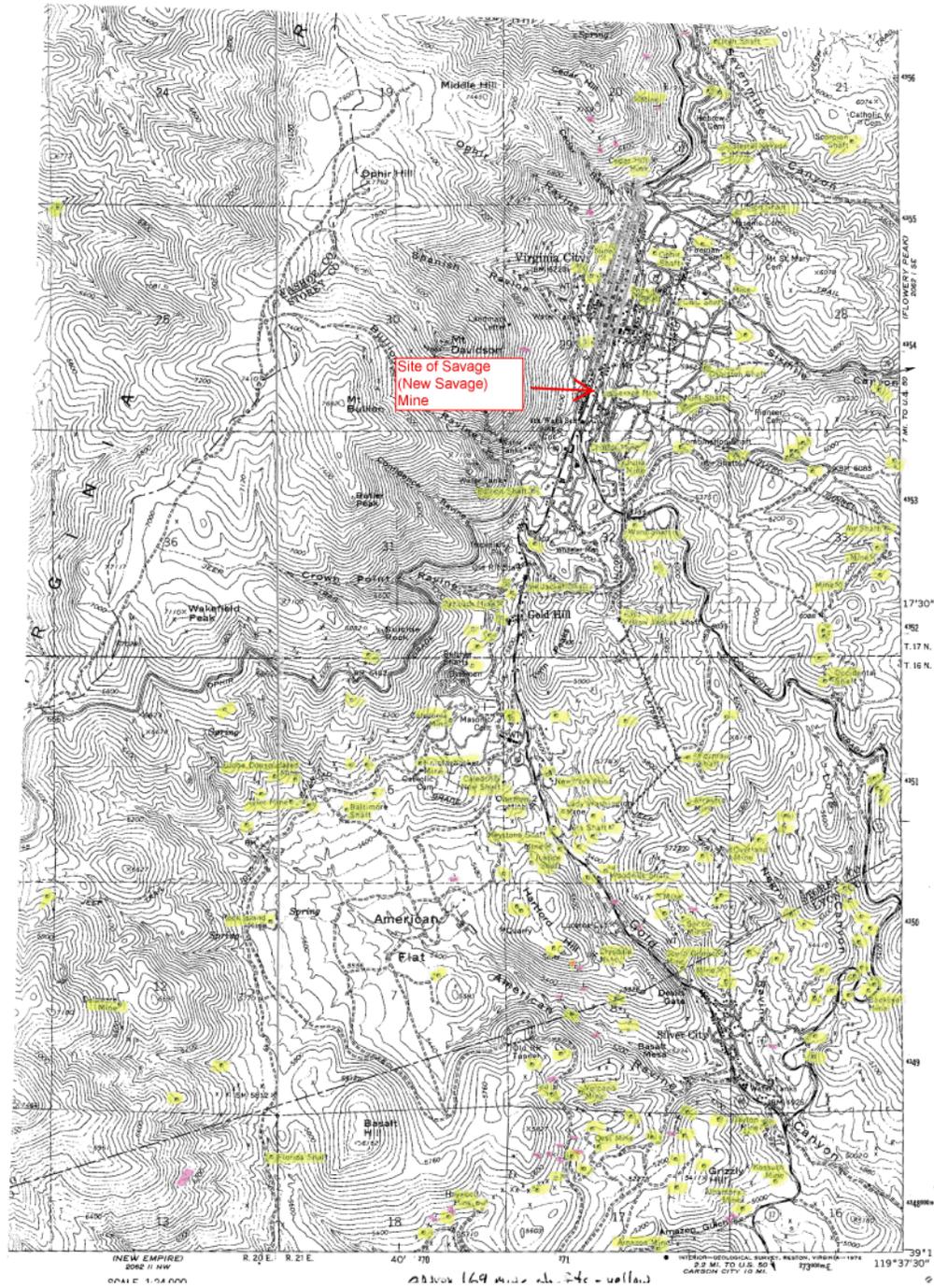
pages from Mining Districts and Mineral Resources of Nevada show that over \$386 million of gold and silver were produced in the Comstock District from 1859 to 1921:

Year	PRODUCTION OF THE COMSTOCK DISTRICT			
	Tons	Gold \$	Silver \$	Total \$
1859 (1)		30,000.00		30,000.00
1860 (1)	10,000	550,000.00	200,000.00	750,000.00
1861 (1)	140,000	2,500,000.00	1,000,000.00	3,500,000.00
1862 (1)	250,000	4,650,000.00	2,350,000.00	7,000,000.00
1863 (1)	450,000	4,940,000.00	7,460,000.00	12,400,000.00
1864 (1)	680,450	6,400,000.00	9,600,000.00	16,000,000.00
1865 (1)	430,745	6,133,488.00	9,700,232.00	15,833,720.00
1866 (1)	640,282	5,963,158.00	8,944,737.00	14,907,895.00
1867 (1)	462,176	5,495,443.20	8,243,164.80	13,738,608.00
1868 (1)	300,560	3,391,907.60	5,087,861.40	8,479,769.00
1869 (1)	279,584	2,962,231.20	4,443,346.80	7,405,578.00
1870 (1)	238,967	3,481,730.16	5,222,595.24	8,704,325.40
1871 (1)	409,718	4,099,811.46	6,140,717.19	10,240,528.65
1872 (1)	384,668	4,894,559.86	7,341,839.79	12,236,399.65
1873 (1)	448,301	8,668,793.40	13,003,187.13	21,671,980.53
1874 (1)	526,743	8,990,714.06	13,486,071.09	22,476,785.15
1875 (1)	546,425	10,330,208.62	15,495,312.92	25,825,521.54
1876 (1)	598,818	12,647,464.08	18,971,196.12	31,618,660.20
1877 (1)	562,519	14,520,614.68	21,780,922.02	36,301,536.70
1878 (1)	272,909	7,864,557.64	11,796,836.47	19,661,394.11
1879 (1)	178,276	2,801,394.33	4,202,091.49	7,003,485.82
1880 (1)	172,399	2,051,606.00	3,077,409.00	5,129,015.00
1881 (1)	76,049	430,248.00	645,372.00	1,075,620.00
1882 (1)	90,181	697,385.60	1,046,078.40	1,743,464.00
1883 (1)	125,914	802,539.54	1,203,809.29	2,006,348.83
1884 (1)	188,369	1,261,313.60	1,577,438.40	2,838,752.00
1885 (1)	226,147	1,729,531.25	1,415,071.04	3,144,602.29
1886 (1)	238,780	2,054,920.15	1,681,298.31	3,736,218.46
1887 (1)	223,682	2,481,176.85	2,030,053.78	4,511,230.63
1888 (1)	271,152	3,169,209.07	4,458,058.66	7,627,267.73
1889 (1)	286,144	2,590,973.32	3,358,949.95	5,949,923.27
1890 (1)	286,075	1,992,349.03	2,988,523.56	4,980,872.59
1891 (1)	188,647	1,380,857.02	2,071,285.53	3,452,142.55
1892 (1)	133,678	1,043,158.86	1,130,088.77	2,173,247.63
1893 (1)	109,780	1,123,262.54	748,841.70	1,872,104.24
1894 (1)	97,049	768,880.63	512,587.09	1,281,467.72
1895 (1)	63,558	548,873.68	365,915.79	914,789.47
1896 (1)	39,240	340,253.36	226,835.57	567,088.93
1897 (1)	17,850	223,808.63	149,205.76	373,014.39
1898 (1)	10,766	123,023.89	82,015.92	205,039.81
1899 (1)	6,780	103,006.74	68,671.16	171,677.90
1900 (1)	35,300	381,423.56	319,441.70	700,865.26
1901 (1)	56,577	746,477.00	521,032.00	1,267,509.00
1902 (1)	96,490	785,030.50	495,944.96	1,280,975.55

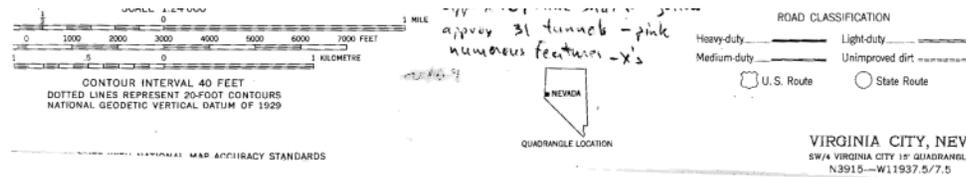
(1) Director of Mint, AR 1903, (1903), 157.

Year	Tons	Gold	Silver	Copper	Lead	Total
1859-1902*	10,851,748	\$148,145,385	\$204,653,040			\$352,798,425
1871-1902* Mill Tailing		6,272,953†	12,176,910†			18,449,863
1903†	36,142†	329,656	124,132			453,788
1904†	69,972**	636,563	728,942			1,365,505
1905†	89,484**	613,425	348,959	\$3,795		966,179
1906†	52,507**	327,766	185,763			513,529
1907†	39,400**	254,690	107,442	543	\$126	362,801
1908†	113,908**	599,617	287,269			886,886
1909†	92,092**	556,621	260,845		80	817,546
1910†	108,592**	502,843	173,187	73	82	676,185
1911†	95,894**	977,349	327,543			1,304,892
1912†	112,001**	855,494	496,214†	218†	163†	1,352,089
1913†	157,562**	853,564	440,903†	290†	178†	1,294,935
1914†	103,406**	434,387	154,065†	146†		588,598
1915†	85,144**	298,990	79,419†	93†	229†	378,731
1916†	63,187**	483,137	188,074†	222†	763†	672,196
1917†	59,805**	360,875	200,291			561,166
1918†	95,051**	518,154	321,636			839,790
1919†	50,376**	355,640	443,278†	41†	157 †	799,116
1920†	58,494**	321,982	353,971			675,953
1921†	64,601**	324,827	263,931			588,758
Total						
1859-1921	12,399,366	\$164,023,917	222,315,814	\$5,421	\$1,778	\$386,346,951

■ Topo map of Virginia City showing hundreds of mines, tunnels and mine features in the area around the New Savage Mine.



K BLM.VirginiaCity.05 Comstock Lode



**Methodology**

Reviewed source documents. Highlighted and counted number of mines and tunnels on topographic map of Virginia City Nevada.

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Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:11:01 PM

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### Assignment Workpaper

Prepared by: William McMullen 12/05/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.VirginiaCity.06                      **Subsection:** Audit Step K.1  
**Program Name:** BLM (Site Visits)  
**Subject:** Latest Status

**Origination Doctlink:** ■

**Purpose**  
Document BLM's initial response to OIG concerns about Virginia City.

**Scope**  
BLM AML program.

**Source**  
Email from Chris Ross, BLM AML State lead to George Stone with attachments as shown in Details section.

- Conclusion**
- BLM provided information on what had been done in the past to try to remedy the trespass situation in Virginia City.
  - ■ BLM contends that surveys of Section 29 (site of commercial and residential trespass) had not been done.

**Details**  
Email:

---

George M Stone/WO/BLM/DOI@BLM  
12/05/2007 08:31 AM

To: "John Ilson" <john\_illson@oig.doi.gov>, William McMullen/DEN/OIG/DOI@OIG  
cc  
Subject: Fw: Response for OIG presentation

Fyi  
George Stone ---ofc: 202.557.3573---cell 202.253.0061  
Chris Ross  
----- Original Message -----

**From:** Chris Ross  
**Sent:** 12/05/2007 09:19 AM  
**To:** George Stone; Robert Kelso; Leslie Torrence  
**Subject:** Response for OIG presentation

We've devoted much of this week to the attached. It has been approved by the acting State Director [Lueders], the Minerals folk, Cadastral, Lands, and External Affairs. There is consensus that the issues at VC are clearly survey and title related and that it's time to move it away from AML/Minerals, at least until those issues are resolved.







VCbriefFinal3.2.doc VirginiaCity Hx overview from Bob Thompson rev2.doc 1994Article2.PDF 1991LtrtoBryan.PDF 1994Article1.PDF

I will be here to discuss, or can be reached via cell if not. If you don't get me on my gummint cell (775.223.3280), try my personal which works better in almost all locations: ■■■■■ )  
I'm headed to the field this morning to look at the next round of northern Nevada AML closures at Painted Rock, along I 80 east of Reno.

Chris

---

From VCbriefFinal3.2.doc:  
In 1991 the Nevada BLM developed a course of action to evaluate and resolve these issues (see letter dated August 7, 1991). In fiscal years 1993 and 1994 specific funding was received to begin resurveying Virginia City. The resurvey remains a priority for the BLM in Nevada and work continues with existing funds. To effectively manage this large survey it was divided into two Phases. Phase I consists of 7 sections of land and is scheduled to be approved this fiscal year (approximately 4,500 acres). Phase II consists of the remaining two sections (29 and 32) and includes the most complex and time consuming boundary and title issues.

We were told by NV State Surveyor that surveying on Section 29 (site of commercial and residential trespass **K.BLM.Virginia City.01 Trespass Issues** ■) had been done **K.BLM.Virginia City.02 Cadastral Survey** ■.

**Methodology**

Reviewed source documents.

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Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	04/28/2008 12:59:39 PM

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## Assignment Workpaper

Prepared by: William McMullen 12/26/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Section:** K.BLM.VirginiaCity.07                      **Subsection:** K.1  
**Program Name:** BLM (Site Visits)  
**Subject:** Aerial Photo of Section 29

**Origination Doctlink:** ■

### Purpose

Document BLM ownership of land in Section 29 (Township 17 N Range 21 E) at Virginia City, NV.

### Scope

BLM AML Program.

### Source

Email from Ray Hewitt, BLM Las Cruces on 12/27/2007 with attached aerial photo as shown in Details section.

### Conclusion

BLM Las Cruces provided the aerial photo of Virginia City shown in the Details section that also highlights in Yellow the land managed by BLM in Section 29.

### Details

email:

**Ray Hewitt/LCFO/NM/BLM/DOI@BLM**  
12/27/2007 10:15 AM

To William McMullen/DEN/OIG/DOI@OIG@DOI  
cc  
Subject Re: T17N R21E Section 29 Map ■

Bill,

See attached.

Ray



T17NR21ESection29.pdf

## Ray J. Hewitt

*GIS Specialist*

Bureau of Land Management  
Division of Multiple Resources  
Las Cruces District Office  
1800 Marquess St  
Las Cruces, NM 88005

Office: 575-525-4374  
Fax: 575-525-4412

ray.hewitt@nm.blm.gov

The aerial photo in the attachment was cropped, the scale was added, the photo was saved and is shown below (reduced size). Section 29 is outlined in blue.



**Methodology**

N/A

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All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

K BLM.VirginiaCity.07 Aerial Photo of Section 29

Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 07/03/2008

Assignment Number: C-IN-MOA-0004-2007

Assignment: Audit of Public Safety Issues on Abandoned Mine Lands

Section: K.BLM.VirginiaCity.08

Subsection:

Program Name: BLM (Site Visits)

Subject: State Director Letter

Origination Doctlink: 

### Purpose

Collect and review information regarding BLM knowledge of trespass in Virginia City, NV

### Scope

AML Program trespass

### Source

Letter provided to OIG by BLM as follows:



VC Letter to Sen Bryan.pdf

San Francisco Chronicle article dated March 23, 1994:



VC newspaper article.pdf

### Conclusion

- In 1991, BLM was aware that there were concerns over land ownership in Virginia City and the State Director communicated with Senator Richard Bryan regarding a possible solution.
- In 1994, the Virginia City Assessor noted that even he did not know who owned the town.
- A resident in Virginia City noted that BLM thought no one owned the town.
- As of our site visit, clearly BLM had not resolved issues of potential trespass in Virginia City and **[Auditor opinion]**, we are concerned that the public in trespass may continue to be exposed to safety and environmental hazards from AML sites on public lands until BLM resolves these issues.

### Details

In 1991, Billy Templeton, BLM NV State Director wrote a letter to Senator Richard Bryan suggesting a process by which title to lands in Virginia City could be resolved:

2000/1541.3  
(NV-932.3) ✓

AUG 7 1991

Honorable Richard Bryan  
United States Senate  
600 East William, Suite #304  
Carson City, NV 89701

Attn: Mr. Tom Baker

Dear Senator Bryan:

Most, if not all, of the Virginia City Townsite is situated on mining claims - patented and unpatented. Presumably many of the townsite lots were not patented pursuant to the Townsite Laws, which were subject to prior valid mining rights. The County allegedly "sold" many townsite lots via tax deeds.

To begin work towards a resolution of land title conflicts in Virginia City, we offer the following suggestions:

I. The first step is to identify the extent and nature of the title conflicts. The following items are needed to begin this process. Other steps may become apparent as work progresses.

The letter notes that much of the town is situated on mining claims, some of which are unpatented. Templeton suggests that BLM needs to:

B. Survey the boundary of Federal lands including remnant portions remaining inside private lands. This effort could require two permanent positions (a party chief and a principal assistant) and two temporary positions. Records research, field survey and plat preparation by this staff will take approximately five years at a preliminary cost of from \$100,000 to \$125,000 per year to complete. As the issues are better defined, additional work may be needed. Survey work inside private land boundaries would require contributed funds.

Clearly, in 1991, BLM was aware that there were concerns over land ownership in Virginia City.

The letter suggests possible remedies for the title issues:

II. Potential options for resolution of some or all of the title conflicts are:

A. If the subsurface were patented with a reservation of the surface to the United States "for townsite purposes" and, if the pattern of surface reservations fits the pattern of the lots and surface improvements, we can issue a FLPMA patent. The purchase price should be paid by the title insurance company, not the "owner" of the lot. However, the liability of the title insurance company would be limited to the face amount of the policy.

B. If some portions of the townsite have not been conveyed into private ownership, there is a real possibility of the presence of unpatented mining claims. The claimant, pending a contest action, has appropriated the land and is entitled to receive patent, including the surface estate, if the claim is found to be valid.

C. If the fee, including surface rights, underlying townsite lots, patented or unpatented, has been conveyed into private ownership, the actual occupants of the surface may have some rights for recourse under state law. However, we are not in a position to know what those rights may be, if any, or to take action to deal with such private title disputes.

D. The County may be required to refund real estate tax payments where collections have been made from more than one owner for the same parcel of land. Reportedly, there is one parcel for which Charter Title has insured four different chains of title to the same parcel of land.

E. Some otherwise unresolvable situations may require an agreement between the patent holder and the surface occupant in the form of a lease or other instrument.

F. "Owners" of unpatented townsite lots or patented townsite lots which overlap a valid mining right which are not or have not been occupied in recent times likely have few, if any, rights to be protected unless the claim of title can be traced back to a patent from the United States pursuant to an authority other than the Townsite Laws.

Apparently, the actions suggested by Templeton were never acted upon as the situation remains today that title in Virginia City is unclear.

The San Francisco Chronicle article notes that there were questions in 1994 as to who owned the town:

out that nobody has clear title to Virginia City.

It's a mess: Storey County may not own the classic 1875 county courthouse. The Roman Catholic Church may not own the Catholic church. The bars that line C Street, the main drag, may belong to a mining company.

Even County Assessor John Flanagan, the official who sends out the tax bills, admits he doesn't know who owns the town

of 1,000 souls and 10 bars.

"There is a whole lot of concern about this," said Flanagan. "We don't know what's going to happen."

Thirty years ago, nobody cared. In fact, lawyers say one of the patents, a mining claim that carries land title to what could be most of the town, changed hands in a saloon poker game. Out of that transaction came a complex

VIRGINIA CITY: Page A5 Col. 1

The article also notes that at least one person in Virginia City was told by BLM that no one owned the town.

**Unanswered Questions**

Land titles were never seriously disputed before. Everyone knew there was a problem, but no one did anything -- until suddenly a couple of years ago an attempted sale of mineral rights raised questions no one could answer.

"According to the Bureau of Land Management, we don't even own the town," said Greg Hess, a surveyor, businessman and mine owner.

As of our site visit, clearly BLM had not resolved issues of potential trespass in Virginia City [K.BLM.Virginia City.01 Trespass Issues](#) and **[Auditor opinion]**, we are concerned that the public in trespass may continue to be exposed to safety and environmental hazards from AML sites on public lands until BLM resolves these issues.

**Methodology**

Reviewed letter from BLM NV State Director to Senator Bryan regarding status of land ownership in Virginia City and newspaper article.

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**Assignment Program/Summary Workpaper**

Prepared by: William McMullen 07/17/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section L.  
 Assignment Program Name Best Practices

**Objective:**

Identify and document best practices being used by individual entities in BLM or NPS or by outside parties regarding management of AML sites and mitigation of AML hazards.

**Background:**

Best practices, if shared and adopted bureau-wide, can help deal with AML issues in a more cost effective and technically effective manner.

**Assignment Steps:**

L. Best Practices		
Audit Step	Staff	Work Paper Reference
1. Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.  a. Identify potential best practices to suggest to the Department to use in its abandoned mine land program.	Greta, Bill	F.BLM.NVSO.01 BLM Nevada AML NEPA Approach F.DOI.01 DOI AML NEPA Categorical Exclusions L.1.a NAMLET L.1.b NV Abandoned Mines Permanent Closure Program L.1.b.01 Agreement between BLM and NDOM FAA 050037 L.1.b.03.01 NDOM Fact Sheet L.1.b.03.02 NDOM's Eagle Scout Program L.1.b.03.03 NDOM's List of Contractors L.e Desert Managers Group L.g. Withdrawal, Segregation and Closure of Lands L.d.01 BLM Volunteer Policy

**Conclusion:**

***Prefabricated Materials for Mitigation***

At Joshua Tree National Park, NPS has the capabilities to mass produce prefabricated bat gate and cupola materials. This production capability enables a large number of sites to be bat gated in a short amount of time. The current method has proven to be very secure and the patina gives a historic aged look, which allows the mine sites with bat gates and cupolas to blend more appropriately with the historic landscape and not lose their "flavor." *NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead* Staffing and materials could be expanded at Joshua Tree National Park for the production site to be utilized by other parks and public agencies. We believe this approach is a good model that could be expanded at Joshua Tree National Park and adopted by other bureaus. *NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead*.

***Utilizing Volunteers to Address AML Issues***

We identified volunteers who assisted NPS and BLM to identify and inventory AML sites. For example, at Joshua Tree National Park, a retired sheriff helps locate and map AML sites within the Park. *NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead*

In Nevada, BLM is supported by the State's Division of Minerals who uses volunteers to identify and inventory AML features *J.BLM.16 07/20/07 ROD Chris Ross BLM Nevada*. BLM has also developed a grassroots effort to mitigate physical hazards using volunteer labor *L.1.b.03.02 NDOM's Eagle Scout Program* and donated equipment (flat beds, back hoes) and materials [see first para of conclusion *J.BLM.11 State of NV - Division of Minerals*].

We believe using volunteers can be effective if they are properly trained and supervised as required by BLM policy [Auditor opinion]

### Partnerships with Other Organizations

The Bureau of Land Management initiated the Nevada Abandoned Mine Land Environmental Taskforce (NAMLET) in March 1999. NAMLET, founded by BLM and led by NDOM, was created to address environmental hazards associated with abandoned and inactive mines in Nevada. The task force includes 13 federal and state agencies that work together to (1) foster regulatory cooperation, (2) identify priority sites for cleanup, and (3) provide administrative oversight for funded projects. L.1.a NAMLET

### CALIFORNIA DESERT REGION

The Desert Manager's Group is a regional interagency partnership among Federal, State and Local entities in California's 20 million acre desert region. The desert region, which includes but is not limited to two national parks, 72 wilderness areas and six military bases. L.e Desert Managers Group has a large portion of the AML sites that are located in the Southwest [need link supporting his]. DMG has recently kicked off a five-year effort to form partnerships to leverage funding and mitigate the highest priority abandoned mine sites in the California Desert Region. In 2006, DMG began developing the list of AML sites in the desert region, discovering the capabilities of the different agencies within the DMG, and prioritizing the AML sites. L.e.01 Desert Managers Group Five Year Plan. DMG's latest Five Year Plan for FY 2007-2011 notes goals to (1) form partnerships to leverage funding and accomplish goals, (2) develop a central database of AML sites within the desert region and (3) mitigate the highest priority environmental and physical safety sites. L.e.01 Desert Managers Group Five Year Plan. This collaborative effort among agencies such as BLM, NPS, Department of Defense and the State of California L.e.01 Desert Managers Group Five Year Plan could provide a benchmark for maximizing efficiency in mitigating AML sites (auditor's conclusion).

### Site Closures

In August 2006, BLM closed several environmentally contaminated abandoned mine land sites in California to protect the public. The closure included "all forms of entry by the public, including mineral access" and facilitated environmental remediation actions. Site closure actions could be used more often to protect the public by limiting access to AML lands. L.g. Withdrawal, Segregation and Closure of Lands

Submission:	Submitted	William McMullen	05/05/2008 03:01 24 PM
Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	06/02/2008 02:47 55 PM

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L.1.a NAMLET

## Assignment Workpaper

Prepared by: Greta Bloomfield 08/21/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** L.1 a **Subsection** BLM NV

**Program Name** Best Practices

**Subject** NAMLET

**Origination Doclink** ■

### Purpose:

Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.

### Scope:

BLM Nevada's Abandoned Mine Program

### Source:

Christopher Ross, PHD  
Abandoned Mine Program Lead  
Nevada State Office  
1340 Financial Blvd, P.O Box 12000  
Reno, NV 89520  
Phone: (O): 775-861-6571 (C): 775-223-3280  
Fax: 775-861-6711  
E-mail: c1ross@nv.blm.gov

### Conclusion:

It is the auditor's conclusion that BLM Nevada is doing a good job of spearheading cooperative efforts to address environmental issues related to abandoned mines and that NAMLET could be a potential best practice. The auditor did not conclude whether or not the actual mitigation efforts were adequate. Though BLM Nevada spearheaded environmental AML cooperative efforts, the State of Nevada Division of Minerals conducts the majority of the coordination.

The Bureau of Land Management initiated the Nevada Abandoned Mine Land Environmental Task Force (NAMLET) in March 1999. The purpose of the formation of NAMLET was to begin the remediation of environmental hazards associated with abandoned and inactive mines in Nevada. The task force includes 13 federal and state agencies that work together to:

1. Foster regulatory cooperation
2. Identify priority sites for cleanup
3. Provide administrative oversight for funded projects.

Even though BLM initiated the task force, the Nevada Division of Minerals (NDOM) is the lead coordinator.

Since formation, NAMLET has been overseeing reclamation activities at several abandoned mine sites and has initiated two database projects.

### Funding for NAMLET

Funding for NAMLET comes from several sources:

- United States Army Corps of Engineers (USACE)
- Bureau of Land Management (BLM)
- Bureau of Reclamation (BOR)
- Environmental Protection Agency (EPA)
- Mining reclamation bonds

### Details:

**Nevada AML Environmental Task Force**

In March of 1999, the Bureau of Land Management (BLM) initiated the formation of a Nevada Abandoned Mine Land Environmental Task Force (NAMLET) to begin the remediation of environmental problems associated with abandoned and inactive mines in Nevada. The task force is comprised of 13 federal and state agencies in order to foster regulatory cooperation, identify priority sites for cleanup, and provide administrative oversight for funded projects. The Division is the lead coordinator in this effort.

Since 1999, the task force has overseen reclamation activities at 21 abandoned mine sites and initiated work on two database projects. Funding for these projects has come from a variety of sources including the U.S. Army Corps of Engineers (USACE), BLM, Bureau of Reclamation, Environmental Protection Agency, and mining reclamation bonds. The USACE Restoration of Abandoned Mine Sites (RAMS) program has received \$4 million in congressional appropriations since 2000 for work in Nevada to support the development of closure plans, and small, innovative, on-the-ground demonstration projects related to abandoned mine cleanup. The following is a list of AML projects currently underway or completed:

1. **Aurora Creek/Bodie Creek** (Esmeralda) – Site characterization initiated in 2006.
2. **Caselton** (Lincoln) – Channel diversion and armoring completed in 2006.
3. **Crum Canyon/Hilltop** (Lander) – Characterization planned for 2007.
4. **Easy Junior** (White Pine) - Reclamation completed in 2005.
5. **Elder Creek** (Lander) – Reclamation completed in 2006.
6. **Golden Butte** (White Pine) - Reclamation completed in 2005.
7. **Golden Eagle** (White Pine) – Site characterization completed in 2006, waiting for reclamation funding.
8. **Gooseberry** (Storey) – Hazmat cleanup completed with bond money, Brownfields project underway in 2006.
9. **Guanomi** (Washoe) – Reclamation completed in 2006, see figure 15.
10. **Johnston Mill Site** (Lincoln) – Reclamation completed in 2006.
11. **Kingston** (Lander) – Reclamation completed in 2006 except for well abandonment.
12. **MacArthur** (Lyon) – Site characterization and closure plan completed with reclamation scheduled for 2007.
13. **Mt. Hamilton** (White Pine) – Reclamation of part of haul road scheduled for 2007.
14. **Norse-Windfall** (Eureka) – Engineering design and final closure plan completed with structure removal scheduled for 2007.
15. **Paradise Peak** (Nye) – Site characterization completed with engineering design and final closure plan completed in 2006.
16. **Perry Canyon** (Washoe) – Reclamation completed with cooperation from private property owner in 2006.

17. **Rip Van Winkle** (Elko) - Site characterization and design work completed, waiting for reclamation funding, possible Good Sam site with help from Trout Unlimited.
18. **Pine Grove/Rockland** (Lyon) – Site characterization scheduled for 2007.
19. **Tybo Tailings** (Nye) – Final closure plan completed, initial reclamation planned for 2007 more reclamation funding needed.
20. **Veta Grande** (Douglas) - Reclamation completed in 2005
21. **Ward** (White Pine) – Site characterization and closure plan scheduled for 2007.

Further information on some of these projects is available at the USACE RAMS website at <http://www.nwo.usace.army.mil/html/rams/rams.html>.



Figure 15. Reclamation work at the Guanomi Mine, Pyramid Lake Indian Reservation.

**Methodology:**

n/a

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L.1.a NAMLET

Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: Greta Bloomfield 08/24/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** L.1 b **Subsection** BLM NV  
**Program Name** Best Practices  
**Subject** NV Abandoned Mines Permanent Closure Program

**Origination Doclink** ■

### Purpose:

Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.

### Scope:

BLM Nevada's AML Program

### Source:

Christopher Ross, PHD  
Abandoned Mine Program Lead  
Nevada State Office  
1340 Financial Blvd, P.O Box 12000  
Reno, NV 89520  
Phone: (O): 775-861-6571 (C): 775-223-3280  
Fax: 775-861-6711  
E-mail: c1ross@nv.blm.gov

**Ross provided hardcopy of newsrelease during site visit.**

link to source for news release: [www.nevadamining.org](http://www.nevadamining.org)

### Conclusion:

The federal and state agencies in Nevada have a collaborative program for securing physical hazards at abandoned mines, that is considered a model for other states ■ It is the auditor's conclusion that other Departmental bureaus other BLM state offices and the Department as a whole could use Nevada as a model for initiating collaboration with other state and private industry agencies to secure physical abandoned mine hazards in other states (auditor conclusion).

The BLM Nevada state office has been able to forge a public/private partnership by working with the Nevada Division of Minerals and the Nevada Mining Association's members. NDOM utilizes a body of wildlife specialists, researchers, graduate students and volunteers to identify and secure abandoned mine physical hazards. Some of the volunteers are Girl Scouts, Boy Scouts and even archaeologists ■.

One special caveat about the program, a standing Environmental Assessment has been created, to significantly shorten the NEPA process involved in mine closing projects **F.DOI.01 DOI AML NEPA Categorical Exclusions** ■.

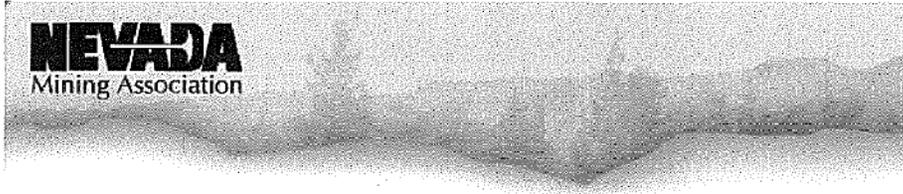
When we asked if there was a formal agreement (link to ROD) with all participating agencies, Chris Ross told us that there is no formal agreement among the participants and that the lack of a formal agreement has not been a hindrance to a successful mine closing program for Nevada. There is a Memorandum of Understanding / Cooperative Agreement between NDOM and BLM, however **J.BLM.12 BLM NV MOU with State of NV** ■.

### Details:

**Nevada Mining Association Claims Program is a Model for Others**

From a press release issued on [www.nevadamining.org](http://www.nevadamining.org)

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December 13, 2006

**Nevada program to secure abandoned mines is model for other states**

*Number of permanent mine closures sets BLM record*

**CALENDAR**  
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A public/private partnership is making Nevada's public lands safer by permanently securing mine sites that are no longer operational and have been abandoned by their owners. **The successful program, which includes government, land, mining and wildlife-related organizations and companies, has become a model for other states.** The targeted mine sites pre-date the 1983 federal regulations governing mine closures, with some sites dating back to the 1840s.

**"The Abandoned Mines Permanent Closure Program is successful because of the tremendous cooperation, 'can do' attitude and donation of manpower, services and equipment of all the partners," said Chris Ross, abandoned mine program leader for the Nevada Bureau of Land Management (BLM). "As a result, everyone in Nevada benefits from the elimination of potential safety hazards. Now other states also are benefiting by learning about our program."**

Ross has spoken to other government entities, land and mining groups and conferences that have expressed an interest in establishing a similar program.

The Abandoned Mines Permanent Closure Program involves the BLM, the Nevada Division of Minerals (NDOM), the Nevada Mining Association (NMA) and its members, which include mining and industry supply companies. Assistance also comes from a diverse group

Nevada Mining- Press Releases

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of agencies and entities, such as the Nevada Department of Wildlife, university researchers and graduate students, and volunteers ranging from professional archaeologists to Girl Scouts, Boy Scouts and Eagle Scouts.

According to the BLM, about 25 people nationwide die each year from accidents related to abandoned mines. Bill Durbin, NDOM chief of Southern Nevada operations, said there hasn't been an abandoned mine-related death in Nevada since 1999, and there was only one injury incident involving a dog in 2006. "Abandoned mine hazards could include falls, loose ground, rotten timbers, bats, poisonous snakes and spiders, bad air, old explosives and hantavirus from rodents."

Since the program began in 1999, 255 abandoned mines in urban areas and areas of high public use in Nevada have been permanently secured. The program continues to grow from six mines in 1999 to a new nationwide BLM record of 118 abandoned mines secured during 2005 and 2006 in or around Tonopah, Rhyolite, Beatty and Perry Canyon north of Reno. A backfilling process is used to permanently secure the mines with rock of no mineral value that was left around the mine opening.

According to BLM estimates, between 200,000 and 300,000 abandoned mines are scattered throughout Nevada, and 50,000 of these sites are considered physical or safety hazards. Ross said Nevada has more abandoned mines than all other western states combined, primarily due to Nevada's long mining history and the state's many ores and minerals. The formal mining history of Nevada began with the discovery of lead at Mt. Potosi outside of Las Vegas in the 1840s, and grew with the discovery of the Comstock Lode's gold and silver deposits in 1859.

"While there are many abandoned mines in Nevada, there is a very narrow window of time in the fall that we can backfill mines because of environmental considerations related to bat population habitats, and sheer numbers" Durbin said. "Therefore, we prioritize and target those mines closest to population centers and off-road and recreational areas."

Ross said many of the abandoned mines are more than 100 years old. "It's important to note that today's modern mining industry has nothing to do with the abandoned mines," he said. "There is absolutely nothing of value left in those mines so there's no reason people should even go into them."

Planning for each backfill project takes several months,

and several surveys have to be completed to obtain the necessary clearances which the BLM coordinates. For example, the Tonopah project surveys involved:

- NDOM determining which mines were hazardous;
- NDOM verifying that the mines were on public land;
- BLM and its Tonopah Field Station archeological staff checking for cultural resources and the archaeological significance of the mines; and
- BLM, NDOM and NMA with assistance from the TFS and Nevada Department of Wildlife conducting wildlife surveys, including bat surveys.

In addition to BLM, NDOM and NMA, private individuals and companies assisting with the Tonopah project included: Mary Kaye Cashman, Cashman Equipment, which provided the Caterpillar D-6 bulldozer; Paul DeLong, DeLong Heavy Hauling, which transported the bulldozer; Tinker Fannin, Round Mountain Gold, which provided the fuel drums; and Alfred Anderson, Round Mountain Gold, who operated the bulldozer.

According to Ross, there is no formal agreement between participants in the program, which began in late 1999. "Everyone recognizes the benefit of working together to secure potential hazards," he said.

**Agreement No. FAA 050037 between BLM and the Nevada Division of Minerals**

**FUNDING**

NDOM recognizes the importance of the cooperative relationship it has had with the BLM with regard to the abandoned mines program and wishes to keep that relationship strong. NDOM requests the BLM continue to fund the assistance agreement at a minimum of \$60,000 this year to keep the program at the current level.

With the continued support of Nevada's mining industry and the BLM at current levels, it is anticipated that NDOM will be able to identify, rank, and secure approximately 350 to 400 hazardous abandoned mine openings that are located on public lands in FFY-07.

Thank you for your attention to this request.

**Methodology:**

n/a

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2. It is estimated approximately 200,000 abandoned mine "features" exist in Nevada from historical mining operations. Approximately 50,000 may present physical safety hazards.
3. The program has two major tasks:
  - a. Abatement of Hazardous Conditions - The Division identifies and ranks the hazardous condition and conducts ownership research at the county courthouse. If a landowner or mining claimant is identified, the Division notifies them of their responsibility to secure the hazard and simultaneously notifies the county. If the securing is not accomplished in the time frame established by regulation, the Division notifies the county if enforcement action is necessary. If no landowner or claimant exists, the Division fences the hazard as soon as possible based on the hazard's rank and posts warning signs.
  - b. Public Awareness - The Division educates the public about the dangers in and around abandoned mines. The motto "Stay Out and Stay Alive" is stressed at school presentations, on billboards, through public service announcements, and at other events.
4. The program is funded by fees paid by the minerals industry and grants from the Bureau of Land Management. Two Division personnel are primarily assigned to the abandoned mine lands program.
5. Since 1987, and as of **June 5, 2007**, the Division has identified and ranked **11,625** hazardous mine openings throughout the state. Landowners, claimants, counties, and the Division have secured **9,024** of these openings. Priority attention is given to hazards near populated areas.
6. For more information about abandoned mines contact the Division of Minerals.

From 2006 Annual Report :[due to the size of the report, the relevant pages were scanned and inserted below. The current hyperlink for the report can be found: [http://minerals.state.nv.us/forms/aml/amlreport2006\\_Final\\_050807INT.pdf](http://minerals.state.nv.us/forms/aml/amlreport2006_Final_050807INT.pdf)]



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**ALAN R. COYNER**  
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COMMISSION ON MINERAL RESOURCES  
DIVISION OF MINERALS

**NEVADA ABANDONED  
MINE LANDS REPORT  
2006**



by  
**Bill Durbin** - Chief, Southern Nevada Operations  
**Mike Visser** - Chief, Abandoned Mine Lands Program  
**Alan R. Coyner** - Administrator

April 2007

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Dennis Bryan, Small Scale Mining and Prospecting      Eugene Kufowich, Oil and Gas  
Richard DeLong, Large-Scale Mining      John Mudge, Large-Scale Mining  
Patrick Fagan, Geothermal Resources      Fred D. Gibson, Jr., Chairman, General Public      Ron Parratt, V. Chair, Exploration and Development

The AML program is primarily funded by fees on mining claim filings. The county recorder collects the fees for the Division at the time the claims are filed. The program is also funded by a fee paid by mining companies or individuals for new operations or expansions occurring on public lands. In 1995, the Division entered into a cooperative agreement with the BLM. Under this agreement, which was renewed in 2005, the BLM has provided a yearly assistance grant to enhance and accelerate both field investigation activities and work performed by staff and volunteers to secure orphan hazards.

Page 2 4/26/2007

**Funding**

The Division's AML program is funded by three major revenue sources: 1) mining claim fees, 2) surface disturbance fees paid on new mining plans of operations on public lands, and 3) grants from the Bureau of Land Management. As of July 16, 2001, \$1.50 of every mining claim filing collected by the county on behalf of the Division is dedicated to the AML program (NAC 513.315). The Division collects a one-time fee of \$20 per acre for every acre of permitted disturbance associated with new mining operations on public lands. The Division has an assistance agreement with the Bureau of Land Management, which provides annual support for the AML program, depending on available funding. Table 4 shows the revenues received by the Division from these three revenue sources for the years 2002 through 2006.

**Table 4. Revenue to the AML program for the years 2002 through 2006.**

Year	BLM Grants	Mining Claim Fees	Disturbance Fee	Total
2002	\$ 60,000	\$ 140,856	\$ 37,440	\$ 238,296
2003	\$ 66,204	\$ 157,056	\$ 36,800	\$ 260,060
2004	\$ 60,000	\$ 210,596	\$ 95,940	\$ 366,536
2005	\$ 70,000	\$ 227,221	\$ 23,476	\$ 320,697
2006	\$ 60,000	\$ 249,763	\$ 36,824	\$ 346,587

AML revenue is used to pay salary expenses, travel expenses, the summer intern program, vehicle expenses, and field supplies such as fence posts, signs, and barbed wire. The revenue is also used to support the AML public awareness program through school presentations, video distributions, brochures, magnets, pencils, bumper and hard hat stickers, and other means of outreach.

**Methodology:**

n/a

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Eagle Scout Volunteer AML Securing Projects

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# Nevada Commission on Mineral Resources Division of Minerals



## Eagle Scout Volunteer AML Securing Projects

### An Impressive List of Accomplishments



Chase Bodhaine's Eagle Project in Clark Co., May 2004

The abandoned mine securing work performed by Eagle Scout candidates for their service project has provided an assist to the Division of Minerals' AML program that no one could have imagined a few years ago.

Beginning with David Loring, the son of Reno area exploration geologists in September of 1992, there have been a steady stream of eager and impressive young men who have come forward to help the Division fence, barricade, and sign hazardous mine openings

The table shown below depicts the number of Eagle Scout volunteers and their

associated number of secured hazardous conditions and completed repairs on sites that had been subjected to vandalism. The work has been performed in Carson City, Churchill, Clark, Douglas, Lyon, Mineral, Nye, and Washoe Counties.

The hazards that were secured were found to be "orphan" sites, i.e., sites on open public (BLM) land. The sites were secured through construction of fences or barricades, and posted with warning signs in accordance with the requirements of NAC (Nevada Administrative Code) 513.370 and 513.390.

Materials for the Eagle Scout securing projects were provided by the Division and the work was monitored at all times for safety by Division staff. The Eagle Scout candidate was responsible for all phases of planning of the project including staff and materials needs and setting the project date. Eagle Scout securing projects fall under the Nevada "Good Samaritan"

Law, NRS (Nevada Revised Statutes) 41.0331.

The Division of Minerals salutes each and every Eagle Scout for his hard work, dedication and for his genuine concern for the safety of all people.

If you are interested in doing an Eagle Scout Abandoned Mine Lands project, please contact:

For Northern Nevada: **Mike Visher**, 775-684-7044, [mvisher@govmail.state.nv.us](mailto:mvisher@govmail.state.nv.us)

For Southern Nevada: **Bill Durbin**, 702-486-4344, [bdurbin@govmail.state.nv.us](mailto:bdurbin@govmail.state.nv.us)



Duncan Rickford's Eagle Project in Clark Co., January 2004

[Nevada Eagle Scout Abandoned Mine Lands \(AML\) Securing Program chart](#)

**Methodology:**

n/a

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## Assignment Workpaper

Prepared by: Greta Bloomfield 10/29/2007

**Assignment Number** C- N-MOA-0004-2007

**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** L.1 b.03.03 **Subsection**

**Program Name** Best Practices

**Subject** NDOM's List of Contractors

**Origination Doclink** ■

### **Purpose:**

Identify potential best practices to suggest to the Department to use in its abandoned mine land program.

### **Scope:**

BLM Nevada's AML Program, as well as their partner, the Nevada Division of Minerals

### **Source:**

NDOM's Website Publications

### **Conclusion:**

The fact that NDOM actively maintains and publishes a list of qualified individuals to assist with AML closures, is a potential best practice. This allows a private land owner, federal agency or anyone for that matter, to have a list of resources to go to, in order to expedite the closing of dangerous physical hazards.

### **Details:**

AML Contractor's List as of 10/4/2007

Page 1 of 3

The following individuals have expressed interest in and an ability to secure potentially hazardous mine openings. Securing arrangements are the responsibility of the claimant or owner. The Division of Minerals does not make specific endorsements or recommendations.

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275 3<sup>rd</sup> Street Suite 208  
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Phone 775-753-4142  
Fax 775-753-4142  
Cell 775-778-1564

**Artistic Fence Co.**

5740 Highway 50 East  
Carson City, NV 89701-1683  
Phone 775-882-4665  
Fax 775-882-7847

**Carl's Trend Services**

369 5<sup>th</sup> Street  
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Fax 775-778-0687  
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Cell [REDACTED]  
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43479 Old Foothill Road  
Richland, Oregon 97870  
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\*\* Also does bat gates

**Foam Concepts, Inc.**

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\*\* Also does bat gates

AML Contractor's List as of 10/4/2007

The following individuals have expressed interest in and an ability to secure potentially hazardous mine openings. Securing arrangements are the responsibility of the claimant or owner. The Division of Minerals does not make specific endorsements or recommendations.

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PHC Reclamation, Inc.  
Sage Bldg, 2031 11<sup>th</sup> Avenue  
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Fax 801-904-4100  
[@urcorp.com](mailto:[REDACTED]@urcorp.com)  
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Contract Inventory Work

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P.O. Box 408  
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Fax 775-573-2528

AML Contractor's List as of 10/4/2007

Page 3 of 3

The following individuals have expressed interest in and an ability to secure potentially hazardous mine openings. Securing arrangements are the responsibility of the claimant or owner. The Division of Minerals does not make specific endorsements or recommendations.

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\*\*END\*\*

**Methodology:**

n/a

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## Assignment Workpaper

Prepared by: Greta Bloomfield 10/29/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** L.1 b.03.04 **Subsection**  
**Program Name** Best Practices  
**Subject** NDOM's 2006 AML Annual Report

**Origination Doclink** ■

### Purpose:

Identify potential best practices to suggest to the Department to use in its abandoned mine land program

### Scope:

NDOM's Background and 2006 Successes with AML, both physical and environmental

### Source:

NDOM's publications (cited pages were scanned and pasted into the workpaper)

### Conclusion:

It is the auditor's conclusion that BLM Nevada has done a good job of finding ways to secure abandoned mines, by cooperatively working with the State of Nevada Division of Minerals. Instead of trying to manage all of BLM's abandoned mine securing projects as a single entity, BLM gives an annual 50,000 grant to the State of Nevada, to secure the mine projects on BLM land. This allows a greater use of available resources regardless of public land status (state or federal) and maximizes return on investment.

### Details:



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ALAN R. COYNER  
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COMMISSION ON MINERAL RESOURCES  
DIVISION OF MINERALS

## NEVADA ABANDONED MINE LANDS REPORT 2006



by  
Bill Durbin - Chief, Southern Nevada Operations  
Mike Visser - Chief, Abandoned Mine Lands Program  
Alan R. Coyner - Administrator

April 2007

Denise Bryan: Small-Scale Mining and Prospecting

Richard DeLong: Large-Scale Mining

Patricia Fagan: Coal/Thermal Reserves

Commission on Mineral Resources

Fred D. Gibson, Jr., Chairman, General Public

Eugene Kozlowski: Oil and Gas

John Mudge: Large-Scale Mining

Ron Parcell, V. Chair, Exploration and Development

### Executive Summary

## Executive Summary

The State of Nevada's Abandoned Mine Lands (AML) program entered its 19<sup>th</sup> year in 2006. Key points for the program in 2006 include the following:

- One non-injury incident involving a dog falling into a mine shaft was reported to the Nevada Division of Minerals (NDOM) in May 2006.
- The total number of AML hazards discovered and ranked since the beginning of the program reached 11,518 hazards. The total number of hazards secured reached 8,883.
- 738 hazards were discovered and ranked in 2006, a 4.5% increase over 2005. This increase was in response to the need to focus attention on areas across the state having high levels of public use.
- 540 hazards were secured in 2006, a 52.1% increase over 2005. Mining claimants and private property owners secured 228 hazards. 243 orphan hazards (hazards located on public land where no claimant or property owner exists) were secured by NDOM staff and volunteers, a decrease of 4.0% compared to 253 securings in 2005.
- Public awareness activities: 100 classroom presentations to approximately 2,795 students, 30 presentations at school functions outside the classroom to nearly 1,100 students. 24 presentations at other venues brought the "Stay Out and Stay Alive" message to over 16,000 additional adults and children. Students and teachers were given brochures, bumper stickers, magnets, "hard hat" stickers and pencils bearing the "Stay Out and Stay Alive" message. AML brochures were distributed to every 4<sup>th</sup> and 8<sup>th</sup> grade student in the state, a total of over 75,300 brochures, and the "Stay Out and Stay Alive" video was sent to all new schools in the state.
- In a cooperative effort between the Division, the Bureau of Land Management, and the Nevada Mining Association, 52 hazards were backfilled at the Ray Camp north of Tonopah in Nye County.
- The Summer Intern Program included 6 students in 2006. The interns were mining engineering students from the Mackay School of Earth Sciences and Engineering, University of Nevada, Reno.
- A record 78 hazards were secured and 5 previously secured hazards were repaired by 16 Eagle Scout candidates in 2006. Since 1992, 68 Scout projects have been completed resulting in 406 secured orphan hazards and 31 repairs to existing fences.
- The Division continued its role as the principal facilitator of the state's AML Environmental Task Force (NAMLET).
- The Division met or surpassed both of the AML performance indicators approved by the State Legislature. Total secured hazards divided by total discovered hazards was 77.1% (70% required) and total public awareness presentations were 17.1 per staff member (12 required).
- Total dedicated funding for the AML program from mining claim filings, fees on permitted surface disturbance associated with new mining operations on public lands, and Bureau of Land Management (BLM) grants totaled \$346,587 in 2006, as compared with \$320,697 in 2005.

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## Program Background

## Program Background

Nevada's geology provides ideal conditions for the deposition of a large variety of valuable and useful minerals. These mineral deposits have attracted the attention of miners and prospectors for over 150 years. The hearty souls who searched across the state exploring for this vast mineral wealth left behind a legacy of shafts, adits, glory holes, stopes, mill sites and other features that are potentially dangerous to unwary or curious people and to wild and domestic animals. Over time, most of the mine openings have become unstable because of exposure to the elements and decay of support timbers. It is estimated that 200,000 to 300,000 of these mining-related features exist in the state. Of these, the Division estimates that 50,000 are significant hazards that require some type of securing. Appendix A lists the hazards discovered and hazards secured by the AML program from 1987 through 2006.

The State of Nevada AML program was created by the Nevada Legislature in 1987 in response to a number of incidents, both fatal and nonfatal, that had occurred in abandoned mine openings. Table 1 shows a 36-year history of known incidents related to abandoned or idle mines. The legislation placed the program with the Division of Minerals and mandated two primary functions: 1) Investigation and inventory of mining-related openings and structures at mining sites that are currently idle or abandoned, and 2) Development and maintenance of an aggressive public awareness campaign to educate the public about dangerous conditions that exist as a result of historic mining activities. The primary Nevada Revised Statutes (NRS) governing the AML program can be found in Appendix B.

In 1989, the Nevada Legislature expanded the program to include the responsibility of securing hazardous conditions on open public lands where no claimant or property owner could be identified (so-called "orphan" mine openings). The legislation also provided an opportunity for companies, individuals, and civic groups to voluntarily assist the program in securing orphan mine openings under a designated Good Samaritan law (NRS 41.0331). See Appendix B.

The AML program is administered under Nevada Administrative Code (NAC) 513. The pertinent regulations can be found in Appendix C. Sections 513.320 through 513.360 provide for the openings or structures to be given a hazard ranking based on the location and type of feature. The regulations also require that land ownership status be conducted at the county courthouse to determine whether a current claimant or landowner is responsible for abating hazardous conditions on lands under their control.

The AML program is primarily funded by fees on mining claim filings. The county recorder collects the fees for the Division at the time the claims are filed. The program is also funded by a fee paid by mining companies or individuals for new operations or expansions occurring on public lands. In 1995, the Division entered into a cooperative agreement with the BLM. Under this agreement, which was renewed in 2005, the BLM has provided a yearly assistance grant to enhance and accelerate both field investigation activities and work performed by staff and volunteers to secure orphan hazards.

---

## BATS

### Bat Related Projects

The Division works with several State and Federal agencies to identify adits and shafts which may be suitable for bat habitat and would benefit from bat-compatible enclosures such as bat gates and bat cupolas. Prior to any permanent closure, such as a backfill, pre-closure surveys are performed to confirm that the closure will not negatively impact significant biological habitat. These surveys are conducted by appropriately trained biologists from one or more of our partnering agencies; Nevada Department of Wildlife, Nevada Natural Heritage Program, Bureau of Land Management, US Forest Service, see Figure 10. In 2006, pre-closure surveys were conducted at more than 100 sites in Nevada.

A grant received by the Department of the Interior from land sales under the Southern Nevada Public Land Management Act (SNPLMA) Round 5 is currently being used to fund archaeological and biological surveys on 344 previously identified orphan abandoned mine hazards, on federally managed public lands (BLM, USFS and National Park Service) in Clark County. Survey work began in 2006 and may take two years to complete. Funding from the same grant is earmarked for the construction of bat-compatible closures (e.g. bat gates, bat cupolas) on those hazards identified as containing potential or significant bat habitat. In 2006, 57 of the 344 hazards were surveyed by Walter Clevenger, a biologist for the Army Corps of Engineers. Thirteen were identified as potential bat habitat and are recommended for additional surveys.

This recent work, along with initial studies done from 1999 to 2003 by [redacted] Bat Conservation International [redacted] Christopher Newport University, Newport News, Virginia; the Harry Reid Center for Environmental Studies at the University of Nevada, Las Vegas; and Christopher Ross of the BLM/NSO, bring the current total to twenty-nine mine openings on federally managed lands in Clark County as having potential habitat for bats and may be recommended for bat-compatible closures (under SNPLMA Round 4 and 5 grants). Construction of these closures is expected to begin in 2007. Sites found not suitable as bat habitat are recommended for permanent closure by backfill, and this work, funded by SNPLMA Round 6, is expected to begin in 2007 as well.



Figure 10. NDOW biologist, [redacted] conducts a pre-closure survey in Nye County. A Townsend's big-eared bat in flight in an adit in Nye County.

### Summer Intern Program

The Division completed its sixth summer intern program in 2006. Four students from the Mackay School of Earth Sciences and Engineering and two incoming freshman were hired. The six were [REDACTED]. The Division appreciates the great work they performed during the 14 weeks of the program, see Figure 11. This program helps to advance the AML program, and provides the students with valuable field experience in map reading, data collection, land status research, and geological investigation. Figure 12 is a chart illustrating the monthly hazard discovery and orphan securing efforts made during 2006. It is very clear the interns' presence during the May-August time frame had a marked positive impact on the program. Working in 13 counties, the interns secured or repaired 173 hazards, completed inspection/assessment visits to 85 previously secured hazards, logged 212 new hazards and logged 773 non-hazards!



Figure 11. 2006 Summer interns in a group photo at the Round Mountain Gold Mine and logging and securing hazards in Esmeralda and Lincoln Counties.

---

### Contracted AML Work

#### Contracted AML Work

In early 2006, Geotemps was awarded a \$40,000 contract to locate and log previously unidentified hazards and non-hazards in Nye and Esmeralda Counties. Contractors John Morley and Dustin White logged 352 new hazards and 834 non-hazards from late January through March. Particular emphasis was placed on the historic mining districts near Goldfield, Beatty and Lida.

---

### Performance Measures

#### Performance Measures

The Legislature requires state agencies to have performance measures in place for all of their major programs. For the AML program the Division has two performance indicators: 1) maintain the number of secured hazardous mine openings to the number of hazardous mine openings identified, logged and ranked at a minimum of 70% (77.1% in 2006), and 2) maintain the number of public awareness and education presentations concerning the Nevada mineral industry and abandoned mines per staff member at a minimum of 12 per year (17.1 in 2006). The Division has consistently attained or surpassed these goals.

**Funding****Funding**

The Division's AML program is funded by three major revenue sources: 1) mining claim fees, 2) surface disturbance fees paid on new mining plans of operations on public lands, and 3) grants from the Bureau of Land Management. As of July 16, 2001, \$1.50 of every mining claim filing collected by the county on behalf of the Division is dedicated to the AML program (NAC 513.315). The Division collects a one-time fee of \$20 per acre for every acre of permitted disturbance associated with new mining operations on public lands. The Division has an assistance agreement with the Bureau of Land Management, which provides annual support for the AML program, depending on available funding. Table 4 shows the revenues received by the Division from these three revenue sources for the years 2002 through 2006.

**Table 4. Revenue to the AML program for the years 2002 through 2006.**

Year	BLM Grants	Mining Claim Fees	Disturbance Fee	Total
2002	\$ 60,000	\$ 140,856	\$ 37,440	\$ 238,296
2003	\$ 66,204	\$ 157,056	\$ 36,800	\$ 260,060
2004	\$ 60,000	\$ 210,596	\$ 95,940	\$ 366,536
2005	\$ 70,000	\$ 227,221	\$ 23,476	\$ 320,697
2006	\$ 60,000	\$ 249,763	\$ 36,824	\$ 346,587

AML revenue is used to pay salary expenses, travel expenses, the summer intern program, vehicle expenses, and field supplies such as fence posts, signs, and barbed wire. The revenue is also used to support the AML public awareness program through school presentations, video distributions, brochures, magnets, pencils, bumper and hard hat stickers, and other means of outreach.

**2006 Summary****Summary**

The Nevada Division of Minerals Abandoned Mine Lands program continues to make good progress in the discovery and securing of abandoned mine hazards across Nevada. The total number of hazards discovered increased in 2006 and the number of securings completed in 2006 remained at a level well above the historical average. This is despite the fact that much of the remaining work is located in the more remote, less accessible areas of the state. The combined help of the Nevada mining industry, the federal land management agencies, the summer intern program, and many volunteers have greatly enhanced the efforts of the NDOM staff.

The public awareness program reached nearly 20,000 people directly in 2006 through personal interaction with students, teachers, parents and members of civic groups and organizations and the media. Thousands of other people may have been impacted through a "Stay Out and Stay Alive" public service announcement on television or reading an AML brochure brought home by a student.

Despite Nevada's tremendous population growth and the growing number of visitors that recreate in Nevada, there has been no significant increase in the number of injuries or fatalities related to abandoned mine hazards. It is the sincere hope of the NDOM staff that the mine backfill efforts, fences, barricades and signs, and the awareness brought to people through the "Stay Out and Stay Alive" message are factors that contribute to keeping the incident rate as low as possible.

The Commission on Mineral Resources and the Nevada Division of Minerals will continue to aggressively support the AML program through fieldwork and public awareness because the only satisfactory number of abandoned mine injuries or fatalities is **ZERO!**

**Methodology:**

n/a

Submission: Submitted Greta Bloomfield 01/07/2008 06:05 23 PM  
 Level 1 Approval: Approved William McMullen 01/09/2008 09:12 54 AM

Level 2 Approval: Approved John Illson 01/10/2008 10:33:48 AM

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## Assignment Workpaper

Prepared by: Greta Bloomfield 01/08/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section L.1 b.03.05 Subsection  
Program Name Best Practices  
Subject Chris Ross Email

Origination Doctlink ■

### Purpose:

To determine the level of volunteer efforts for mitigating and remediating mine hazards in BLM Nevada.

### Scope:

BLM Nevada's AML Program

### Source:

Email from Chris Ross dated 1/8/08 ■

### Conclusion:

It is the auditor's conclusion that BLM Nevada is doing a good job of utilizing volunteers for both mitigation and remediation of mine hazards.

According to Chris Ross, mitigation and remediation are different activities. Mitigation is a temporary fix for AML and includes activities such as fencing and posting signs. Remediation work is more permanent and includes activities such as backfilling and PUFing hazards.

According to Chris Ross, NDOM uses volunteers to **mitigate** sites by fencing and posting signs.

According to Chris, BLM and NDOM do not use volunteers for inventory work - as it is very dangerous and specialized

According to Chris BLM and NDOM uses volunteers for **remediation** work (permanent closures):

- Professionals in the minerals industry (heavy equipment operators, heavy haul truck drivers)
- Equipment such as low-boy trucks, bulldozers, fuel, mechanical support etc..

### Details:

Chris Ross/NVSO/NV/BLM/DOI@BLM

01/08/2008 07:23 AM

To Greta Bloomfield/DEN/OIG/DOI@OIG@DOI  
cc  
Subject Re: Question re: Best Practices ■

Hi Greta-

We are all fine and snowy here. Closing AML hazards like crazy - setting national records and all that!

We use the term **mitigating** to describe fencing and signing - which are at least of temporary and help, but don't eliminate a hazard.

We use the term **remediating** to describe a relatively permanent solution, such as backfilling or gating or foaming a hazard.

We [mostly the Nevada Division of Minerals, with financial and other support from BLM] have used volunteers to **mitigate** sites, primarily fencing and posting signs. Except where someone just calls us to tell us about a problem, we have **not** used volunteers for inventory work. That requires a protocol, vocabulary, and expertise that volunteers don't typically have, and it is potentially very dangerous.

However, we have gotten an enormous amount of volunteer labor and equipment for **remediation**, all of that volunteerism from professionals in the minerals industry, including equipment operators from Nevada mines, heavy haul truck drivers, low-boy [not flatbed] trucks, bulldozers [not backhoes], and fuel, mechanical support, etc. Most of this has been arranged by the Nevada Mining Association [NMA], at our request, using member companies such as trucking firms, active mines, and equipment dealers. NMA executives themselves have been physically present and involved with on-the-ground labor during these intensive projects, and have paid for

L.1.b.03.05 Chris Ross Email

equipment, fuel, operator living expenses, etc. All of this has been strictly volunteer work, since not one of the sites remediated has any connection with any existing company, individual, or organization.

If you wish, I would be happy to review whatever you writeup prior to publication. The mining world, both active and AML, has its own arcane and complex terminology,, as you know,

Nice to hear from you!

Chris  
775.861.6571  
Greta Bloomfield/DEN/OIG/DOI@OIG

**Greta Bloomfield/DEN/OIG/DOI@OIG**  
01/07/2008 14:15

To: Chris Ross/NVSO/NV/BLM/DOI@BLM  
cc  
Subject: Question re: Best Practices

Hi Chris,

I hope you are doing well.

We are finishing up our report and I'm working on the Best Practices section. In my writeup I mention that your grassroots effort to mitigate physical AML hazards uses volunteers. I have pretty good workpaper support for volunteer labor with inventorying and mitigating sites. However, I know you had mentioned something about volunteers providing equipment such as flatbed trucks, back hoes etc...

Is that true or is my mine playing tricks on me?

If true, please provide a statement to me, regarding donated use of equipment such as flat bed trucks, back hoes etc...

Thanks!  
Greta

**Methodology:**  
n/a

Submission:	Submitted	Greta Bloomfield	01/08/2008 02:49 27 PM
Level 1 Approval:	Approved	William McMullen	01/09/2008 09:13 36 AM
Level 2 Approval:	Approved	John Illson	01/10/2008 10:33:17 AM

**Linkage Information**

**History**

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<b>In Progress Edit</b>	Greta Bloomfield/DEN/OIG/DOI	
<b>Confidentiality</b>	Standard	

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: William McMullen 01/04/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section L.d 01 Subsection Audit Step L.1 a  
Program Name Best Practices  
Subject BLM Volunteer Policy

Origination Doctlink 

### Purpose:

Document BLM's policy regarding use of volunteers.

### Scope:

BLM Volunteer Program

### Source:

BLM Manual Chapter 1114 found at [http://www.blm.gov/content/etc/media/lib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.80752.File.dat/1114.pdf](http://www.blm.gov/content/etc/media/lib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.80752.File.dat/1114.pdf) and attached:



BLM manual chapter 1114 Volunteers.pdf

### Conclusion:

BLM Manual Chapter 1114:

- Establishes BLM policy for the use of volunteers.
- Defines a BLM volunteer and establishes volunteer qualifications.
- Establishes management responsibility for volunteers including responsibility to ensure volunteers are trained.
- Specifies that job hazard analyses should be conducted for volunteer jobs.
- Provides examples of typical volunteer jobs some of which could apply to the AML program.

### Details:

Page 8 of the attachment shows management responsibility to volunteers:

**I. Project Lead or Supervisor in Charge of the Activity or Project:**

1. Oversees the work of the individual volunteer or volunteer group, provides necessary instructions and guidance, and ensures that unqualified or undertrained volunteers are not involved in potentially hazardous work.

2. Reports volunteer activity, accidents, injuries, and property damage to the appropriate officials (see BLM Manual Section 1112).

Page 9 of the attachment shows BLM's overall policy with respect to volunteers:

**.06 Policy.** The policy of the BLM is to encourage and accept volunteer services wherever its programs, services, or operations would be enhanced or improved. The BLM accepts the service of volunteers with the understanding that the BLM has the sole authority to terminate the volunteer's agreement regardless of reason.

Page 12 of the attachment defines BLM volunteers and specifies, in part, qualifications for volunteers:

**.11 Bureau of Land Management Volunteer.** "A BLM Volunteer is an individual who contributes his/her time and service to assist the Bureau of Land Management (BLM) in the accomplishment of its mission and receives no wages, salary, stipend, or other compensation other than reimbursement for expenses." Volunteer service is not creditable for leave accrual or any other benefit. However, volunteer service is considered creditable work experience.

**.14 Qualifications.** Volunteers must be qualified through training or experience before being assigned to any volunteer position, especially potentially hazardous work. Volunteers must be physically able to perform the work assigned. Many types of work are suitable for physically challenged volunteers. Volunteers may be asked prior to service about any physical limitations related to the work to be done.

Page 23 of the attachment notes the need to prepare a Job Hazard Analysis for work to be done by volunteers:

**A. Job Hazard Analysis (JHA).** Just as with staff members, the safety program for volunteers should begin with the Job Hazard Analysis (JHA) or, as some prefer to call it, the Job Series Hazard Analysis. A JHA outlines an occupation or job specialty by tasks, hazards, necessary personal protective gear, and safe job procedures to minimize the risk of injury to a staff member or volunteer.

Pages 47-50 of the attachment show typical jobs done by volunteers in BLM:

Examples of BLM Volunteer Jobs

Below is an illustrative listing of some of the tasks that volunteers can accomplish. Each of these tasks requires orientation, appropriate skills and/or training, and supervision. Highlighted jobs are those potentially applicable to the AML program.

<p><b>Cadastral Survey</b>  <b>Work on survey crews of various types including federally administered lands</b>                      Assist the BLM cadastral surveyors search for and identify original monuments of early land surveys and cadastral surveys                      Operate equipment (when qualified)</p> <p><b>Cultural Resources</b>                      Cultural resource survey, both for inventory and for case related projects                      Archaeological excavations                      Literature searches                      Site monitoring                      Artifact preservation and cataloguing</p> <p><b>Engineering</b>                      Construct or maintain facilities and trailheads                      Work on survey crews of various types (engineering, etc )  <b>Erect or maintain signs</b></p> <p><b>Fire and Aviation Management</b>                      conduct fire prevention projects                      Assist with logistics operations (away from firelines)                      Transport fire crews and equipment                      Operate communications equipment                      Assist with fire accounting</p> <p><b>Forestry</b>                      Assist with post pole and fuelwood sales to the public                      Thin seedling patches and sapling stands                      Assist in piling debris from cuttings</p> <p><b>Lands</b>                      Monitor compliance with terms of lands actions</p> <p><b>Minerals</b>                      Geologic, paleontology, structural, geobotanical, and industrial minerals mapping                      Geochemical sampling and analysis                      Geophysical surveying                      Photogeology                      Sediment analysis                      Economic geology and other studies                      Monitor compliance with seismic permits, leases, etc</p>	<p><b>Range Management</b>                      Inventory and identify plants                      Prepare study mounts                      Maintain a herbarium, or establish one                      Collect plant phenology data                      Assist in eradication of noxious weeds                      Prepare aerial photos and maps for field work                      Compute field data or determine acreage                      Assist in conducting vegetation or soil inventories                      Monitor and maintain range projects where BLM has maintenance responsibility  <b>Construct and/or maintain fences, enclosures, or exclosures</b>                      Update grazing case files                      Assist in determining the effects of acid rain on vegetation  <b>Gather samples for water quality analysis</b>                      Assist in determining stream runoff occurrences and reading streams</p> <p><b>Recreation (many of these apply to Wilderness also)</b>                      Serve as campground hosts                      Develop and/or maintain interpretive exhibits                      Maintain facilities                      Perform in living history demonstrations                      Monitor compliance with recreation permits (limited to reporting noncompliance to appropriate staff members)  <b>Monitor off road vehicle use</b>                      Monitor payment of fees at campgrounds or other fee-use sites conduct recreation inventories, recreation area management planning, and/or recreation project planning                      Maintain and/or construct trails                      Provide visitor services: staff visitor centers, provide information and interpretation, monitor use and report problems to appropriate staff members, and give first aid and other emergency assistance to visitors</p> <p><b>Watershed</b>                      Monitor watershed studies, collect data</p> <p><b>Wilderness</b>                      Monitor Wilderness Study Areas (WSA's) or designated Wilderness Areas (impairing actions are reported to appropriate BLM staff)                      Teach low impact camping and wilderness skills                      Serve as trailhead contacts                      Collect user data</p> <p><b>Wildlife</b>                      Assist on habitat improvement projects including, but not limited to, installation of wildlife waters, installation of bird</p>
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<p>Assist with paleontological excavations</p> <p><b>Multi-Program Tasks</b>                  Conduct research                  Draft news releases                  Assist with environmental analyses                  Perform office support tasks such as serving as receptionist, copying, filing slides or photographs, and typing                  Prepare artwork for publications                  Rehabilitate disturbed areas                  Serve as hosts, moderators, and facilitators at public meetings                  Take photographs                  Train employees in various skills</p>	<p>amps in stock water tanks, stream improvements, shrub planting and seedin-, nest box construction and erecting, and fence construction or modification                  Collect wildlife and/or vegetation data for inventory, monitoring, or management purposes                  Adopt a wildlife habit management area and complete selected projects, monitor changes in vegetation and wildlife                  Conduct or help conduct special studies and research                  Make literature/date searches                  Inspect and maintain wildlife improvements                  Record wildlife use of critical areas or facilities                  Revegetate wildlife habitat                  Make public fisheries contacts</p> <p><b>Wild Horses and Burros</b>                  Handle adoption applications including mailing, sorting, reviewing, and filing applications                  Draft responses to public inquiries                  Handle title applications                  Move, set, operate, and maintain portable capture traps or corrals                  Feed and water penned animals                  Maintain tack or other equipment                  Provide transportation, feed or other equipment</p>
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**Methodology:**

Reviewed source document.

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Level 1 Approval:			
Level 2 Approval:	Approved	John Illson	04/28/2008 01:00:19 PM

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**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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## Assignment Workpaper

Prepared by: Greta Bloomfield 09/04/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section L.e Subsection CA-BLM/NPS  
Program Name Best Practices  
Subject Desert Managers Group

Origination Doctlink ■

### Purpose:

Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.

### Scope:

Department of Interior Bureaus' abandoned mine lands program

### Source:

Luke Sabala with Joshua Tree NP, told us about the Desert Manager's Group I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead :■  
Desert Manager's Group Website: www.dmg.com

### Conclusion:

It is the auditor's conclusion that the Desert Managers Group could be considered a potential best practice. The Desert Manager's Group is a regional interagency partnership among Federal, State and Local entities in California's 20 million acre desert region. The desert region, which includes but is not limited to two national parks, 72 wilderness areas and six military bases, has a large portion of the AML sites that are located in the Southwest. The Desert Managers Group was created as a cooperative effort to support agency missions, protection of desert resources and public use.

Joshua Tree NP believes it makes the most sense to share resources throughout the region, in order to quickly and efficiently mitigate the highest priority sites ■. The shared funds, staff and materials from NPS, BLM, DOD and the State could make this possible, with the Desert Manager's Group as a Portal (auditor's conclusion)

### Details:

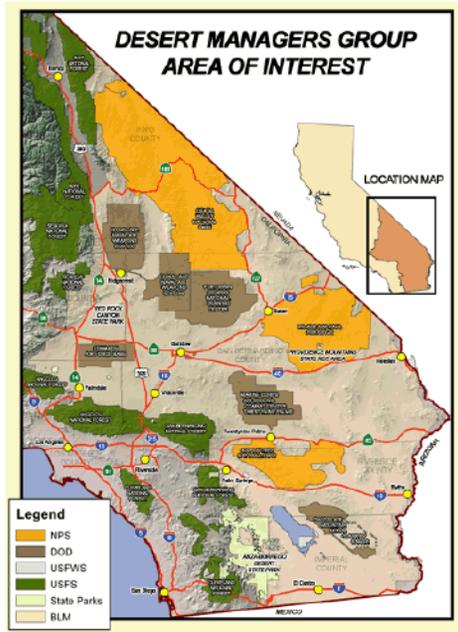
During our site visit to Joshua Tree National Park (JOTR), JOTR's AML Coordinator Luke Sabala told us about the Desert Managers Group. According to Luke, DMG is a multi-agency managers' group representing public agencies in the desert region. DMG represents USFS, FWS, NPS, BLM, DOD and other State and Local governmental entities. The DMG has several working groups, one which deals with "hazardous materials." Luke stated the AML group exists within the larger group and that Luke recently conducted a presentation to DMG on AML. Luke stated the entities need to train others, since small AML staff cannot do everything by themselves. The group has discussed key changes to improve the program. Among their ideas include uniformity in methods used for prioritizing, taking inventory, and performing mitigation, especially in areas related to surface water, ground water and collateral duty safety officers.

Luke also mentioned that he personally thinks Mojave has more high priority sites left to be mitigated, than Joshua Tree and that resource sharing should occur to ensure the highest priority sites are mitigated. Specifically, it makes more sense to Luke that the highest priority sites in the entire Desert Region are mitigated through shared resources (funding, staff and materials from NPS, BLM, DOD, State of CA etc..) first, before less priority AML sites are mitigated.

- We conducted further research into the DMG, on their website:

The California Desert's vast, seemingly harsh yet fragile lands within a day's drive of 40 million people. Approximately 80 percent of the desert, or 20 million acres, is publicly owned and includes two national parks, one national preserve, six military bases, 72 wilderness areas, 10 state parks, and the California Desert Conservation Area managed by the Bureau of Land Management. In addition, the area includes 8 county jurisdictions and 37 federally recognized Native American Indian tribes. Conflicting demands for use of California desert lands make it imperative for governmental agencies to work cooperatively in support of agency missions, protection of desert resources, and public use

## Desert Managers Group Area of Interest



### California Desert Region

80 Percent of California Desert Region comprised of public lands

- National Parks
- Bureau of Land Management
- Wilderness Areas
- State Parks
- Tribal Lands
- Military Bases

### DOI PARTNERS WITH DMG

- Bureau of Indian Affairs
  - Pacific Region Office
- Bureau of Land Management
  - Barstow Field Office
  - Desert District Office, Riverside
  - El Centro Field Office
  - Needles Field Office
  - Palm Springs Field Office
  - Ridgecrest Field Office
- Fish and Wildlife Service
  - Carlsbad Office
  - Ventura Office

- National Park Service
  - Death Valley National Park
  - Joshua Tree National Park
  - Lake Mead National Recreation Area
  - Mojave National Preserve
- Geological Survey
  - National Mapping Division, Menlo Park
  - Water Division, San Diego
  - Western Ecological Research Center, Sacramento

The Desert Managers Group (DMG) Hazardous Materials Interagency Work Group serves as technical advisors to the DMG on hazardous materials/solid waste issues. As a team, they provide technical information, guidance, and innovative recommendations on hazardous materials and solid waste in desert areas. **Agency personnel may be shared between agencies to effectively utilize scarce resources, extensive experience, and wide breath of technical knowledge.** The agency managers retain their current authorities to make decisions and establish policy relating to hazardous materials and solid waste management within their jurisdiction.

### MISSION

- To provide scientific and technical expertise in the fields of hazardous materials and solid waste management needed to support the DMG in its coordinated and integrated ecosystem planning and management efforts.
- To collaborate and cooperate in the conservation and restoration of desert resources (including biological resources, environmental quality, surface water, ground water, soils, and air quality) and the safety of desert users.
- To develop cost effective and creative coordinated public outreach programs to encourage the awareness, appreciation, and conservation of desert resources.
- To develop creative and innovative approaches for making effective and efficient use of public funds and agency resources, crossing agency or department boundaries when necessary.
- To coordinate with representatives from the regulatory and enforcement community concerning hazardous materials and solid waste issues.
- To provide technical field support for initiative work associated with hazardous materials and solid waste cleanup/removal activities, and assist with resolution of common environmental problems such as the identification, remediation, restoration, and prevention of illegal dumping activities and environmental crime sites.

### DUTIES and RESPONSIBILITIES

- Brief the DMG on the Work Group's activities.
- Coordinate with other DMG interagency work groups as appropriate to carry out their missions.
- Develop annual work plan and budget for work group activities. Submission to DMG not later than July 1 for upcoming FY.
- Assist in developing annual work plans and associated budgets by reviewing proposals to implement DMG initiatives.
- As requested by the DMG, provide technical review of activities, projects, work plans, final reports, and major products. Evaluate the effectiveness of these activities and report results to the DMG.
- Assist in developing, implementing, and evaluating outreach programs for DMG efforts.
- Provide a forum for discussion and resolution of issues related to their mission.
- Annually review and recommend for approval to the DMG updates to the DMG five-year plan.
- Provide and sponsor technical training opportunities for participating agencies.

**Methodology:**

summarized information from DMG's website, with supporting comments from Luke Sabala

Submission: Submitted Greta Bloomfield 01/16/2008 10:33 59 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 01/17/2008 11:22 20 AM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 05/05/2008 11:18:43 AM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Mon 05/05/2008 11:18 AM. For original text, refer to the field(s) above.

**Purpose:**

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**Scope:**

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Me hodology:  
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**History**

**Status** Approved **Request Review**

**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Greta Bloomfield 01/07/2008

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section L.e 01 Subsection  
Program Name Best Practices  
Subject Desert Managers Group Five Year Plan

Origination Doctlink ■

### Purpose:

Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.

### Scope:

Department of Interior Bureaus' abandoned mine lands program

### Source:

Luke Sabala with Joshua Tree NP, told us about the Desert Manager's Group I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead : ■  
Desert Manager's Group Website: www.dmg.com



Desert Manager's Group Five Year Plan (retrieved from website): DMG 5 year plan.pdf

### Conclusion:

It is the auditor's conclusion that given adequate resources, the Desert Manager's Group partnerships for abandoned mine mitigation can be a potential best practice to be modeled by other regions throughout the Southwest and beyond. The Desert Managers Group (DMG) is an interagency group that includes Dept of Defense, Dept of Interior (BLM and NPS) and US Forest Service, as well as State and Local govt entities. DMG has recently kicked off a five-year effort to form partnerships to leverage funding and mitigate the highest priority abandoned mine sites in the California Desert Region.

The Desert Region covers the majority of Southern California. ■ The DMG has a Five Year Plan ■ that documents DMG's accomplishments in FY 2006 ■ and maps out DMG's goals and objectives for FY 2006-2011 ■. Performance of the goals and objectives are dependent on adequate funding and resources from each participating agency ■.

Specific to Abandoned Mines, DMG's 2006 goal was to, "**Make high priority AML sites that pose a significant environmental and safety threat safe by reducing or removing physical and chemical hazards associated with the site.**"

### In 2006, DMG's HAZMAT Work Group: ■

1. Began discussing developing a comprehensive list of AML sites within DMG's desert region
2. Conducted briefings on capabilities of each member of DMG to "restore and render safe AML sites."
3. Began discussing prioritizing AML sites in the region and the funding that is and could be available to mitigate the sites.

### For Fiscal Years 2007-2011, DMG has the following goals: ■

1. Mitigate high priority sites that pose a significant environmental and safety threat. This is ongoing on both BLM and NPS lands.
2. Gain a better understanding of existing AML sites by merging AML data into one data source.
3. Form partnerships to leverage funding and accomplish the initiatives and goal objectives.

### Details:

Five Year Plan (sections from plan scanned and pasted into workpaper)

By 2020 the deserts' permanent population is expected to increase by over 1 million and the population of the surrounding area is expected to increase by about 10 million. The demands of increasing use by millions of visitors and permanent residents will create mounting pressure and new challenges for land management agencies in the deserts. A mechanism for addressing desert-wide issues was established in 1994 in the form of the Desert Managers Group (DMG), an interagency group that is coordinating and integrating desert conservation, visitor services, and public safety efforts in the California deserts.

Partners involved with the DMG include the State of California (Fish and Game, Parks and Recreation, and Caltrans), Kern, San Bernardino and Imperial Counties, the Department of Defense (Army, Navy, Air Force and Marine Corps), the Department of the Interior (Bureau of Land Management, National Park Service, Fish and Wildlife Service, Bureau of Indian Affairs and Geological Survey), and the U.S. Forest Service. More information on the DMG, including the Group's charter, organization, and current events is available at [www.dmg.gov](http://www.dmg.gov).

The purpose of this document is to summarize the accomplishments of the DMG in fiscal year 2006 and describe the goals and objectives established by the DMG for fiscal years 2007-2011. This document was approved by the DMG at its regular meeting 2 February, 2007. As with all crosscutting multi-agency efforts, performance is dependent on the availability of adequate funds and staff for each agency to actively participate in these efforts.

## 2.0 FY 06 Accomplishments

DMG accomplishments for FY 06 are summarized below.

*Goal 13. Make high priority Abandoned Mine Land (AML) sites that pose a significant environmental and safety threat safe by reducing or removing physical and chemical hazards associated with the site.*

- A. The HAZMAT Work Group initiated discussion on development of a comprehensive list of AML sites within the DMG's area of influence.
- B. The HAZMAT Work Group conducted briefings on the capabilities of each member jurisdiction to restore and render safe AML sites.
- C. The HAZMAT Work Group initiated discussion on prioritization of AML sites in the California deserts and the availability/sources of funding to restore these sites.

### 3.0 The 5 Year Work Plan

The 5 Year Work Plan is intended to facilitate internal and external communication about the goals and activities of the DMG and serve as a tool to allow the DMG and its Work Groups to track activities and projects. The 5 Year Work Plan is updated and approved annually by the DMG.

A brief description of the goals and activities for FY 07 – FY 11 are provided below. Fiscal year of activity completion, lead agency, and current activity status are noted in parentheses.

*Goal 13. High priority Abandoned Mine Land (AML) sites that pose a significant environmental and safety threat will be made safe by reducing or removing physical and chemical hazards associated with the site.*

- A. Reclaim high priority AML sites that pose a significant environmental and safety threat. **(FY 07 – 11, BLM/NPS/Kern County, ongoing)**
- B. Gain a better understanding of AML sites by combining existing AML data into one database/data layer. **(FY 07, BLM/NPS/Kern County/MDEP, ongoing)**
- C. Form partnerships to leverage funding and accomplish initiatives and goal objectives. **(FY 07-11, BLM/NPS/Kern County, ongoing)**



**History**

**Status** Approved **Request Review**

**In Progress Edit** Greta Bloomfield/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Record of Discussion**

Prepared by: Greta Bloomfield 04/09/2008

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** L.e 02 **Subsection**  
**Program Name** Best Practices  
**Subject** ROD Desert Managers Group April 1, 2008

**Origination Doclink** ■

**Participants**

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**Location** Mojave National Preserve Headquarters, Barstow, California

**Date/Time**

04/01/2008 10:00 AM

**Purpose:**

To attend the Desert Managers Group Meeting in Barstow California and determine whether or not the DMG is a potential best practice.

**Scope:**

California Desert Region's collaboration and implementation of AML mitigation efforts.

**Conclusion:**

It is the auditor's conclusion that the DMG's HAZMAT working group is going to be a pinnacle contributor to successful AML mitigation throughout the Desert Region, thus it should be considered a "potential best practice". In the past, the working group worked mainly to tackle chemical hazards and the AML work is relatively new. With the new AML focus, it appears the group is going through a "storming phase." NPS is very focused on wanting the region's most dangerous AML sites to be mitigated first. NPS wants to create a collective prioritization and ranking process, however BLM is very resistant to this idea. Some of the BLM offices think that collective prioritization and ranking will not be possible and that it will result in some of the offices losing priority funding for mitigation. While NPS wants to see the most dangerous, highest ranked sites mitigated first, regardless of land ownership (state, BLM, NPS etc...), BLM is much more territorial and stated they will compete with NPS for available partnership funding from the State.

NPS stated after the meeting that while the BLM State Director is wholly supportive of the collaborative process of the working group, individual representatives have different agendas.

**Summary:**

**Contracting Statement of Work**

Bob Bryson passed around a portion of the Statement of Work that the State Dept of Conservation put together and can be used as a boilerplate. A rep stated hopes the SOW could work for project descriptions and categorical exclusions. Concerns regarding SOW:

1. There are existing contractors for heavy equipment and hazmat, but NO CONTRACTORS for bat gate work.
2. Need to get IDIQ contract in place ASAP for BLM
3. Need to create a group that advises who IDIQ contract awards will go to...need to consider qualifications and experience, as well as price.
4. Need to figure out a way for all agencies to have access to procurement system
5. Worries about finding qualified contractors in SoCal and wondering whether or not to expand contractor requests out to entire state or to other states as well.

**Programmatic Agreement**

The group has been working on creating a standing Programmatic Agreement, that will be used to speed up the mitigation process. Bob said the PA is not to be a treatise for AML but is specific to historic compliance, as well as the inherent NEPA requirements. The State Historic Preservation Office wants to assist with creating the PA.

This spurred conversation regarding bat surveys. Some reps in the group stated that instead of the dealing with the lengthy bat survey process, they might as well put bat gates and cupolas on all holes. BLM said this will eliminate the PUF and backfill option but at least they won't have to conduct bat surveys. Another member stated that the advantage of a bat survey is that it could result in more and less costly treatment options for holes. CA Fish and Game stated they are fine with the no bat survey approach, as no biological opinion would be necessary. The desert tortoise is still an issue and drive by assessments will need to be done.

BLM stated that while there has "been a call for consistent implementation," BLM believes the PA is fit better for NPS/State of California and not for BLM. BLM stated they will use the PA to create "their own template.

Discussion arose regarding owls and how to design treatments to allow owl entry and exit. Russell Scofield with BLM stated they will contact a Migratory Bird Act representative by the next meeting, to learn more about the owl issue.

Discussion also arose regarding big horn sheep and their use of adit entrances and the raptor issue. A DOD rep stated "raptors are not to be disturbed at all."

**Sarah - California State Dept of Conservation**

Sarah with the State Dept of Conservation, is a little concerned about the priority list that was submitted to Feinstein. The list that was submitted resulted in BLM and NPS receiving funds this year, but not Forest Service. Sara said that she thinks the list of priorities should be recompiled and sent back to Feinstein, but in greater detail. Sarah said that the agencies need to show progress on the original sites, as well as a comprehensive ranking and site locations. The State would like to maintain the list as a living document (with both chemical and physical hazards) and Sarah solicited advice on how to maintain the document. She suggested maintaining the priorities annually. Sarah also mentioned that not all agencies are using the State's ranking system. Some spoke that the State's ranking system is not good enough.

The group then spoke about whether or not to have a comprehensive ranking and priority system for the entire region. While it appeared that NPS and the State felt this was important, BLM noted it would just make things more difficult. DOD did not state an opinion.

The State is also creating a web-based AML Clearinghouse to go live in 2009. The Clearinghouse will be a one-stop shop for all that is AML and will include information such as AML contractors, information for the public, etc... There will not be proprietary information on the site (i.e. mine site locations that could be used by the public), but it could be possible to do both an intranet and an extranet on the site.

The group also discussed the difficulties in merging inventory data.

Russell began the afternoon session with the "AML Projects" agenda item. Russell stated they all had action items to identify the projects they want to begin working on (1) internally, (2) through contractors and (3) by partnering with the State (which means competing with each other for limited funds).

Bob with Mojave stated "we may be premature but let's develop a philosophy on how we are going to that. Do we want to spread the wealth? We want to ensure the State's success through our accomplishments so we can continue to get funding and we can only do that, if we are willing to work together."

BLM stated that they have a short list of projects they want to get done and \$150-\$180 K available but they absolutely need the IDIQ contract in place and don't have faith it will be in place by the beginning of the States next fiscal year (July). Bob with Mojave tried to assure Linn that it would be in place. (the State has requested \$427K in funding for next fiscal year, to go towards the partnership projects. The funding comes from gold and silver mine fees).

Russell with BLM said that for each office, there are internal priorities, but it's important to take each office's highest priorities and pool them, then divide them by what can be done with the State, internally through Luke Sabala's shop, and through contractors.

Bob said that Pat Brown has been doing bat surveys but right now there is no one available to do the underground surveys (the last available person retired).

Linda with Death Valley stated that "Bat Conservation International has a subterranean specialist qualified to go underground (██████████ AZ). BCI gets grants for Fish and Wildlife to do work. Maybe that can be granted to us for work."

The group then began to discuss again, the just "assuming bat presence" rather than trying to find qualified people to do the survey work, which again results in more costly mitigation (i.e. bat gates and cupolas) versus backfill and puf.

The group talked about the difficulties with timing right now. "Bat maternity season is just beginning." We can do anything right now, even if we wanted to.

#### **Luke Sabala with Joshua Tree**

Luke reminded everyone that he is only one person and right now he's working over at Needles. Luke stated they all need to develop a unified set of priorities, with the drive-up sites as the most important sites to mitigate. Luke said "we need to bring a unified priority list to the group."

However, the problem is that Feinstein's money has been divvied up, regardless of collective priorities, and that leaves resource areas out of the mix for funding.

Linn said "there's gotta be some way to share the money. I have my list right here and I'm going to give it to Sarah (California) to get the rest of her money that is available this fiscal year."

NPS said "we need to be equitable, to avoid competition. Competition may not be the best way to go, considering the money has not been allocated to everyone at the table."

BLM then stated that they have problems receiving money from a state agency, which NPS didn't understand since they don't have any problems.

DePrey with Joshua Tree said they have to develop an approach to how they are going to create the criteria. "Joshua Tree and Death Valley have done a lot of work and we recognize we can't always be at the trough."

Dave Lawler with BLM said, "everyone agrees that Joshua Tree and Death Valley have done a good job and that Luke's group has worked diligently to take out their highest priority sights. Maybe it's good for these specific agencies to be spotlighted to Feinstein, in order to show success."

More Ridgecrest...

Linn said “we have to remediate 300-400 sites in an open play area called Rademacher Hills.. sites that you can drive a car into We have 190 sites remediated, leaving the most dangerous sites that will have to get a gate or a cupola Our experience has taught us that biological surveys delay these projects by 1-2 years so we are going to treat every hole as if there is a bat If we could come out after maternity season, cover, remove and immediately fix, we would, but there is no one to do it. We are going to have to stipulate the existence of critters by doing bat gates and cupolas and negate the bio surveys. The Director of BLM wants to see projects finished by the end of the fiscal year, ”

Dave Lawler – “we will have to pick low hanging fruit in order to show progress this year.”

Sarah with the State said “this is the first time we are gong to have to prioritize sites. The State of California priorities may have to take precedence.” The State needs to shine in order for all of us to continue receiving funding from Feinstein.

Sarah said that they should use the state’s prioritization method, because the State has been instrumental in getting AML work going. The State’s prioritization process, PAR Ranking System” was developed in 2000 and it was used to inventory chemical physical hazards. We inter # of shafts, tailings, waste, water and it all comes up with the a score that allows us to rank the info.

Ted Weasma said “it doesn’t take into account, management priorities, or the fact that anything deeper than 10 feet, is dangerous. It doesn’t show how close holes are to the road.”

Sarah said, “that is a minor part of the larger score.”

Someone then said “Why doesn’t DMG create a priority system that the State adopts? The State’s system was not created to prioritize, but rather to assess hazards at AML sites ”

INVENTORY

Everyone agrees that no further inventory work will be done, because Feinstein’s office wants to see progress. Bob said “it’s not the speed of which we should get things done, but the breadth.” BLM said “if we don’t accomplish said number of holes, we risk losing funding in future years.” Bob with Mojave said “ we need to conduct a short term plan to satisfy Feinstein and a long term plan to make sure we are doing what’s best in the long run.”

Submission:	Submitted	Greta Bloomfield	04/11/2008 12:36:46 PM
Level 1 Approval:	Approved	William McMullen	04/11/2008 12:50 05 PM
Level 2 Approval:	Approved	John Illson	04/28/2008 01:00 35 PM

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Add Document Readers

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L.g. Withdrawal, Segregation and Closure of Lands

## Assignment Workpaper

Prepared by: William McMullen 10/23/2007

Assignment Number C- N-MOA-0004-2007  
Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Section L.g. Subsection Audit Step K.11  
Program Name Best Practices  
Subject Withdrawal, Segregation and Closure of Lands

Origination Doctlink 

### Purpose:

Document use of segregation and closure action of lands prior to remediation.

### Scope:

BLM Authority to segregate and close lands to mineral entry.

### Source:

Email from Tim Carroll, Geologist, BLM Folsom Field Office dated 10/22/07 in response to email from OIG. Emails are in the Details section.  
Email from George Stone showing examples of land withdrawals pursuant to remediation activities (see Withdrawals tab below).  
Proposed Tyro mill withdrawal provided by Al Burch, BLM AZ during OIG visit and attached:



Tyro mill withdrawal.PDF

Federal Register Notice of the withdrawal dated as effective on April 21, 2005, found at <http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/pdf/05-7960.pdf> and attached:



Tyro mill FR notice.pdf

Land withdrawal Q&As found at <http://www.blm.gov/or/landsrealty/loquestions.php> and copied in tab below.

### Conclusion:

- BLM has the authority to close public lands.
- BLM has used this authority to close lands prior to initiation of a CERCLA remedial action at selected abandoned mine land sites in California.
- BLM Folsom Field Office manager determines how long the closure order will last.
- If claimants are present on lands needing to be remediated, relinquishment of claims in the face of CERCLA liability could be an effective tool to remove claimant interests.
- BLM has used the withdrawal process to remove land from mineral entry so that planning or remediation activities could proceed and final remedies be protected.
- BLM withdrew the Tyro mill tailings in 2005 stating "Mineral withdrawal will prohibit the reprocessing of tailings, which could cause fugitive dust." BLM also stated, "The withdrawal is essential to protect the Federal investment of the reclamation project and to prevent disturbance of the reclaimed and capped mill tailings."
-  [Auditor Opinion] Site closure orders could be used more often to protect the public by limiting access to sites with safety and environmental hazards and enable AML site mitigation.

### Details:

The BLM Folsom Field Office issued an Emergency Closure and Segregation of Federal Lands in the Federal Register on 8/9/2006 "In order to protect the health and safety of the public and minimize conflicts that may result from cleanup efforts initiated under the Comprehensive Environmental Response, Compensation and Liability Act, six abandoned mine land sites need to be closed and segregated from all forms of entry, including mineral entry under the 1872 Mining Law." (see page 1 of email attachment "FedRegPondPoorePoisonGoldRunLongfellowDavis.doc in Carrol Emails tab below).

BLM concluded that these lands needed to be protected from public access, including access by potential mining claimants so that remedial actions under CERCLA could proceed. BLM was concerned that new mining claims filed on these sites could jeopardize CERCLA cleanup activities. As noted by Tim Carroll, there were no existing claimants at the sites when the order was issued. Carroll also notes that had claimants been present, they likely would have relinquished claims instead of facing liability under CERCLA for cleanup costs.

Carroll notes that if the remediation includes onsite disposal (repository), then BLM would proceed to formally withdraw the land from mineral entry "to prevent disturbance of the repository by mining claim operations." Carroll also notes that designating an Area of Critical Environmental Concern is an alternative, although potentially less effective, approach to protect the remedy. Finally, he notes that if the remedy includes removal for off-site disposal, then the sites could be claimed and operations could proceed under current BLM regulations.

The Federal Register notice states that "This closure is effective immediately and will be verified upon publication in the **Federal Register**. It will remain in effect until the Manager, Folsom Field Office, determines it is no longer needed."

L.g. Withdrawal, Segregation and Closure of Lands

BLM State Directors are delegated the authority to close public lands [B.BLM.04 Federal Authority to Close Lands](#). As noted above, the Field Office manager can determine how long the closure will last.

Text of Federal Register Notice referenced in Carol email regarding closure of lands in CA:

[Federal Register](#) / Vol. 71 No. 153 / Wednesday August 9 2006 / Notices

DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
[CA-180-06-1010-JK]

**Emergency Closure and Segregation of Federal Lands in Amador, Placer, Nevada and Tuolumne Counties, CA**

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** Emergency closure and segregation of six abandoned mine land sites in California.

**SUMMARY:** Notice is hereby given that all BLM-administered public lands at the Pond, Poore, Gold Run, Poison Lake, Davis and Longfellow abandoned mine land (AML) sites located in Amador, Placer, Nevada and Tuolumne Counties, California are closed to all forms of entry by the public, including mineral entry under the 1872 Mining Law. This closure is necessary to protect the public from hazards associated with these sites and to enable the remediation of the sites pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Sampling of water and sediment at these sites indicates substantial amounts of mercury and/or arsenic are present in sluice tunnel floor sediments and in mill tailings. Shafts and tunnel inlets/outlets are also present at these sites. These conditions represent significant health and physical safety hazards to the public. The closure and segregation of these lands from all forms of land and mineral entry is also needed to prevent the location of any new mining claims on these lands pending completion of necessary removal and remediation actions. This closure will remain in effect until the Folsom Field Manager determines it is no longer needed. This closure does not apply to authorized employees and contractors.

**DATES: Effective Date:** This closure is effective immediately and will be verified upon publication in the **Federal Register**. It will remain in effect until the Manager, Folsom Field Office, determines it is no longer needed.

**FOR FURTHER INFORMATION CONTACT:** Tim Carroll, Geologist, Bureau of Land Management, 63 Natoma St., Folsom, CA 95630, Telephone (916) 985-4474.

[Carroll Emails](#)

Actually, Bill, I only just thought of the liability angle when I replied to your email.

We have had success getting mining claimants to relinquish equipment, structures and other items stored on their claims to avoid posting a reclamation bond covering BLM's cost of hiring a contractor to remove them, but not a relinquishment of claims. At BLM's Boston Pit abandoned mine land project which involved the removal of mercury contaminated sediment from a sluice tunnel, the tunnel was/is under a mining claim. BLM obtained permission from the claimant to proceed with the cleanup. We may have tried to threaten the claimant with using this liability tactic if he refused to cooperate, but it would have been hard for us to prove his liability for historic hydraulic gold mining operations. Incidentally, we gave the claimant the gold recovered from the tunnel.

Some CERCLA sites have mineral values. We need to avoid mining claim conflicts that could complicate, even prevent remedial action, but we must also acknowledge claimants' rights under the Mining Law.

Tim

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG  
10/23/2007 08:03 AM

To: Timothy Carroll/CASO/CA/BLM/DOI@BLM@DOI  
cc: John Illson/DEN/OIG/DOI@OIG  
Subject: Re: Emergency closure of AML sites for CERCLA actions

Tim, thanks for your quick and comprehensive response. It seems that this closure approach has quite a bit of merit in allowing BLM to proceed with CERCLA actions without the complication of claimants. Also, getting claimants to relinquish claims or face CERCLA liability is a good angle. Have you been successful in this approach?

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

William,

L.g. Withdrawal, Segregation and Closure of Lands

1. See attached memo to WO-630 dated Jan. 30, 2006 with Briefing Paper and FR Notice of Emergency Closure.



FedRegPondPoorePasonGoldRunLongfellowDavis.doc Emergency Closure and Segregation.pdf

2. A review of BLM California mining claim records showed no mining claim locations in the areas proposed for closure. If a pre-existing claim was involved, a relinquishment of the claim would be necessary before we would take any remedial actions at the site. It is likely that a claimant would rather relinquish the claim than be liable for remediation costs. If the claimant refuses to relinquish his claim, a validity determination may be required but that is a lengthy, costly process that would not achieve the desired result if it is determined that a discovery of valuable minerals exists, i.e. the claim is valid.
3. Closures will remain in effect until cleanup operations are completed. If a cleanup is not practical and a repository of hazardous mine tailings (for example) is to be maintained on a site on public lands, our Field Office will recommend BLM Washington Office approval of a withdrawal of the land from mineral entry to prevent disturbance of the repository by mining claim operations. Another option is to establish an Area of Critical Environmental Concern which would require Plan and reclamation bond approval by BLM before operations proceed. However, BLM decisions to restrict operations can be appealed to the IBLA. If the site is cleaned up, mining claim operations would be allowed as they would normally be allowed on public lands as long as they comply with our regulations 43 CFR 3715 and 3809.
4. Only a withdrawal from mineral entry can assure that a site would not be disturbed by future mining claim operations. For BLM's withdrawal authority refer to 43 CFR 2300. For more information on BLM's authority to withdraw public lands from mineral and other types of entry, contact Duane Marti (cc'd above) at our State Office.

If you have any more questions, please call or email me.

Tim Carroll  
Geologist  
BLM Folsom Field Office  
63 Natoma St., Folsom, CA 95630  
(916) 985-4474

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG

10/22/2007 01:21 PM

To: Timothy Carroll/CASO/CA/BLM/DOI@BLM  
cc: John Ilson/DEN/OIG/DOI@OIG  
Subject: Emergency closure of AML sites for CERCLA actions

Tim, I am working with John Ilson on the OIG audit of abandoned mine lands. I noticed that the Folsom Field Office issued an emergency closure of selected AML sites titled "Emergency Closure and Segregation of Federal Lands in Amador, Placer, Nevada and Tuolumne Counties, CA" that was published in the Federal Register on August 9, 2006. Could you help me understand (with supporting documentation if available) the following:

1. what procedures you used to develop and support the closure order
2. were there existing mining claimants on the AML sites you closed and, if so, what authorities did you use to restrict them from accessing their claims
3. what will happen vis a vis mining claimants and their rights once the closure order is lifted, e.g., can they locate minerals and disturb remedial actions under a plan of ops with adequate bond or
4. can you, in effect, ensure that remediated sites are longer be accessible to location and what authorities do you have to do this.

I appreciate any help you can provide in this area as it seems this method might be a powerful tool to deal with existing or potential claimants at sites where critically needed mitigation must take place. Thanks

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

BLM has also used formal land withdrawals as a means of removing land from mineral location so that remediation efforts can proceed. The process of applying for a land withdrawal is shown in the email attachments titled "Manning...".

#### Withdrawal Examples and Process

In 2005, BLM prepared a proposed withdrawal action for the Tyro mill in Arizona. [K.BLM.Arizona.03 Discussions with Al Burch and Bill Harris](#). The purpose was to withdraw the land from mineral entry so that the reclamation activities could be protected and land use planning completed. The withdrawal "Briefing for the Assistant Secretary" stated "The withdrawal is essential to protect the Federal investment of the reclamation project and to

L.g. Withdrawal, Segregation and Closure of Lands

prevent disturbance of the reclaimed and capped mill tailings" (see tab below): BLM originally proposed to withdraw the land for 20 years but because of inconsistencies with the current land use plan, the time was shortened to 5 years while changes were made to the land use plan for the site. BLM did withdraw the land pursuant to a Notice in the Federal Register (see source document) effective April 21, 2005, for five years.

**Tyro Mill Withdrawal**

**BRIEFING FOR THE ASSISTANT SECRETARY**

DATE: February 22, 2005

PREPARED BY: Paul Misiaszek, Geologist, BLM, Kingman Field Office

FROM: Kathleen Clarke, Director, Bureau of Land Management (BLM)

SUBJECT: Tyro Mill Site Reclamation Project Proposed Withdrawal, Arizona

PURPOSE OF BRIEFING DOCUMENT: The BLM is requesting approval of a public land order (PLO) to withdraw approximately 90 acres of public land from mining for 5 years to protect the Tyro Mill Site Reclamation Project while the BLM completes land use planning for the area

ISSUES: The land proposed for withdrawal contains four piles of mill tailings (sand or silt size particles of processed mine rock) that contain cyanide, sulfur, and iron. The tailing piles are located within two dry washes that flow during heavy rainfall and wash metal laden particles into the Colorado River. The BLM plans to reclaim the site and construct a barrier capping to prevent the hazardous materials from washing downstream. The withdrawal is essential to protect the Federal investment of the reclamation project and to prevent disturbance of the reclaimed and capped mill tailings. A decision will be made as to whether to withdraw the land for a longer term after land use planning is complete.

**ENVIRONMENTAL IMPACTS:**

The Critical Elements of the Human Environment (BLM Handbook H-1790-1) were considered during this project with respect to the proposed action, no action and any other alternatives. The table below lists the critical elements and pertinent comments on each. Elements not affected by the Proposed Action or alternatives will not be discussed further in this EA.

Critical Element	Comment
Air Quality	Mineral withdrawal will prohibit the reprocessing of tailings, which could cause fugitive dust. Reclamation will stabilize and cover the tailings with soil, preventing fugitive dust.
ACECs	N/A
Cultural Resources	N/A

L.g. Withdrawal, Segregation and Closure of Lands

MEMORANDUM

TO: Director (350), Room 1000, L Street  
THRU: Southwest Zone Withdrawal Coordinator  
FROM: Field Manager Kingman, Arizona (AZ310)  
SUBJECT: Tyro Mill Site Reclamation Project Proposed Withdrawal, Arizona

Attached for further appropriate action by your office are draft copies of a proposed public land order, briefing paper, and transmittal memorandum to the Assistant Secretary. Several other pertinent documents are also enclosed.

The order would withdraw 90 acres of public land from location and entry under the United States mining laws for five (5) years to protect the Tyro Mill Site Reclamation Project until land use planning is completed for the area. We originally filed an application to withdraw the land for 20 years and published a notice of proposed withdrawal in the *Federal Register* to that effect. However, the proposed withdrawal is not consistent with the current land use plan. So we need to complete a Land Use Plan amendment before we proceed further with the withdrawal proposal and we are requesting a five-year withdrawal to protect the land in the interim.

The land proposed for withdrawal contains four piles of mill tailings (sand or silt size particles of processed mine rock) that contain cyanide, sulfur, and iron. The tailing piles are located within two dry washes that flow during heavy rainfall and wash metal laden particles into the Colorado River. We plan to reclaim the site and construct a barrier capping to prevent the hazardous materials from washing downstream. The withdrawal is essential to protect the Federal investment of the reclamation project and to avoid disturbance of the reclaimed and capped mill tailings.

I recommend approval of the withdrawal.

  
\_\_\_\_\_  
Wayne King

Withdrawal Q&A

**Land Withdrawal - Withdrawal Questions**

**What is a Land Withdrawal?** A management tool in the real estate tool box used to implement resource management planning prescriptions or as a means to transfer administrative jurisdiction from one federal agency to another. A withdrawal creates a title encumbrance on the land restricting an agency's ability to manage its lands under multiple use management principles. The restrictions generally segregate the lands from some or all the public land laws and some or all of the mining and mineral leasing laws for a specific period of time, generally 20 years for post Federal Land Policy and Management Act withdrawals.

**Who has the Authority to Make, Modify, or Revoke a Withdrawal?** As stated in the Federal Land Policy and Management Act of 1976, PL 94-579, (43 U.S.C. 1714), the Secretary of Interior is authorized to make, modify, extend, or revoke withdrawals.

**When should the Withdrawal Tool be used?** Due to the restrictive nature, the cost of processing, and the level at which a final decision is made, a withdrawal should be used only as a management tool of last resort. To determine how and when to propose a withdrawal first, one needs to look at the agency's forest or resource management plan to determine plan consistency. Second, the surface resource and the subsurface resource values (generally locatable minerals) need to be assessed to determine relative value. If the mineral values exceed the surface values and the minerals have a high potential for development and the public through the planning process want the surface to be preserved and if a mineral operation cannot mitigate the surface values then an agency should consider requesting a land withdrawal. If, however, there is no mineral potential in the subsurface estate, the agency should look to other methods to protect surface values.

**Methodology:**  
N/A.

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

L.g. Withdrawal, Segregation and Closure of Lands

Submission: Submitted William McMullen 01/11/2008 10:22:40 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 04/28/2008 01:00:49 PM

**Linkage Information Set By William McMullen/DEN/OIG/DOI On 05/02/2008 11:27:17 AM**

The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Fri 05/02/2008 11:27 AM. For original text, refer to the field(s) above.

Purpose:

Document use of segregation and closure action of lands prior to remediation.

Scope:

BLM Authority to segregate and close lands to mineral entry.

Source:

Email from Tim Carroll, Geologist, BLM Folsom Field Office dated 10/22/07 in response to email from OIG. Emails are in the Details section.

Email from George Stone showing examples of land withdrawals pursuant to remediation activities (see Withdrawals tab below).

Proposed Tyro mill withdrawal provided by Al Burch, BLM AZ during OIG visit and attached:



Tyro mill withdrawal.PDF

Federal Register Notice of the withdrawal dated as effective on April 21, 2005, found at <http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/pdf/05-7960.pdf> and attached:



Tyro mill FR notice.pdf

Land withdrawal Q&As found at <http://www.blm.gov/or/landsrealty/loquestions.php> and copied in tab below.

Conclusion:

BLM has the authority to close public lands.

- BLM has used this authority to close lands prior to initiation of a CERCLA remedial action at selected abandoned mine land sites in California.
- BLM Folsom Field Office manager determines how long the closure order will last.
- If claimants are present on lands needing to be remediated, relinquishment of claims in the face of CERCLA liability could be an effective tool to remove claimant interests.
- BLM has used the withdrawal process to remove land from mineral entry so that planning or remediation activities could proceed and final remedies be protected.
- BLM withdrew the Tyro mill tailings in 2005 stating "Mineral withdrawal will prohibit the reprocessing of tailings, which could cause fugitive dust." BLM also stated, "The withdrawal is essential to protect the Federal investment of the reclamation project and to prevent disturbance of the reclaimed and capped mill tailings."
- [Auditor Opinion] Site closure orders could be used more often to protect the public by limiting access to sites with safety and environmental hazards and enable AML site mitigation.

Details:

The BLM Folsom Field Office issued an Emergency Closure and Segregation of Federal Lands in the Federal Register on 8/9/2006 "In order to protect the health and safety of the public and minimize conflicts that may result from cleanup efforts initiated under the Comprehensive Environmental Response, Compensation and Liability Act, six abandoned mine land sites need to be closed and segregated from all forms of entry, including mineral entry under the 1872 Mining Law." (see page 1 of email attachment "FedRegPondPoorePoisonGoldRunLongfellowDavis.doc in Carrol Emails tab below).

BLM concluded that these lands needed to be protected from public access, including access by potential mining claimants so that remedial actions under CERCLA could proceed. BLM was concerned that new mining claims filed on these sites could jeopardize CERCLA cleanup activities. As noted by Tim Carroll, there were no existing claimants at the sites when the order was issued. Carroll also notes that had claimants been present, they likely would have relinquished claims instead of facing liability under CERCLA for cleanup costs.

Carroll notes that if the remediation includes onsite disposal (repository), then BLM would proceed to formally withdraw the land from mineral entry "to prevent disturbance of the repository by mining claim operations." Carroll also notes that designating an Area of Critical Environmental Concern is an alternative, although potentially less effective, approach to protect the remedy. Finally, he notes that if the remedy includes removal for off-site disposal, then the sites could be claimed and operations could proceed under current BLM regulations.

The Federal Register notice states that "This closure is effective immediately and will be verified upon publication in the **Federal Register**. It will remain in effect until the Manager, Folsom Field Office, determines it is no longer needed."

BLM State Directors are delegated the authority to close public lands **B.BLM.04 Federal Authority to Close Lands**. As noted above, the Field Office manager can determine how long the closure will last.

Text of Federal Register Notice referenced in Carrol email regarding closure of lands in CA:

**Federal Register** / Vol. 71 No. 153 / Wednesday August 9 2006 / Notices

L.g. Withdrawal, Segregation and Closure of Lands

DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
[CA-180-06-1010-JK]

**Emergency Closure and Segregation of Federal Lands in Amador, Placer, Nevada and Tuolumne Counties, CA**

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** Emergency closure and segregation of six abandoned mine land sites in California.

**SUMMARY:** Notice is hereby given that all BLM-administered public lands at the Pond, Poore, Gold Run, Poison Lake, Davis and Longfellow abandoned mine land (AML) sites located in Amador, Placer, Nevada and Tuolumne Counties, California are closed to all forms of entry by the public, including mineral entry under the 1872 Mining Law. This closure is necessary to protect the public from hazards associated with these sites and to enable the remediation of the sites pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Sampling of water and sediment at these sites indicates substantial amounts of mercury and/or arsenic are present in sluice tunnel floor sediments and in mill tailings. Shafts and tunnel inlets/outlets are also present at these sites. These conditions represent significant health and physical safety hazards to the public. The closure and segregation of these lands from all forms of land and mineral entry is also needed to prevent the location of any new mining claims on these lands pending completion of necessary removal and remediation actions. This closure will remain in effect until the Folsom Field Manager determines it is no longer needed. This closure does not apply to authorized employees and contractors.

**DATES:** *Effective Date:* This closure is effective immediately and will be verified upon publication in the **Federal Register**. It will remain in effect until the Manager, Folsom Field Office, determines it is no longer needed.

**FOR FURTHER INFORMATION CONTACT:** Tim Carroll, Geologist, Bureau of Land Management, 63 Natoma St., Folsom, CA 95630, Telephone (916) 985-4474.

**Carroll Emails**

Actually, Bill, I only just thought of the liability angle when I replied to your email.

We have had success getting mining claimants to relinquish equipment, structures and other items stored on their claims to avoid posting a reclamation bond covering BLM's cost of hiring a contractor to remove them, but not a relinquishment of claims. At BLM's Boston Pit abandoned mine land project which involved the removal of mercury contaminated sediment from a sluice tunnel, the tunnel was/is under a mining claim. BLM obtained permission from the claimant to proceed with the cleanup. We may have tried to threaten the claimant with using this liability tactic if he refused to cooperate, but it would have been hard for us to prove his liability for historic hydraulic gold mining operations. Incidentally, we gave the claimant the gold recovered from the tunnel.

Some CERCLA sites have mineral values. We need to avoid mining claim conflicts that could complicate, even prevent remedial action, but we must also acknowledge claimants' rights under the Mining Law.

Tim

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG  
10/23/2007 08:03 AM

To: Timothy Carroll/CASO/CA/BLM/DOI@BLM@DOI  
cc: John Illson/DEN/OIG/DOI@OIG  
Subject: Re: Emergency closure of AML sites for CERCLA actions

Tim, thanks for your quick and comprehensive response. It seems that this closure approach has quite a bit of merit in allowing BLM to proceed with CERCLA actions without the complication of claimants. Also, getting claimants to relinquish claims or face CERCLA liability is a good angle. Have you been successful in this approach?

William H. McMullen  
Evaluator  
Central Region Audits  
303.236.9123

William,

1. See attached memo to WO-630 dated Jan. 30, 2006 with Briefing Paper and FR Notice of Emergency Closure.



FedRegPondPoorePasonGoldRunLongfellowDavis.doc Emergency Closure and Segregation.pdf

2. A review of BLM California mining claim records showed no mining claim locations in the areas proposed for closure. If a pre-existing claim was involved, a relinquishment of the claim would be necessary before we

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would take any remedial actions at the site. It is likely that a claimant would rather relinquish the claim than be liable for remediation costs. If the claimant refuses to relinquish his claim, a validity determination may be required but that is a lengthy, costly process that would not achieve the desired result if it is determined that a discovery of valuable minerals exists, i.e. the claim is valid.

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If you have any more questions, please call or email me.

Tim Carroll  
Geologist  
BLM Folsom Field Office  
63 Natoma St., Folsom, CA 95630  
(916) 985-4474

William McMullen/DEN/OIG/DOI@OIG

William McMullen/DEN/OIG/DOI@OIG  
10/22/2007 01:21 PM

To: Timothy Carroll/CASO/CA/BLM/DOI@BLM  
cc: John Illson/DEN/OIG/DOI@OIG  
Subject: Emergency closure of AML sites for CERCLA actions

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Evaluator  
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BLM has also used formal land withdrawals as a means of removing land from mineral location so that remediation efforts can proceed. The process of applying for a land withdrawal is shown in the email attachments titled "Manning...".

#### Withdrawal Examples and Process

In 2005, BLM prepared a proposed withdrawal action for the Tyro mill in Arizona [K.BLM.Arizona.03 Discussions with Al Burch and Bill Harris](#). The purpose was to withdraw the land from mineral entry so that the reclamation activities could be protected and land use planning completed. The withdrawal "Briefing for the Assistant Secretary" stated "The withdrawal is essential to protect the Federal investment of the reclamation project and to prevent disturbance of the reclaimed and capped mill tailings" (see tab below): BLM originally proposed to withdraw the land for 20 years but because of inconsistencies with the current land use plan, the time was shortened to 5 years while changes were made to the land use plan for the site. BLM did withdraw the land pursuant to a Notice in the Federal Register (see source document) effective April 21, 2005, for five years.

#### Tyro Mill Withdrawal

##### BRIEFING FOR THE ASSISTANT SECRETARY

DATE: February 22, 2005

PREPARED BY: Paul Misiaszek, Geologist, BLM, Kingman Field Office

L.g. Withdrawal, Segregation and Closure of Lands

FROM: Kathleen Clarke, Director, Bureau of Land Management (BLM)

SUBJECT: Tyro Mill Site Reclamation Project Proposed Withdrawal, Arizona

PURPOSE OF BRIEFING DOCUMENT: The BLM is requesting approval of a public land order (PLO) to withdraw approximately 90 acres of public land from mining for 5 years to protect the Tyro Mill Site Reclamation Project while the BLM completes land use planning for the area

ISSUES: The land proposed for withdrawal contains four piles of mill tailings (sand or silt size particles of processed mine rock) that contain cyanide, sulfur, and iron. The tailing piles are located within two dry washes that flow during heavy rainfall and wash metal laden particles into the Colorado River. The BLM plans to reclaim the site and construct a barrier capping to prevent the hazardous materials from washing downstream. The withdrawal is essential to protect the Federal investment of the reclamation project and to prevent disturbance of the reclaimed and capped mill tailings. A decision will be made as to whether to withdraw the land for a longer term after land use planning is complete.

ENVIRONMENTAL IMPACTS:

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ACECs	N/A
Cultural Resources	N/A

L.g. Withdrawal, Segregation and Closure of Lands

MEMORANDUM

TO: Director (350), Room 1000, L Street  
THRU: Southwest Zone Withdrawal Coordinator  
FROM: Field Manager Kingman, Arizona (AZ310)  
SUBJECT: Tyro Mill Site Reclamation Project Proposed Withdrawal, Arizona

Attached for further appropriate action by your office are draft copies of a proposed public land order, briefing paper, and transmittal memorandum to the Assistant Secretary. Several other pertinent documents are also enclosed.

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I recommend approval of the withdrawal.

  
\_\_\_\_\_  
Wayne King

Withdrawal Q&A

**Land Withdrawal - Withdrawal Questions**

**What is a Land Withdrawal?** A management tool in the real estate tool box used to implement resource management planning prescriptions or as a means to transfer administrative jurisdiction from one federal agency to another. A withdrawal creates a title encumbrance on the land restricting an agency's ability to manage its lands under multiple use management principles. The restrictions generally segregate the lands from some or all the public land laws and some or all of the mining and mineral leasing laws for a specific period of time, generally 20 years for post Federal Land Policy and Management Act withdrawals.

**Who has the Authority to Make, Modify, or Revoke a Withdrawal?** As stated in the Federal Land Policy and Management Act of 1976, PL 94-579, (43 U.S.C. 1714), the Secretary of Interior is authorized to make, modify, extend, or revoke withdrawals.

**When should the Withdrawal Tool be used?** Due to the restrictive nature, the cost of processing, and the level at which a final decision is made, a withdrawal should be used only as a management tool of last resort. To determine how and when to propose a withdrawal first, one needs to look at the agency's forest or resource management plan to determine plan consistency. Second, the surface resource and the subsurface resource values (generally locatable minerals) need to be assessed to determine relative value. If the mineral values exceed the surface values and the minerals have a high potential for development and the public through the planning process want the surface to be preserved and if a mineral operation cannot mitigate the surface values then an agency should consider requesting a land withdrawal. If, however, there is no mineral potential in the subsurface estate, the agency should look to other methods to protect surface values.

Methodology:  
N/A.

L.g. Withdrawal, Segregation and Closure of Lands

**History**

**Status** Approved **Request Review**

**In Progress Edit** William McMullen/DEN/OIG/DOI

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

## Assignment Workpaper

Prepared by: Greta Bloomfield 10/29/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** L.h **Subsection**  
**Program Name** Best Practices  
**Subject** Partnering for Success Workshop

**Origination Doclink** 

### Purpose:

Identify potential organizations (inside DOI or external to DOI) with good practices that may have relevance to the Department and bureaus' abandoned mine land programs.

### Scope:

BLM Nevada's AML Program

### Source:



Submitted by Chris Ross during site visit 08/03/07 : Partnering for Success Workshop Ross.pdf

### Conclusion:

BLM Nevada's AML Coordinator, Chris Ross, has been an instrumental figure in the difficult job of reclaiming AML lands on federal lands throughout the US. As such, Chris Ross was named the keynote speaker at the Partnership for Success Workshop. The Workshop in itself could also be considered a best practice, because it is a coordinated effort to ensure that AML program managers have working knowledge of AML needs, will feel comfortable participating in partnering strategies, and assist in developing as well as benefiting from different regional and national funding efforts.

### Details:

#### **Partnering for Success – Workshop Overview** **St. Louis, May 9-11**

**Goal:** To ensure that AML program managers have or gain enough working knowledge and comfort with partnering strategies to develop and benefit from the full range of funding alternatives available in their respective regions and nationally.

#### **Methodology:**

- To demonstrate and reinforce the strategies, steps and contingencies that have already led to significant expansions of AML reclamation resources throughout the US.
- To support AML managers in developing and initial implementation of resource plans for their programs during the session (rather than using hypothetical examples).
- Sessions will feature a mix of examples, panel and peer discussions, planning and structuring activities, and initial implementation steps during the workshop.
- Participants will do on-line and telephonic research into new funding opportunities.

Objectives:

Participants will gain/share information for pursuing any of the following:

Organizational alignment for successful partnering

Partnering with government agencies

Working effectively with local, state and federal partners

Practical background on EPA, BLM, USFS, NPS, ACE &/or TVA

Mobilizing the private sector (and mining industry)

Partnering with foundation, environmental or academic partners

Broadening Constituency Base (legislators, citizen and watershed groups, property owners)

Strategies for diverse leadership, organizational cultures/structures

Outcomes or Deliverables for end of workshop:

Increased skill in investigating new funding sources

Identify and profile new potential funding sources

Know steps and approaches in pursuing successful partnerships with targets

Alignment of key staff and allies

Draft funding and partner expansion strategy and plan

Make contact with outside agency resources

Outline of next steps

Targeted dates: midday of Tuesday, May 9<sup>th</sup> through afternoon Thursday, May 11th

7/27/2007

**AML Funding Enhancement Project  
Partnering and Resource Expansion Workshop Draft Outline**

**O. Pre-conference Preparation**

- A. Phone consultation about specific needs/situation of each program
- B. View and discuss *Partnering for Success* video with key staff
- C. Assemble and bring planning materials helpful with potential partners
  - Planning documents
  - Contact information for current and potential partners, sample contracts
  - Laptop, cell phone, ability to send/receive email in St. Louis
- D. Come prepared to share a 2 minute overview of emerging partnering strategy or one your program is interested in developing through this workshop

**I. Leading with your Intention (Tuesday afternoon)**

- A. Share partnering direction(s)/overview your program would like to expand
- B. Case Review: *Key Noter: Chris Ross on Filling Holes in Nevada*
- C. Missions, Goals and Roles that motivate

**II. Assessing your Current Strategic Approach**

- A. Value of a conscious strategy: focus, alignment, assess progress
- B. Motivation Factors in Partnerships
- C. Anatomy of a strategy and Approaches/Examples in some proven strategies
- D. Profile your current/emerging strategy and share with group
- E. Wrap-up with input for next steps

**III. Potential Resources in your Environment:** (Wednesday)

- A. Anatomy of a target, ways target can potentially contribute
- B. Sharing research into new funding possibilities –  
EPA, BLM, USFS, NPS, ACE, TVA (Implications of watershed focus)  
Local and state and academic partners
- C. Mobilizing the private sector (and mining industry)  
Partnering with environmental foundations
- D. Broadening Constituencies: Legislators, citizen groups, change the playing field

**IV. Your Partnering/Funding Plan**

- A. Vision of steps/progression involved
- B. Profile new program initiatives: who, what, where, when, how
- C. Aligning to ensure success

**V. Your Action (Implementation Steps):** (Thursday)

- A. Identify concerns/gaps with draft plans
- B. Individual and collective approaches to addressing needs
- C. Strategies for diverse leadership, organizational cultures and org structures
- D. Systems for ongoing support, assessment, revision.

**Methodology:**

n/a

Submission:	Submitted	Greta Bloomfield	01/07/2008 06:12 07 PM
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**Add Document Readers**

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**Assignment Program/Summary Workpaper**

Prepared by: William McMullen 08/23/2007

Assignment Number C- N-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Assignment Program Section M.  
 Assignment Program Name BLM (Authorities)

**Objective:**

Determine if BLM has policy and procedures for interacting with mining claimants regarding AML hazards.

**Background:**

Active or inactive mine claimants can complicate the mitigation of AML hazards because they some rights to develop their claims C.BLM.RidgecrestFO.06 BLM "Adopt a Cabin" Program [REDACTED]. In one case, BLM field office staff were prevented by higher management from contacting a claimant to warn of AML hazards D.01.01 Interview with Linn Gum [REDACTED].

**Assignment Steps:**

<b>M. BLM Authorities</b>			
<b>Audit Step</b>	<b>Staff</b>	<b>Justification for Step Addition or Removal</b>	<b>Work Paper Reference</b>
1. Determine the authority, if any, for BLM to mitigate immediate hazards at abandoned mines where there is an inactive claimant who objects to mitigation that would limit access to minerals.	Marsh		G.DOI.03 FLPMA [REDACTED]
2. Has BLM developed policy and procedures that address the mitigation of immediate hazards at abandoned mines with inactive claimants?	Marsh		M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures [REDACTED] J.BLM.20 AML Strategic Plan [REDACTED]
3. When immediate hazards exist on an abandoned mine site, has BLM contacted current mining claimants to inform them of BLM's intention to perform mitigation?	Marsh		J.BLM.12 BLM NV MOU with State of NV [REDACTED] K.BLM.Rip Van Winkle.01 Site Visit [REDACTED] K.BLM.Arizona.02 Site Visits [REDACTED] K.BLM.Arizona.01 Phoenix District Entrance Conference [REDACTED]
4. [REDACTED]	Marsh	Overall finding that BLM lacked policy and procedures for interacting with mining claimants negated the need for this step (see ref W/P).	M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures [REDACTED]
5. [REDACTED]	Marsh	Overall finding that BLM lacked policy and procedures for interacting with mining claimants negated the need for this step (see ref W/P).	M.01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures [REDACTED]
6. To protect the public health and safety from immediate hazards, what authority does BLM have to restrict the filing of claims on abandoned mine lands (i.e. withdrawal, or other).	Marsh		L.g. Withdrawal, Segregation and Closure of Lands [REDACTED] B.BLM.04 Federal Authority to Close Lands [REDACTED]
7. Has BLM developed policy and procedures for restricting the filing of claims at abandoned mines when such claims would jeopardize public health and safety?	Marsh		L.g. Withdrawal, Segregation and Closure of Lands [REDACTED]
8. Has BLM ever actually prohibited the	Marsh		L.g. Withdrawal, Segregation and Closure of Lands [REDACTED]

Assignment Program/Summary Workpaper M.

filing of a new claim on disturbed lands to prevent further degradation and thereby protect the public health and safety? If so, document these efforts.			
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**Conclusion:**

BLM proposed in the AML Strategic Plan that the AML program and the 3809 programs should develop policy and procedures on claimant interactions **J.BLM.20 AML Strategic Plan**. BLM has not developed policy and procedures on claimant interactions that are being used consistently by field offices.

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Level 1 Approval:

Level 2 Approval: Approved John Illson 06/02/2008 02:48 28 PM

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**Record of Discussion**

Prepared by: William McMullen 08/23/2007

**Assignment Number** C- N-MOA-0004-2007  
**Assignment** Audit of Public Safety Issues on Abandoned Mine Lands

**Section** M.01 **Subsection** Audit Step M 2  
**Program Name** BLM (Authorities)  
**Subject** G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures

**Origination Doclink** ■

**Participants**

Name	Title	Office Location	Phone No.	Email Address
John Illson	OIG Team Leader	Lakewood	303 236 9119	john_illson@doioig.gov
Bill McMullen	OIG Asst Team Leader	Lakewood	303 236 9123	william_mcmullen@doioig.gov
George Stone	BLM Senior Abandoned Mine Lands Specialist	Washington	202 557 3573	George_M_Stone@blm.gov

**Location** Telephone conversation

**Date/Time**

08/23/2007 06 30 AM

**Purpose:**

Discuss status of audit and issues of BLM authority vis a vis claimants.

**Scope:**

BLM abandoned mine lands and post FLPMA inactive sites

**Conclusion:**

- BLM is reluctant to communicate with claimants regarding hazards of abandoned or inactive mines on claimed land (caused by the current or prior claimants). The reasons typically given by BLM (such as "we can't interfere with rights under the 1872 Mining Law" do not appear valid based on discussions George has had with the BLM Solicitor (Harvey Blank).
- ■ BLM can identify abandoned or inactive mines and can identify claimants but these processes have not been linked to provide BLM a tool to use to identify and inform claimants or to enhance mitigation by informing claimants of issues. **This indicates insufficient management oversight of claimants and lack of procedures.**
- We did find examples where BLM took action to inform and encourage claimants to mitigate sites or to mitigate sites by BLM in NV and AZ.
- A policy on how BLM should interact with claimants regarding safety and environmental hazards at abandoned and inactive mines is needed. ■ **J.BLM.20 AML Strategic Plan**
- BLM should communicate with claimants formally regarding hazards at abandoned or inactive mines to 1) encourage claimants to mitigate hazards if they or responsible or 2) to inform claimants that BLM may take action to mitigate the hazards to protect the public. This process could be initially piloted in a single state.
- ■ **[Auditor Opinion]** BLM does not have procedures that are used routinely by field staff to interact with claimants and to 1) identify claimants at AML sites, 2) inform claimants of hazards, 3) identify claimant responsibilities for mitigating hazards 4) require claimants to address hazards by at least posting signs and fencing sites or 5) requiring BLM staff to proceed with mitigation (at least signs and fences) if claimants refuse to take action. ■

**Summary:**

- George noted that BLM is still in the throes of a reorganization and that chaos reigns.
- We discussed the upcoming GAO audit on minerals valuation and he provided the reference to the previous GAO report that is being updated (Entrance Conference today by phone). The reference is GAO/RCED 92-192.
- In response to our question, George said he did not know of an instance where BLM had withdrawn lands either to conduct remediation or to preserve mitigation actions; he noted that BLM always defers to claimant rights under the 1872 Mining Law as the reason for not withdrawing lands.
- George said that after the OIG Saginaw report, Bob Anderson tasked a group, including George, to develop a policy and procedures of how BLM could interact with claimants in situations where hazards exist on abandoned or inactive mines that need to be mitigated; however, the policy and procedures work was never completed. George thinks a recommendation regarding such a policy and procedures is a good idea.
- George thinks the policy and procedures on claimant interactions should cover pre and post FLPMA mines (abandoned (pre 1981) and inactive (post 1981 but not covered by 3809 bonding program)). BLM has the tools to identify abandoned mines (AMM) with dangerous hazards, however incomplete the data may be, and tools to identify claimants at the locations of these abandoned or inactive mines (claimant overlay in Site Mapper). ■ He thinks BLM does not have procedures and is not using these tools effectively to identify and inform claimants at sites with dangerous hazards that must be mitigated or to enhance mitigation efforts by claimants or ■ BLM who often defers mitigation action because of the Mining Law. Because BLM defers to the rights of claimants under the Mining Law, **often claimant responsibilities for AML hazards are not determined by BLM** In addition, BLM rarely consistently requires claimants to address hazards on their claims. ■ This indicates insufficient management oversight of claimants. We were told by BLM of isolated examples where BLM took action to inform and ■ encourage claimants to mitigate sites by, as a minimum posting signs or fencing sites or to mitigate sites by BLM in NV and AZ. **K.BLM.Rip Van Winkle.01 Site Visit** ■ **K.BLM.Arizona.02 Site Visits** ■ **K.BLM.Arizona.01 Phoenix District Entrance Conference** ■. These examples, while commendable, in their noteworthiness show that they are somewhat unique and that BLM does not have procedures that are used routinely by field staff to interact with claimants and to 1) identify claimants at AML sites 2) inform claimants of hazards 3) require claimants to address hazards by at least posting signs and

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

M 01 G. Stone Discussion on BLM/Claimant Interaction Policy and Procedures

- fencing sites or 4) requiring BLM staff to proceed with mitigation (at least signs and fences) if claimants refuse to take action.
- George believes a recommendation to Asst Secty to send a letter to claimants where Saginaw-type sites are located is a great idea. The letter could be a simple notification that tells the claimant the BLM has identified potential safety or environmental hazards located on the site of the claim and that mitigation action, by the claimant if they caused the hazard, or BLM may be warranted to protect public health and safety. George noted that such a recommendation does not require funds, can be justified on the grounds of protecting the public, might be embraced by the National Mining Association (on the basis that they wish to bring bad actors to heel) and does not threaten rights under the 1872 law. George said he did not think BLM Solid Minerals had ever notified claimants regarding hazards on post-FLPMA sites but this needs to be checked.
- Instead of BLM sending out hundreds of thousands of letters to claimants, perhaps the process could start in one state as a pilot.
- George noted that BLM's typical approach of "getting permission" from claimants to mitigate hazards is not supported by the BLM solicitor; Harvey Blank, according to George, thinks no such permission is required.
- We discussed [REDACTED] as a potential source of information of BLM rights vis a vis claimants.

Submission: Submitted William McMullen 01/11/2008 10:23 30 AM  
Level 1 Approval:  
Level 2 Approval: Approved John Illson 04/28/2008 01:01 03 PM

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The following information was copied from the rich text field(s) above into this field by William McMullen/DEN/OIG/DOI on Fri 05/02/2008 08:46 AM. For original text, refer to the field(s) above.

Purpose:  
Discuss status of audit and issues of BLM authority vis a vis claimants.

Scope:  
BLM abandoned mine lands and post FLPMA inactive sites

Conclusion:  
BLM is reluctant to communicate with claimants regarding hazards of abandoned or inactive mines on claimed land (caused by the current or prior claimants). The reasons typically given by BLM (such as "we can't interfere with rights under the 1872 Mining Law" do not appear valid based on discussions George has had with the BLM Solicitor (Harvey Blank).

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**History**

**Status** Approved **Request Review**

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**Add Document Readers**

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Draft Report

## Draft Report

Appendix A - OIG SITE VISITS - California CW
<b>Rand Mining District</b> Environmental contamination Safety hazards due to deteriorating structures and open shafts Inadequate fencing and signs Claimant negotiations could impact mitigation Land conveyances could present liability
<b>Atolia</b> Open shafts Unrestricted access Inadequate fencing and signs
<b>Ruth Mine</b> Open adit Deteriorating structures Inadequate signs <b>Recent trespass in residence</b> [responded to Referencer comment 1 in previous Draft Report that we observed evidence of people living in the residence during our site visit]; C.BLM.RidgecrestFO.07 Site Visits: Ruth and Darwin CW Erosion of tailings into streambed
<b>El Paso Mountains</b> Safety hazards due to “Adopt a cabin” program where active claim and many open shafts/adits exist adjacent to cabins used by visitors
<b>Rademacher Hills</b> Open adits and shafts Inadequate fencing and signs
<b>Folsom</b>

Draft Report

Open shaft near campground  
Inadequate fencing and signs

**Barstow - Coolgardie**

Open shafts  
Minimal fencing  
No signs

**Barstow - Goat Basin**

Death at one site, not fenced, not on inventory  
Two deaths at another site a short distance away  
A fence had been put up around the hole many years ago, but remnants remained when we visited  
A new fence was erected as a result of our NPFR.  
Other dangerous openings in the area that were not mitigated and not on the inventory  
This site had a death, should have been a high priority, and wasn't even on the inventory

**Darwin**

Safety hazards due to deteriorating mill  
Inadequate sampling to assess environmental hazards

**Spangler**

Open adits and shafts  
Inadequate fencing and signs  
Public invited to ORV events

**Death Valley National Park**

Death at one site (Keane Wonder).  
Open adits and shafts  
Public invited to visit site  
Inadequate fencing and signs

**Rosamond** ■ [K.BLM.RosamondCA.01 Site Visit](#) CW

[Environmental contamination of BLM land](#) CW

[Growing urban interface near contaminated sites](#) CW

**Joshua Tree National Park**

Open shaft, compromised adits. The most dangerous site we saw was difficult to get to, but does get visitors  
The high priority sites we visited are scheduled to be mitigated in 2008.  
A Park-wide environmental inspection of inactive historical mill sites was performed with no significant findings

Draft Report

<b>Mojave National Preserve</b> I.NPS.MOJA.01 Mojave National Preserve ■ CW Open shafts near roads CW Few fences or warning signs CW
<b>Appendix A - OIG SITE VISITS – Nevada</b> CW
<b>Virginia City</b> Two deaths in adit Safety hazards at mill tour business Inadequate sampling to assess environmental hazards New commercial and residential trespass
<b>American Flat</b> Death in mill building Safety hazards due to deteriorating structure Unrestricted access Inadequate warning signs
<b>Caselton</b> Inadequate groundwater sampling to assess environmental hazards Unrestricted access Inadequate warning signs Claimant dump site Claimant negotiations may hinder mitigation
<b>Spruce Mountain</b> Deteriorating structures Open adit
<b>Tuscarora</b> Safety hazards due to illegal dumping
<b>Tonopah</b> Death in open shaft Lack of responsibility for AML assumed by local office. Local office stated that it was not their responsibility and that a race organizer was responsible for the accident Local residents backfilled the mine shaft after the accident
<b>Lake Mead National Recreation Area</b>



Draft Report

## Grand Canyon National Park

Safety hazards due to accessible mine with high radon radiation levels (7) CW

Two sites visited

For the Orphan Mine, the trail was diverted around the contaminated areas. The site was fenced and signs were posted. However, visitors could still get in through a hole in the fence

The other site (Grandview) had no fencing or warning signs but was relatively difficult to get to. However, hikers in the area are using the mine features as shelter.

### Appendix B - Objective, Scope, Methodology and Internal Controls CW

#### Audit Objective:

To determine if the Department of the Interior and its bureaus are effectively protecting the public from physical safety and environmental hazards at abandoned hardrock mine sites located on federal lands.

#### Audit Scope:

Our audit focused on abandoned hardrock mine lands on federal property in the Western U.S. We concentrated on lands in California, Nevada and Arizona, three states with a significant mining legacy that receive no funds collected for reclamation of abandoned mines under the Surface Mining Control and Reclamation Act. This Act primarily supports reclamation of abandoned coal mines. In addition, population growth and wider recreational use of federal land in these states are CW increasing the risks from abandoned mine CW hazards. After reviewing abandoned mine CW issues and inventories for NPS, BLM, the U.S. Fish and Wildlife Service FWS (56) and the Bureau of Indian Affairs BIA, we limited our field work to lands managed by the NPS and BLM. We also evaluated Departmental programs and efforts to deal with abandoned mine lands.

#### Audit Methodology:

We conducted (b) (5) audit (b) (5) between March 2007 and April 2008. K.BLM (Site Visits) CW To accomplish the audit objective, we:

Conducted the audit in accordance with Government Auditing Standards issued by the Comptroller of the United States.

Included tests of records and other audit procedures that were considered necessary.

Gained an understanding of applicable laws and regulations and the Department's and bureaus' abandoned mine lands (AML) programs.

Conducted a limited review of data to identify accidents resulting in fatalities or injuries at abandoned mine lands AML sites.

Reviewed Department, bureau and other systems used to report on accidents at abandoned mine lands AML sites resulting in fatalities or injuries.

Analyzed management processes for identifying, reporting, prioritizing, and mitigating physical safety and environmental hazards at abandoned mine lands AML sites.

Draft Report

Interviewed Departmental and bureau officials at the headquarters, regional, and field office levels.

Visited selected bureau offices to review records and abandoned mine lands AML sites to assess the nature of safety and environmental hazards. We selected sites based on knowledge gained from bureau officials, prior accident locations, and priority of hazards as identified in bureau plans or by bureau officials.

Identified best practices within bureaus and from outside entities for mitigation of abandoned mine lands AML hazards.

#### Internal Controls:

As part of the audit, we performed an evaluation of the Department and its bureaus' systems of internal controls related to the identification, prioritization, and mitigation of abandoned mine lands AML hazards. We did not assess the bureaus' internal controls applicable to financial reporting.

This evaluation of internal controls was conducted at Departmental and bureau offices to the extent we considered necessary to accomplish the audit objective. We concluded that the BLM abandoned mine lands AML program lacks adequate internal controls to identify, prioritize and mitigate abandoned mine lands AML hazards. These deficiencies are discussed in the Results of Audit section of the report. NPS generally had adequate internal controls, except it needs to finalize and distribute its abandoned mines handbook.

We reviewed the Department of the Interior's Performance and Accountability Reports for fiscal years 2006 and 2007 and noted that no material weaknesses were reported related to abandoned hard rock mines. Some Government Performance and Results Act goals (b) (5) in the 2007 Performance and Accountability Report PAR did relate to the possible effects of abandoned hard rock mines (e.g., number of visitor injuries and fatalities, percent of physical and chemical hazards mitigated to protect public health and safety, and percent of contaminated sites remediated to protect watersheds) but were not specifically related to such sites. As reported in the PAR, all of these goals were met in 2007.

Our recommendations, if implemented, should improve the internal controls in the areas with identified weaknesses.

### Appendix C - Related Reports CW

#### OIG Flash Report No. C-IN-BML-0012-2007,

*Environmental and Safety Issues at Bureau of Land Management Ridgecrest Field Office, Rand Mining District*, September 2007.

The OIG noted hazardous conditions at abandoned mine sites in California's Rand Mining District that required immediate action to protect the health and safety of the public and employees. Levels of arsenic thousands of times higher than safe levels were found in tailings piles located near residential properties. The cost of environmental site mitigation could exceed \$170 million.

#### OIG Flash Report No. C-IN-MOA-0013-2005,

*Public Safety Issues at Saginaw Hill Property, Bureau of Land Management*, March 2005.

Draft Report

The OIG found that BLM had not identified the abandoned hard rock mine safety hazards and environmental contaminants **CW** present at the Saginaw hill property in Arizona. In addition, BLM had not taken appropriate measures to mitigate or remediate the hazards or limit public access to the hazards at this site.

**GAO Report No. 05-377,**

*Hardrock Mining: BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs* , June 2005.

The report concluded that the financial assurances may not fully cover all future reclamation costs as 48 hardrock operations on BLM land had not been fully and adequately reclaimed by operators. The report also found that BLM’s LR2000, the system designated to manage BLM’s financial assurances, was inadequate.

**GAO Report 96-30,**

*Information on Efforts to Inventory Abandoned Hard Rock Mines* , February 1996.

The report identified no definitive inventory available to identify the number of abandoned hard rock mines located on federal lands. Four major federal land-managing agencies, the BLM, NPS, the U.S. Fish and Wildlife Service ~~FWS~~ and the U.S. Forest Service ~~USFS~~ were in various stages of inventorying the mine sites on the lands they manage; however, because the methodologies and assumptions used to develop their inventories differ, their results could not be meaningfully compared or combined. As a result, neither the number of sites identified, the physical / environmental hazards reported, nor the cost of remediation associated with each hazard could be presented as a consistent total for abandoned mine lands on federal property. Therefore, the potential harms and damage caused from abandoned mine lands, on federal property, remained difficult to assess and quantify.

**OIG Report No. 92-I-636,**

*Hardrock Mining Site Reclamation, Bureau of Land Management* , March 1992.

The OIG identified that BLM had not implemented procedures for ensuring that abandoned hardrock mining sites on BLM managed lands were being reclaimed. BLM also failed to develop a comprehensive inventory of hardrock mining sites that required timely reclamation, and BLM was not fully aware of hazards and dangerous conditions at some abandoned mining sites.

**Appendix D- Abbreviations **CW****

AML.....	Abandoned Mine Lands
BIA.....	Bureau of Indian Affairs
BLM.....	Bureau of Land Management
BOR.....	Bureau of Reclamation
CFR.....	Code of Federal Regulations
Department and DOI.....	Department of the Interior

Draft Report

FWS.....	U.S. Fish and Wildlife Service
FY.....	Fiscal Year
GAO.....	Government Accountability Office
GPRA.....	Government Performance and Results Act
GRD.....	Geologic Resources Division
NPS.....	National Park Service
OIG.....	Office of Inspector General
OMB.....	Office of Management and Budget
SMCRA.....	Surface Mining Control and Reclamation Act

Draft Report

**History**

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**Current Editor List:**

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## Final Report



C-IN-MOA-0004-2007 Abandoned Mines Final Transmittal - 071708\_cd.docx



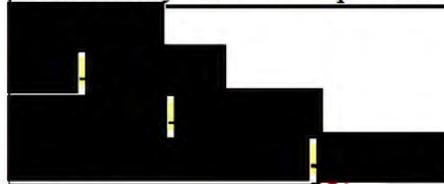
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AutoAudit version of text of Final Report (excluding appendices) is at [Reporting Final Report](#)

### Appendix A - OIG SITE VISITS - California CW

#### Rand Mining District (Red Mountain, Randsburg) ■ K.BLM (Site Visits) CW

Environmental contamination  
Safety hazards due to deteriorating structures and open shafts  
Inadequate fencing and signs  
Claimant negotiations could impact mitigation  
Land conveyances could present liability



#### Ruth Mine

Open adit  
Deteriorating structures  
Inadequate signs  
Recent trespass in residence [responded to Referencer comment 1 in previous Draft Report that we observed evidence of people living in the residence during our site visit]; C.BLM.RidgecrestFO.07 Site Visits: Ruth and Darwin ■ CW  
Erosion of tailings into streambed

#### El Paso Mountains

Safety hazards due to "Adopt a cabin" program where active claim and many open shafts/adits exist adjacent to cabins used by visitors

**Rademacher Hills**

Open adits and shafts

Inadequate fencing and signs

**Folsom Area** CW (You Bet Mine, Upper You Bet Sluice Tunnel, Boston Tunnel, Starr Pitt, Green Creek, Davis Stamp Mill, Kenebec Shaft, and the South Yuba River Campground) ■ **K.BLM (Site Visits)** CW

Open shaft near campground

Inadequate fencing and signs

**Barstow - Coolgardie**

Open shafts

Minimal fencing

No signs

**Barstow - Goat Basin**

Death at one site, not fenced, not on inventory

Two deaths at another site a short distance away

A fence had been put up around the hole many years ago, but remnants remained when we visited

A new fence was erected as a result of our NPFRR.

Other dangerous openings in the area that were not mitigated and not on the inventory

This site had a death, should have been a high priority, but it was not even on the inventory

**Darwin**

Safety hazards due to deteriorating mill

Inadequate sampling to assess environmental hazards

**Spangler**

Open adits and shafts

Inadequate fencing and signs

Public invited to ORV events

**Death Valley National Park**

Death at one site (Keane Wonder).

Open adits and shafts

Public invited to visit site

Inadequate fencing and signs

**Rosamond Area** ■ **K.BLM.RosamondCA.01 Site Visit** CW (Tropico, Cactus and Golden Queen mines) ■ **K.BLM (Site Visits)** CW

Environmental contamination of BLM land **CW**

Growing urban interface near contaminated sites **CW**

### **Joshua Tree National Park**

Open shaft, compromised adits. The most dangerous site we saw was difficult to get to, but does receive visitors  
The high priority sites we visited are scheduled to be mitigated in 2008.

A Park-wide environmental inspection of inactive historical mill sites was performed with no significant findings

### **Mojave National Preserve** I.NPS.MOJA.01 Mojave National Preserve ■ **CW**

Open shafts near roads **CW**

Few fences or warning signs **CW**

## **Appendix A - OIG SITE VISITS - Nevada** **CW**

### **Virginia City**

Two deaths in adit

Safety hazards at mill tour business

Inadequate sampling to assess environmental hazards

New commercial and residential trespass

### **American Flat**

Death in mill building

Safety hazards due to deteriorating structure

Unrestricted access

Inadequate warning signs

### **Caselton**

Inadequate groundwater sampling to assess environmental hazards

Unrestricted access

Inadequate warning signs

Claimant dump site

Claimant negotiations may hinder mitigation

### **Spruce Mountain**

Deteriorating structures

Open adit

### **Tuscarora**

Safety hazards due to illegal dumping

**Tonopah**

Death in open shaft

Lack of responsibility for abandoned mine lands assumed by local office. Local office stated that it was not its responsibility and that a race organizer was responsible for the accident

Local residents backfilled the mine shaft after the accident

**Lake Mead National Recreation Area**

Death at one site, but site was backfilled many years ago

LMNRA does not have a complete inventory [REDACTED] CW

There have been many sites that have been mitigated

Teamed up with Joshua Tree to mitigate sites

**Cherry Creek**

Lack of recognition that King Midas mill [REDACTED] may be on BLM land CW

**Ward**

Accessible [REDACTED] adits CW

[REDACTED] CW

**Appendix A (cont.) - OIG SITE VISITS - Arizona CW**

**Kingman Area CW** (Windy Point Recreation Area, Antler Mine, Boriana Mine, COD Mine, Thumb Mine) [REDACTED] K.BLM (Site Visits) CW

Death on patented land near BLM road

Open shafts

Dangerous physical hazards on patented land

Inadequate fencing and signs

Inadequate sampling to assess potential environmental hazards (Boriana)

Inadequate funding to mitigate known environmental projects (Antler)

Lack of communication between District and Field

Lack of coordination between Field and State

[REDACTED] 6) CW

**Wickenburg**

Unrestricted access

Inadequate fencing and signs

**Octave**

Inadequate sampling to assess environmental hazards

#### Vulture

Inadequate fencing and signs

#### Quartzsite

Safety hazards due to deteriorating structures

Inadequate sampling to assess environmental hazards

#### Grand Canyon National Park

Safety hazards due to accessible mine with high radon levels (7) CW

Two sites visited

For the Orphan Mine, the trail was diverted around the contaminated areas. The site was fenced and signs were posted. However, visitors could still get in through a hole in the fence

The other site (Grandview) had no fencing or warning signs but was relatively difficult to get to. However, hikers in the area are using the mine features as shelter.

### Appendix B - Objective, Scope, Methodology and Internal Controls CW

#### Audit Objective:

To determine if the Department of the Interior and its bureaus are effectively protecting the public from physical safety and environmental hazards at abandoned hardrock mine sites located on federal lands.

#### Audit Scope:

Our audit focused on abandoned hardrock mine lands on federal property in the Western United States. We concentrated on lands in California, Nevada and Arizona, three states with a significant mining legacy that receive no funds collected for reclamation of abandoned mines under the Surface Mining Control and Reclamation Act. This Act primarily supports reclamation of abandoned coal mines. In addition, population growth and wider recreational use of federal land in these states are CW increasing the risks from abandoned mine CW hazards. After reviewing abandoned mine CW issues and inventories for NPS, BLM, the U.S. Fish and Wildlife Service (56) and the Bureau of Indian Affairs we limited our field work to lands managed by the NPS and BLM. We also evaluated Departmental programs and efforts to deal with abandoned mine lands.

#### Audit Methodology:

We conducted our audit between March 2007 and April 2008. K.BLM (Site Visits) CW To accomplish the audit objective, we:

Conducted the audit in accordance with Government Auditing Standards issued by the Comptroller of the United States.

Included tests of records and other audit procedures that were considered necessary.

Gained an understanding of applicable laws and regulations and the Department's and bureaus' abandoned mine lands (AML)

programs.

Conducted a limited review of data to identify accidents resulting in fatalities or injuries at abandoned mine lands [REDACTED] sites.

Reviewed Department, bureau and other systems used to report on accidents at abandoned mine lands [REDACTED] sites resulting in fatalities or injuries.

Analyzed management processes for identifying, reporting, prioritizing, and mitigating physical safety and environmental hazards at abandoned mine lands [REDACTED] sites.

Interviewed Departmental and bureau officials at the headquarters, regional, and field office levels.

Visited selected bureau offices to review records and abandoned mine lands [REDACTED] sites to assess the nature of safety and environmental hazards. We selected sites based on knowledge gained from bureau officials, prior accident locations, and priority of hazards as identified in bureau plans or by bureau officials.

Identified best practices within bureaus and from outside entities for mitigation of abandoned mine lands [REDACTED]-hazards.

#### **Internal Controls:**

As part of the audit, we performed an evaluation of the Department and its bureaus' systems of internal controls related to the identification, prioritization, and mitigation of abandoned mine lands [REDACTED] hazards. We did not assess the bureaus' internal controls applicable to financial reporting.

This evaluation of internal controls was conducted at Departmental and bureau offices to the extent we considered necessary to accomplish the audit objective. We concluded that the BLM abandoned mine lands [REDACTED] program lacks adequate internal controls to identify, prioritize and mitigate abandoned mine lands [REDACTED] hazards. These deficiencies are discussed in the Results of Audit section of the report. NPS generally had adequate internal controls [REDACTED]

#### **CW**

We reviewed the Department of the Interior's Performance and Accountability Reports (PAR) for fiscal years 2006 and 2007 and noted that no material weaknesses were reported related to abandoned hard rock mines. Some Government Performance and Results Act goals [REDACTED] in the 2007 Performance and Accountability Report [REDACTED] did relate to the possible effects of abandoned hard rock mines (e.g., number of visitor injuries and fatalities, percent of physical and chemical hazards mitigated to protect public health and safety, and percent of contaminated sites remediated to protect watersheds) but were not specifically related to such sites. As reported in the PAR, all of these goals were met in 2007.

Our recommendations, if implemented, should improve the internal controls in the areas with identified weaknesses.

#### **Appendix C - Related Reports CW**

**OIG Flash Report No, C-IN-BML-0012-2007,**

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The OIG noted hazardous conditions at abandoned mine sites in California's Rand Mining District that required immediate action to protect the health and safety of the public and employees. Levels of arsenic thousands of times higher than safe levels were found in tailings piles located near residential properties. The cost of environmental site mitigation could exceed \$170 million.

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*Hardrock Mining: BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs* , June 2005.

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*Information on Efforts to Inventory Abandoned Hard Rock Mines* , February 1996.

The report identified no definitive inventory available to identify the number of abandoned hard rock mines located on federal lands. Four major federal land-managing agencies, the BLM, NPS, the U.S. Fish and Wildlife Service [REDACTED] and the U.S. Forest Service [REDACTED] were in various stages of inventorying the mine sites on the lands they manage; however, because the methodologies and assumptions used to develop their inventories differ, their results could not be meaningfully compared or combined. As a result, neither the number of sites identified, the physical / environmental hazards reported, nor the cost of remediation associated with each hazard could be presented as a consistent total for abandoned mine lands on federal property. Therefore, the potential harms and damage caused from abandoned mine lands, on federal property, remained difficult to assess and quantify.

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The OIG identified that BLM had not implemented procedures for ensuring that abandoned hardrock mining sites on BLM managed lands were being reclaimed. BLM also failed to develop a comprehensive inventory of hardrock mining sites that required timely

reclamation, and BLM was not fully aware of hazards and dangerous conditions at some abandoned mining sites.

**Appendix D- Abbreviations CW**

[REDACTED]	[REDACTED]
BLM.....	Bureau of Land Management
[REDACTED]	[REDACTED]
CFR.....	Code of Federal Regulations
Department and DOI.....	Department of the Interior
[REDACTED]	[REDACTED]
FY.....	Fiscal Year
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
NPS.....	National Park Service
OIG.....	Office of Inspector General
[REDACTED]	[REDACTED] CW

[referencer: all of the following appendices need to be referenced]

<b>Appendix E- Analysis of BLM's Response to Draft Report</b>	
<b>BLM Response</b> *Reporting Management's Response to Draft Report ■ [referencer: all indexing in this column is to this W/P's attachment; relevant attachment page numbers are shown in RED for each section]	<b>OIG Analysis</b>
<b>Recommendations</b> ■ BLM stated that it accepted ■ all of the recommendations and would work diligently to implement them. Page 1 of transmittal,	We are encouraged that BLM is committed to implementing the recommendations provided in our report. However, BLM did not provide the detailed information requested on actions taken or planned to implement the recommendations, including target dates

para 2 CW

and the names of officials responsible for their implementation.

[Auditor Conclusion] ■ BLM response to draft report CW

**Conclusions Concerning Overall AML Program**

BLM was concerned with the “broad assertion” made in the draft audit report that BLM has an ineffective abandoned mine lands program and that the program has been undermined, neglected and marginalized. BLM felt that the audit focused on some “mega-AML” sites and hazardous materials sites that had not been addressed as quickly as BLM would have liked because the resources needed to address them exceed available funding. BLM agreed with the conclusion, however, that the program has been underfunded. Page 1 of transmittal, last para and page 2, first para CW

[Auditor Conclusion]

After considering BLM’s comments, we stand by our conclusions concerning the abandoned mine lands program. While we agree that BLM has taken steps to address some hazards within its budget constraints,

BLM stated that it did not agree with our conclusion that the abandoned mine lands program has put the public’s health and safety at risk. BLM stated that it has undertaken temporary or interim measures to mitigate health and safety hazards while seeking additional funding to complete the needed remediation. Page 2 of transmittal, para 2 CW

we are concerned about the large number of unmitigated sites that still exist and pose risk to the public. Even more disturbing, we found that BLM supervisors told staff to ignore these problems, and employees were criticized or received threats of retaliation for identifying contaminated sites. previously referenced as "Field Office Management" section of Final Report \*Reporting Final Report ■ CW

BLM discussed several new initiatives that it is pursuing at the national level including the Fix a Shaft Today (FAST) program, National Mine Land Inventory prototype, Inventory Project Change Board, AML Distance Learning and the Project Management Handbook. Page 3 of transmittal, bulleted list CW

We continue to conclude that BLM has put the public’s health and safety at risk, based on our site visits to about 40 abandoned mine sites in California, Nevada and Arizona. These visits included large contaminated mine sites as well as areas with numerous physical safety hazards. The Rand Mining District is just one example. In this district, residents and off-road vehicle recreationalists were routinely exposed to high levels of arsenic and the district is littered with open mine shafts and other physical hazards that had not been mitigated. ■ K.BLM (Site Visits) CW

We are encouraged by the new initiatives that BLM is pursuing. Most of these initiatives were new and not fully implemented at the time of our audit. ■ BLM response to draft report CW

**Injuries and Deaths**

BLM took exception to our statement that “comprehensive records of abandoned mine accidents are not maintained,” stating that BLM is not always notified immediately when a death or injury takes place on public land. BLM stated that when notified, it responds by verifying the location of the incident and assessing the site for emergency action. BLM also expressed concern that our including examples of abandoned mine accidents inappropriately suggested that BLM failed to address physical safety hazards on public lands. BLM insisted that it has an active program to identify and address such hazards. Finally, BLM stated that some accidents will inevitably take place in light of the hundreds of millions of acres of lands for which BLM is responsible. [Page 1 of attachment to transmittal, "Injuries and Deaths"](#) **CW**

We stand by our conclusion concerning the lack of records on abandoned mine accidents. BLM was unable to provide us with data on such accidents. [see Conclusion to D. Survey-Injuries/Fatalities at AML Sites](#) ■ **CW** While we agree that BLM will not be able to prevent all accidents, **[Auditor Conclusion] CW**

this fact does not relieve BLM from responsibility for taking reasonable steps to prevent injury or death from abandoned mine hazards, especially those hazards that are already known by BLM to exist. [see Key Objectives tab in B.BLM.08 BLM Manual 3720 Abandoned Mine Land Program Policy](#) ■ **CW** During our site visits, we observed numerous physical hazards where BLM had failed to implement even the most basic precautions, such as fences and signs. [K. BLM \(Site Visits\)](#) ■ **CW**

### Observations and Hazards on BLM Land

BLM provided additional information regarding actions that it has taken at four sites included in our report: **CW**

Rand Mining District: Provided additional details on work that has been accomplished, including actions taken as a result of our Flash Report, “Environmental, Health and Safety Issues at Bureau of Land Management, Ridgecrest Field Office, Rand Mining District, CA.” **CW**

American Flat Mill: Clarified facts surrounding the demolition of one structure and reiterated the strong local resistance to the demolition of the remaining structure. **CW**

Barstow: Described actions taken to address hazards that OIG

We made changes to the report to address the clarifications provided by BLM and to provide information on additional actions taken by BLM to address hazards. [changes made throughout the report and noted for referencing in pink or yellow highlighting](#) **CW**

Where practical, we support efforts to negotiate with third parties to participate in the mitigation of abandoned mine sites. However, public safety must be the first priority and we are concerned that the public has not been adequately protected from the environmental hazards associated with the Caselton tailings for over a decade while these negotiations have taken place. Concerning the operations area at the Caselton tailings, we

notified BLM of during the audit. **CW**

Caselton Tailings. Clarified facts surrounding the expenditures for constructing a diversion channel and concerning the negotiations for reprocessing of the tailings piles. BLM asserted that the negotiations were in the best interest of the government and the public. Having a third party perform the work would significantly reduce the cost to the government, currently estimated to be between \$8 -14 million if done unilaterally by BLM. BLM stated that it had removed all hazardous materials and resolved all chemical and physical safety issues at the “dilapidated operations area.” Additionally, BLM stated that its scientists concluded that the risk of groundwater contamination was very small. **Pages 1-3 of attachment to transmittal, "Observations and Hazards on BLM Land** **CW**

### Field Office Management

BLM acknowledged that, as with almost all BLM programs, the abandoned mine lands program has been decentralized to the field office level. Accordingly, the success or failure of the program rests in a large part on the efforts of the Field Office and Field Office Manager. BLM reasoned that because there are well over 12,000 abandoned mine sites in the inventory database, then the vast majority of program managers and staff must be reporting abandoned mine sites. BLM expressed concern that our observations at specific sites were not representative of BLM’s program as a whole and that some of the statements we quoted were taken out of context or misinterpreted. BLM stated that threats and intimidation of its employees will not be condoned or tolerated and when it is made aware of these allegations, it will act to investigate and address the matter. **Page 3 of attachment to transmittal, "Field Office Management" (3)** **CW**

observed unlabeled barrels of unknown materials that had been abandoned and remained on the property. We also noted numerous physical safety hazards. **CW**

An engineering evaluation conducted on the Caselton tailings stated that a catastrophic release of tailings could “severely and intensively impact water quality in Meadow Valley Wash.” BLM has indicated to us that the risk of groundwater contamination is very small; however, BLM has never sampled groundwater at the wells downstream of the tailings.

**See references in 4th para of Caselton Tailings in \*Reporting Final Report** **CW**

We agree that given the decentralization, the success of the program rests with the field offices. We concluded that many field offices are not succeeding **K.BLM (Site Visits) CW** based on our interviews of approximately 65 BLM employees **K.BLM (Site Visits) CW** and questionnaire responses from almost all remaining BLM employees with significant abandoned mine lands responsibilities in California, Arizona, and Nevada. **J.BLM (Overall) [Field Offices tab] (4) J.BLM (Overall) CW**

These states have more abandoned mine sites than the other western states combined. **G.02 Legacy of Hardrock Mining CW**

Our audit highlighted many examples of serious unmitigated abandoned mine hazards that were tolerated because program managers discouraged identifying and mitigating these hazards.

	<p>See references in 2nd cell above <b>CW</b></p> <p>We disagree with BLM’s assertion that program managers and staff must be reporting sites since there are over 12,000 abandoned mine sites in the inventory. <b>[Auditor opinion] see next para CW</b></p> <p>We found that many of the sites listed in the database were obtained from old Bureau of Mines data that was never verified by site visits. <b>CW</b> We found that many abandoned mine lands site coordinators had never used the database to enter or modify site information. <b>previously referenced as "Site Inventory" section of Final Report *Reporting Final Report (5) CW*Reporting Final Report</b> see 4th bullet in list under Details section in J.BLM.29 AML Staff Qualifications</p>
<p><b>Staffing</b></p> <p>BLM acknowledged that staff are assigned abandoned mine lands as a collateral duty and that they have multiple and sometimes conflicting goals and objectives. BLM stated that it understood our concern that it use dedicated, full-time staff to deal with abandoned mines and that it would follow through on the staffing recommendations made in the report. <b>Pages 3-4 of attachment to transmittal, "Staffing" CW</b></p>	<p>Employing experienced, trained, full-time staff dedicated to the abandoned mine lands program should improve performance and minimize the conflicting goals and objectives. <b>J.BLM (Overall) CW</b></p>
<p><b>Program Budget and Funding</b></p> <p>BLM acknowledged that current funding sources, even in the aggregate, are insufficient to address the “mega-AML” sites identified in the report. BLM stated that it will follow through on the recommendations regarding program budgeting. The response provided additional details on the multiple sources of funding that are used for abandoned mines, including funds appropriated for: <b>CW</b></p>	<p>Establishing a specific line item in the budget for the abandoned mine lands program and requesting funding to accomplish project goals identified in the abandoned mine strategic plan should strengthen the program. <b>previously referenced as Recommendation 3 in Final Report *Reporting Final Report CW</b></p> <p>We revised the report to identify the various sources of funding</p>

<p>Soil, Water, and Air <b>CW</b>          Hazard Management and Resource Restoration <b>CW</b>          Central Hazardous Materials Fund <b>CW</b>          Natural Resource Damage Assessment and Restoration <b>CW</b>          Southern Nevada Public Land Management Act <b>CW</b>          Pages 4-5 of attachment to transmittal, "Program Budget and Funding" <b>CW</b></p>	<p>that were used for the abandoned mine lands program. <i>see reference in "Program Budget and Funding" in Final Report</i>  <i>*Reporting Final Report</i> <b>CW</b></p>
<p><b>Site Trespass</b></p> <p>BLM stated that the occupancy and commercial trespass on BLM lands is a law enforcement and land and realty issue that cannot be resolved by the abandoned mine lands program. BLM acknowledged that the land for most of the town of Virginia City, Nevada, is under dispute. BLM stated that survey work was not done in areas we visited in Virginia City and it is not known whether trespass is occurring. <i>Page 5 of attachment to transmittal, "Site Trespass"</i> <b>CW</b></p>	<p>Our report discusses the issues associated with occupancy and commercial trespass on BLM lands that have abandoned mines and the added risks associated with that trespass. We agree that the trespass issues are outside the control of the abandoned mine lands program. <i>previously referenced in last para in "Site Trespass, Virginia City, NV" in Final Report where we note that DOI has allowed trespass to continue for decades</i> <i>*Reporting Final Report</i> <b>CW</b></p> <p>Our recommendations are addressed to the Director, BLM who also has oversight of the BLM law enforcement and land realty programs. <i>see attachment "Organizational chart.pdf" in B.BLM.07 BLM Organization Chart and Reorganization of AML/Hazmat Programs</i> <b>CW</b> <i>note: top box is labeled "Director" and under that is a box labeled "Office of Law Enforcement and Security" on 2nd row and a box labeled "Minerals, Realty and Resource Protection" on 3rd row</i> <b>CW</b></p> <p>Concerning Virginia City, we amended the report to emphasize the disputed ownership of the land and the fact that BLM has not determined where trespassing is occurring. <i>see reference in "Site Trespass, Virginia City, NV" in Final Report</i> <b>CW</b></p>

<p><b>Site Inventory</b></p> <p>BLM acknowledged that the inventory system is a known problem and that populating the database has not been a priority of the field office staff. Many field offices have their own lists of sites or “cuff records.” Page 5 of attachment to transmittal, "Site Inventory" CW</p>	<p>A credible inventory of the most dangerous abandoned mine sites is needed to manage the BLM abandoned mine lands program and to support funding requests to mitigate the hazards. previously referenced in last para of "Site Inventory *Reporting Final Report" CW</p>
<p><b>Best Practices</b></p> <p>BLM provided additional information concerning several of the best practices that we noted in our report. Page 6 of attachment to transmittal, "Best Practices" CW</p>	<p>Despite the problems that we noted in our audit, we did find best practices that BLM should consider for wider implementation. previously referenced as "BLM and NPS Best Practices" in Final Report *Reporting Final Report CW</p>
<p><b>Appendix A</b></p> <p>BLM clarified information concerning several sites included in Appendix A to the report. In some cases, BLM noted that the identified hazards were actually on private lands. Page 6 of attachment to transmittal, "Appendix A" CW</p>	<p>We evaluated the information and made changes to the Appendix as we saw necessary. BLM response to draft report CW</p> <p>The sites described in the Appendix were all on public land according to BLM field office personnel. K.BLM (Site Visits) CW</p>
<p><b>Appendix F- OIG Analysis of NPS' Response to Draft Report</b></p>	
<p><b>NPS Response</b> *Reporting Management's Response to Draft Report [referencer: all indexing in this column is to this W/P's attachment; relevant attachment page numbers are shown in RED for each section]</p>	<p><b>OIG Analysis</b></p>
<p><b>Findings and Recommendations</b></p> <p>NPS stated that it accepted the findings and recommendations in the report. While NPS has mitigated many of its high-risk, easily accessible abandoned mine sites, it agrees that a substantial workload remains to address hazards and reclamation issues</p>	<p>We are encouraged that NPS is committed to implementing the recommendations provided in our report. However, NPS did not provide the detailed information requested on actions taken or planned to implement the recommendations, including target dates</p>

<p>associated with abandoned mines in parks. Page 1 of transmittal, para 2 CW</p>	<p>and the names of officials responsible for their implementation. [Auditor Conclusion] ■ NPS response to draft report. CW</p>
<p><b>Observations and Hazards on NPS Land</b></p> <p>NPS generally agreed with our observations at the parks we visited. However, the response provided additional information concerning the abandoned mine programs at the parks and additional actions that the parks have taken to address the hazards that we observed. All pages of attachment to transmittal CW</p>	<p>We considered the additional information provided and made revisions to the report where we considered necessary. changes made throughout the report and noted for referencing in pink or yellow highlighting CW</p>
<p><b>Program Funding</b></p> <p>NPS disagreed with our conclusion that it did not have a current estimate of the total costs needed to mitigate its abandoned mine hazards. It stated that it performed a detailed analysis in February 2005 which reported estimated total costs of \$165 million with immediate needs of \$43 million. NPS referred to an April 2008 estimate as a current estimate that quotes total needs of \$233 million with immediate needs of \$60 million. Page 4, last para (continued on page 5) of attachment to transmittal CW</p>	<p>We were aware of the 1995 estimate, however, we found during our audit that NPS had not updated this estimate or reestimated the costs since 1995. B.NPS.03 Funding for NPS AML ■ note: attachment "NPS Response to our initial information request.pdf" [this attachment notes that the estimate was made in 1994, but the NPS response to the draft report "Reporting Management's Response to Draft Report" ■ dates the estimate as February 1995; we used the later date in our report CW</p> <p>In April 2008, near the completion of our audit, NPS prepared the new estimate. However, this estimate simply adjusted the 1995 aggregate estimate for inflation to derive costs in 2008 dollars. This calculation did not consider any changes in conditions that occurred since 1995 and did not reflect any updated inventory and risk information that could impact mitigation costs. Because this estimate does not reflect the current inventory of abandoned mine hazards, we do not consider it to be a credible estimate of NPS' needs. ■ NPS response to draft report. CW</p> <p>NPS stated that it is creating a new, more detailed and accurate database of abandoned mine sites that will better identify specific mine features and proposed mitigation costs. see page 10, last para</p>

<p><b>Other Comments</b></p>	<p>of attachment in *Reporting Management's Response to Draft Report ■ CW</p>
<p>NPS comments included a number of clarifications concerning its abandoned mine program as well as recommended report wording changes. Additionally, the response provided more detailed information concerning its program for our consideration. All pages of attachment to transmittal CW</p>	<p>We considered the additional information provided and made revisions to the report where we considered necessary. changes made throughout the report and noted for referencing in pink or yellow highlighting CW</p>

<p align="center"><b>Appendix G – Status of Recommendation ■ A.Administration CW</b></p>		
<p align="center">Recommendations</p>	<p align="center">Status</p>	<p align="center">Action Required</p>
<p>1 through 5 CW</p>	<p>Unresolved CW BLM concurred, additional information needed ■ CW</p>	<p>BLM should provide additional information on actions taken or planned, including target dates and titles of officials responsible for implementation. CW</p>
<p>6 CW</p>	<p>Unresolved CW NPS concurred, additional information needed ■ CW</p>	<p>NPS should provide information on actions taken or planned, including target dates and titles of officials responsible for implementation. CW</p>
<p>7 through 8 CW</p>	<p>Unresolved CW BLM concurred, additional information needed ■ CW NPS concurred, additional information needed ■ CW</p>	<p>BLM and NPS should provide additional information on actions taken or planned, including target dates and titles of officials responsible for implementation. CW</p>

**Report Section:** Appendices  
**Version:** Final Report  
**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands  
**Last Modified:** 07/21/2008 04:21:36 PM  
**Prepared by:** William McMullen 07/14/2008

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### Add Document Readers:

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Level 1 Approval:			
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Seven pages of a Draft  
Memorandum

are being withheld in  
their entirety under

5 U.S.C. §§ 552(b)(5)

## Management's Response to Draft Report

Prepared by: Sean Pettersen 10/10/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Origination Doclink:** [REDACTED]  
**Report Section:** Barstow Response

### Purpose:

To document BLM response to NPFR Safety Hazards Posed by Abandoned Mines - Barstow Field Office, CA

### Scope:

Management response to NPFR

### Source:



Barstow BLM Response.PDF

### Conclusion:

According to the response, BLM has mitigated the physical safety hazards with t-posts, fencing, and warning signs. As the California-BLM becomes aware of any similar AML physical safety hazards, they will install temporary fencing or other types of barriers until a permanent closure can be completed. The BLM recognizes that public safety is a top priority and has published the AML National Strategic Plan that spells out work for the next five years. Specifically, subject to funding, the Barstow Field Office's long-term strategy is to;

1. Continue the inventory effort
2. Mitigate physical safety hazards
3. Streamline the permanent closure process
4. Permanently remediate physical safety hazards

### Details:

The two recommendations made in the NPFR were:

1. Post effective signs to warn the public about the dangers at high risk mine sites.
2. Develop and implement a plan to inventory and mitigate hazards at high risk mine sites within the Barstow Field Office jurisdiction.

**Methodology:**

N/A

**Management Response to Draft Report:**

See source above

**OIG Comments to Management Response:**

It appears the BLM has addressed the recommendations.

Submission:	Submitted	Sean Pettersen	10/12/2007 01:56:08 PM
Level 1 Approval:	Approved	William McMullen	10/22/2007 09:42:24 AM
Level 2 Approval:	Approved	John Illson	04/28/2008 01:01:37 PM

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**Current Editor List:**

## Management's Response to Draft Report

Prepared by: William McMullen 07/14/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Origination Doclink:** [REDACTED]  
**Report Section:** BLM response to draft report

**Purpose:**  
Review and analyze BLM comments on draft report.

**Scope:**  
Sections of report applicable to BLM abandoned mine lands program.

**Source:**  
BLM comments provided to OIG on draft report in attachment to email from Bob Romanyshyn on 7/11/08 shown in Details section below:

**Conclusion:**  
[REDACTED] BLM concurred with all recommendations in the draft reports (see "Recommendations" cell in the table below) but had several comments regarding factual statements in the report. These comments were addressed as shown in the right hand column of the table below (OIG Comments to Management Response section). We also note specific comments in the Details section. We made changes to the Final Report as we thought necessary based on BLM comments.  
[REDACTED] We are encouraged that BLM is committed to implementing the recommendations provided in our report. However, BLM did not provide the detailed information requested on actions taken or planned to implement the recommendations, including target dates and the names of officials responsible for their implementation.

### Details:

**Robert Romanyshyn/ARL/OIG/DOI**

07/11/2008 11:49 AM

To Jack Rouch/DEN/OIG/DOI@OIG, Kimberly Elmore/WDC/OIG/DOI@OIG, Christopher Stubbs/WDC/OIG/DOI@OIG, John Illson/DEN/OIG/DOI@OIG, Jeffrey Carlson/DEN/OIG/DOI@OIG  
cc Sean Pettersen/DEN/OIG/DOI@OIG, William McMullen/DEN/OIG/DOI@OIG, Christopher Stubbs/WDC/OIG/DOI@OIG, Deborah Holmes/WDC/OIG/DOI@OIG  
Subject BLM response to AML draft

**All** .....Attached is the subject. Per my quick read, BLM (1) complements the audit team in paragraph 2 of the memo, (2) appears to agree with all recommendations in paragraph 2 of the memo, but (3) disagrees with a number of report contents. In my opinion, we will have to classify all recs to BLM as "management concurs, additional information needed" telling them to provide action plans, target dates, and mgmt official responsible.

Re NPS response, Vera Washington called me at 1 PM and said that Director, NPS has told staff to have response to OIG by 3 PM today. Earlier in the week, NPS asked for another 2 week extension and I told her that we granted an extension till COB 7/11/08.



C-IN-MOA-0004-2007 dated 07-11-2008 BLM response to draft report.pdf

Bob Romanyshyn  
Assistant Inspector General for Audits  
USDI OIG  
202-208-5603  
202-208-6062 fax

The attachment was reviewed and analyzed and an OIG response prepared as shown below.

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On page 1, BLM noted "accidents will inevitably take place":

**their action. The report also suggests, by describing several abandoned mine accidents, that BLM has failed to address physical safety hazards on the public lands. In light of the hundreds of millions of acres of public lands for which BLM is responsible, some accidents will inevitably take place. However, BLM has an active program in place to identify and address such hazards.**

**[Auditor opinion]** While this may be true, it does not relieve BLM from responsibility for taking reasonable steps to prevent injury or death from abandoned mine hazards **B.BLM.01 BLM Policy for AML Physical Safety Hazards** ■, especially those hazards that are already known by BLM. ■

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With regard to the Rand Mining District (page 1 of the attachment):

Rand Mining District (pp. 5-6)

On September 12, 2007, the Office of the Inspector General issued a Flash Report for the “Environmental, Health and Safety Issues at the Bureau of Land Management Ridgecrest Field Office Rand Mining District, CA” (Report No. C-IN-BLM-0012-2007). The BLM has addressed all six recommendations outlined in the report and is progressing in resolving health and safety issues. Since site discovery in December 2005, significant work has been accomplished. Two cupolas have been constructed – one at the Kelly Mine and one at the Claire Mine – costing \$59,000. The site has been initially characterized using the BLM’s authorities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to identify chemical and safety hazards. The Kelly Mine site has been fenced and gated with an eight-foot cyclone fence. The Off-Highway Vehicle (OHV) Route S110 has been blocked, gated, and rerouted out of the 60-acre Descarga processed mine waste tailings pile near Randsburg. Over forty dangerous mine shafts have been fenced and signed to prevent access by the public. This significant progress should be noted in the audit report.

■ **[Auditor opinion]** We are encourage by the steps BLM is taking to mitigate hazards in the District; however, the fact remains that BLM knew of these hazards for many years without taking such action:

D.01.01 Interview with Linn Gum ■ D.01.02 Interview with Hector Villalobos ■

■ With regard to American Flat (page 2 of the attachment):

Historic Preservation Officer. The report states that the BLM “obtained \$400,000 from a responsible party” to remediate the site. That is incorrect. The potentially responsible party (PRP) performed and paid for the demolition work and has returned in Fiscal Year (FY) 2008 to complete further removal and reclamation actions on the historic impoundments. The BLM

■ With regard to the risk of groundwater contamination at Caselton (page 2 of the attachment): and was neutralized by the alkaline nature of that soil. The depth to groundwater is several hundred feet below ground surface in this area, and the potential for a leachate plume reaching Meadow Valley Wash and resulting in groundwater contamination is, in the view of BLM scientists, very small.

■ With regard to negotiations at Caselton with interested parties to remine the tailings (page 3 of the attachment), BLM noted that they had "made an informed decision that continuing with these negotiations is justified and in the best interests of the government and the general public." In addition, having a third party perform the work could save the taxpayer between \$8 and \$14 million:

The most promising PRP was in bankruptcy and the BLM was unsuccessful in obtaining any relief following full mediation. Negotiations have proceeded with two parties interested in reprocessing the tails. The pilot project developed by the first party involved innovative technology and was unsuccessful and the individual abandoned the site after reclaiming any disturbance related to his operations. The second negotiation includes more conventional technology and is progressing towards resolution of issues and start of active operations. The BLM has made an informed decision that continuing with these negotiations is justified and in the best interests of the government and the general public. The planned operations will provide a more stable waste stream, reclamation of the site, a reclamation bond, and performance penalties if the work is not completed. The estimated cost of reclamation to the taxpayer for the BLM to unilaterally reclaim the site is between \$8-14 million. Having a third party perform the work provides significant cost avoidance incentives, a primary goal and objective of the CERCLA process and DOI policy. If BLM is unable to consummate an agreement with the remaining company, BLM will need to address the site using appropriated funds.

■ Regarding new initiatives BLM is pursuing (see page 3 of transmittal letter in the attachment): [Auditor opinion] We are encourage by the new initiatives being pursued by BLM and note that these were not fully implemented at the time of our audit. ■

In addition, I want to point out several ongoing program management actions and initiatives that the BLM is pursuing at the national level. These include:

- Collaboration under the Federal Mining Dialogue and with the National Association of Abandoned Mine Land Programs (State/Tribal Association). The BLM has participated in developing policies concerning coordination of AML projects at mixed-ownership sites, use of joint repositories for disposal of mine waste, and the “Stay Out and Stay Alive!” program aimed at educating the public about the dangers posed by abandoned mines. We have recently launched the Fix A Shaft Today (FAST!) program aimed at furthering partnerships to address open mine shafts that pose potential danger to Off-Highway Vehicle users, and we have deployed an interdepartmental AML web portal at [www.abandonedmines.gov](http://www.abandonedmines.gov) intended to consolidate information about AML issues and programs.
- National Mine Land Inventory prototype – the BLM has worked with its Federal partners to make available to the public spatial data about AML sites. This resource was even used by the audit team. It enables customers to apply AML information in support of their programs, such as in land use planning.
- Inventory Data Quality Improvement – the BLM has established a Project Change Management Board to help set priorities and guide the work that needs to be done to improve our AML inventory data and reporting capabilities. The BLM is also in the process of issuing updated guidance on field validation and data collection, and is considering use of tablet computers to collect and upload inventory data. The BLM will continue to work to validate its inventory data and implement the recommendations.
- Distance Learning-based AML training – The BLM’s National Training Center is coordinating with program leads to develop business process training for field employees on how to more effectively implement their AML program responsibilities. Initial deployment is anticipated by December 2008.
- Project Management Handbook – The BLM developed a handbook to identify

and describe important project management responsibilities for the BLM's employees and to provide guidance to ensure that the BLM's medium to long-term complex environmental cleanup, natural restoration, and physical safety hazard remediation projects are completed in an efficient and cost-effective manner, and comply with all appropriate laws, regulations and policies.

■ On pages 3 and 4 of the attachment, BLM notes the various sources of funding used to support the AML program, e.g., soil, air and water; hazardous management and resource protection; central hazardous materials fund; natural resource damage assessment and restoration; and the Southern Nevada Public Land Management Act.

■ With regard to land status in Virginia City (page 5 of the attachment):

Site Trespass (pp. 13-14)

Occupancy and commercial trespass on public land administered by the BLM is a land and realty issue and a law enforcement issue that cannot be resolved by the AML program. In Virginia City, Nevada, the land for most of the town is in dispute and has been since around 1860.

**Methodology:**

Reviewed and analyzed BLM comments on draft report and prepared OIG response as shown below.

**Management Response to Draft Report:**

BLM's comments to the OIG draft report are shown in the attachment above and summarized in the left hand column of the table below.

**OIG Comments to Management Response:**

OIG's response to BLM comments on the draft report (summarized in the left hand column) is provided in the right hand column of the table below.

BLM Response	OIG Analysis
<p><b>Recommendations</b></p> <p>BLM stated that it accepted all of the recommendations and would work diligently to implement them.</p>	<p>We are encouraged that BLM is committed to implementing the recommendations provided in our report. However, BLM did not provide the detailed information requested on actions taken or planned to implement the recommendations, including target dates and the names of officials responsible for their implementation.</p>

**Conclusions Concerning Overall AML Program**

BLM was concerned with the “broad assertion” made in the draft audit report that BLM has an ineffective abandoned mine lands program and that the program has been undermined, neglected and marginalized. BLM felt that the audit focused on some “mega-AML” sites and hazardous materials sites that had not been addressed as quickly as BLM would have liked because the resources needed to address them exceed available funding. BLM agreed with the conclusion, however, that the program has been underfunded.

BLM stated that it did not agree with our conclusion that the abandoned mine lands program has put the public’s health and safety at risk. BLM stated that it has undertaken temporary or interim measures to mitigate health and safety hazards while seeking additional funding to complete the needed remediation.

BLM discussed several new initiatives that it is pursuing at the national level including the Fix a Shaft Today (FAST) program, National Mine Land Inventory prototype, Inventory Project Change Board, AML Distance Learning and the Project Management Handbook.

After considering BLM’s comments, we stand by our conclusions concerning the abandoned mine lands program. While we agree that BLM has taken steps to address some hazards within its budget constraints, we are concerned about the large number of unmitigated sites that still exist and pose risk to the public. Even more disturbing, we found that BLM supervisors told staff to ignore these problems, and employees were criticized or received threats of retaliation for identifying contaminated sites.

We continue to conclude that BLM has put the public’s health and safety at risk, based on our site visits to about 40 abandoned mine sites in California, Nevada and Arizona. These visits included large contaminated mine sites as well as areas with numerous physical safety hazards. The Rand Mining District is just one example. In this district, residents and off-road vehicle recreationalists were routinely exposed to high levels of arsenic and the district is littered with open mine shafts and other physical hazards that had not been mitigated.

We are encouraged by the new initiatives that BLM is pursuing. Most of these initiatives were new and not fully implemented at the time of our audit.

**Injuries and Deaths**

BLM took exception to our statement that “comprehensive records of abandoned mine accidents are not maintained,” stating that BLM is not always notified immediately when a death or injury takes place on public land. BLM stated that when notified, it responds by verifying the location of the incident and assessing the site for emergency

We stand by our conclusion concerning the lack of records on abandoned mine accidents. BLM was unable to provide us with data on such accidents. While we agree that BLM will not be able to prevent all accidents, this fact does not relieve BLM from responsibility for taking reasonable steps to prevent injury or death from abandoned mine hazards, especially those hazards that are already known by

<p>action. BLM also expressed concern that our including examples of abandoned mine accidents inappropriately suggested that BLM failed to address physical safety hazards on public lands. BLM insisted that it has an active program to identify and address such hazards. Finally, BLM stated that some accidents will inevitably take place in light of the hundreds of millions of acres of lands for which BLM is responsible.</p>	<p>BLM to exist. During our site visits, we observed numerous physical hazards that BLM had failed to implement even the most basic precautions, such as fences and signs.</p>
<p><b>Observations and Hazards on BLM Land</b></p> <p>BLM provided additional information regarding actions that it has taken at four sites included in our report:</p> <p style="padding-left: 40px;">Rand Mining District: Provided additional details on work that has been accomplished, including actions taken as a result of our Flash Report, “Environmental, Health and Safety Issues at Bureau of Land Management, Ridgecrest Field Office, Rand Mining District, CA.”</p> <p style="padding-left: 40px;">American Flat Mill: Clarified facts surrounding the demolition of one structure and reiterated the strong local resistance to the demolition of the remaining structure.</p> <p style="padding-left: 40px;">Barstow: Described actions taken to address hazards that OIG notified BLM of during the audit.</p> <p style="padding-left: 40px;">Caselton Tailings. Clarified facts surrounding the expenditures for constructing a diversion channel and concerning the negotiations for reprocessing of the</p>	<p>We made changes to the report to address the clarifications provided by BLM and to provide information on additional actions taken by BLM to address hazards.</p> <p>Where practical, we support efforts to negotiate with third parties to participate in the mitigation of abandoned mine sites. However, public safety must be the first priority and we are concerned that the public has not been adequately protected from the environmental hazards associated with the Caselton tailings for over a decade while these negotiations have taken place. Concerning the operations area at the Caselton tailings, we observed unlabeled barrels of unknown materials that had been abandoned and remained on the property. We also noted numerous physical safety hazards.</p> <p>An engineering evaluation conducted on the Caselton tailings stated that a catastrophic release of tailings could “severely and intensively impact water quality in Meadow Valley Wash.” BLM has indicated to us that the risk of groundwater contamination is very small; however, BLM has never sampled groundwater at the wells downstream of the tailings.</p>

<p>tailings piles. BLM asserted that the negotiations were in the best interest of the government and the public. Having a third party perform the work would significantly reduce the cost to the government, currently estimated to be between \$8 -14 million if done unilaterally by BLM. BLM stated that it had removed all hazardous materials and resolved all chemical and physical safety issues at the “dilapidated operations area.” Additionally, BLM stated that its scientists concluded that the risk of groundwater contamination was very small.</p>	
<p><b>Field Office Management</b></p> <p>BLM acknowledged that, as with almost all BLM programs, the abandoned mine lands program has been decentralized to the field office level. Accordingly, the success or failure of the program rests in a large part on the efforts of the Field Office and Field Office Manager. BLM reasoned that because there are well over 12,000 abandoned mine sites in the inventory database, then the vast majority of program managers and staff must be reporting abandoned mine sites. BLM expressed concern that our observations at specific sites were not representative of BLM’s program as a whole and that some of the statements we quoted were taken out of context or misinterpreted. BLM stated that threats and intimidation of its employees will not be condoned or tolerated and it when it is made aware of these allegations, it will act to investigate and address the matter.</p>	<p>We agree that given the decentralization, the success of the program rests with the field offices. We concluded that many field offices are not succeeding based on our interviews of approximately 65 BLM employees and questionnaire responses from almost all remaining BLM employees with significant abandoned mine lands responsibilities in California, Arizona, and Nevada. These states have more abandoned mine sites than the other western states combined. Our audit highlighted many examples of serious unmitigated abandoned mine hazards that were tolerated because program managers discouraged identifying and mitigating these hazards. We disagree with BLM’s assertion that program managers and staff must be reporting sites since there are over 12,000 abandoned mine sites in the inventory. We found that many of the sites listed in the database were obtained from old Bureau of Mines data that was never verified by site visits. We found that many abandoned mine lands site coordinators had never used the database to enter or modify site information.</p>

<p><b>Staffing</b></p> <p>BLM acknowledged that staff are assigned abandoned mine lands as a collateral duty and that they have multiple and sometimes conflicting goals and objectives. BLM stated that it understood our concern that it use dedicated, full-time staff to deal with abandoned mines and that it would follow through on the staffing recommendations made in the report.</p>	<p>Employing experienced, trained, full-time staff dedicated to the abandoned mine lands program should improve performance and minimize the conflicting goals and objectives.</p>
<p><b>Program Budget and Funding</b></p> <p>BLM acknowledged that current funding sources, even in the aggregate, are insufficient to address the “mega-AML” sites identified in the report. BLM stated that it will follow through on the recommendations regarding program budgeting. The response provided additional details on the multiple sources of funding that is used for abandoned mines, including funds appropriated for:</p> <ul style="list-style-type: none"> <li>Soil, Water, and Air</li> <li>Hazard Management and Resource Restoration</li> <li>Central Hazardous Materials Fund</li> <li>Natural Resource Damage Assessment and Restoration</li> <li>Southern Nevada Public Land Management Act</li> </ul>	<p>Establishing a specific line item in the budget for the abandoned mine lands program and requesting funding to accomplish project goals identified in the abandoned mine strategic plan should strengthen the program. We revised the report to identify the various sources of funding that were used for the abandoned mine lands program.</p>
<p><b>Site Trespass</b></p> <p>BLM stated that the occupancy and commercial trespass on BLM lands is a law enforcement and land and realty issue that cannot be resolved by the abandoned mine lands program. BLM acknowledged that the land for most of the town of Virginia City, Nevada, is under dispute. BLM stated that survey work was not done in areas we visited in Virginia City and it is not known whether</p>	<p>Our report discusses the issues associated with occupancy and commercial trespass on BLM lands that have abandoned mines and the added risks associated with that trespass. We agree that the trespass issues are outside the control of the abandoned mine lands program. Our recommendations are addressed to the Director, BLM who also has oversight of the BLM law enforcement and land realty programs.</p>

trespass is occurring.	Concerning Virginia City, we amended the report to emphasize the disputed ownership of the land and the fact that BLM cannot determine where trespassing is occurring.
<b>Site Inventory</b>  BLM acknowledged that the inventory system is a known problem and that populating the database has not been a priority of the field office staff. Many field offices have their own lists of sites or “cuff records.”	A credible inventory of the most dangerous abandoned mine sites is needed to manage the BLM abandoned mine lands program and to support funding requests to mitigate the hazards.
<b>Best Practices</b>  BLM provided additional information concerning several of the best practices that we noted in our report.	Despite the problems that we noted in our audit, we did find best practices that BLM should consider for wider implementation.
<b>Appendix A</b>  BLM clarified information concerning several sites included in Appendix A to the report. In some cases, BLM noted that the identified hazards were actually on private lands.	We evaluated the information and made changes to the Appendix as we saw necessary. The sites described in the Appendix were all on public land according to BLM field office personnel.

Submission: Submitted William McMullen 07/18/2008 09:33:31 AM  
 Level 1 Approval:  
 Level 2 Approval: Approved John Illson 07/21/2008 03:25:38 PM

**History**

**Status:** Approved **Request Review:**  
**In Progress Edit:** William McMullen/DEN/OIG/DOI  
**Confidentiality:** Standard  
**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:**

Eleven (11) pages of a  
Draft Report are  
being withheld in  
their entirety under  
5 U.S.C. §§ 552(b)(5)

## Management's Response to Draft Report

Prepared by: Sean Pettersen 10/12/2007

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Origination Doclink:**   
**Report Section:** Death Valley Response

### Purpose:

To document response to our Death Valley National Park NPFR

### Scope:

Response to NPFR

### Source:

The e-mail below was sent of Jack Rouch Central Region Audit Manager.

### Conclusion:

There was no official response received as of 10/12/07 for the Death Valley National Park NPFR. However, the Superintendent sent an e-mail to Jack Rouch stating that, "I am disappointed that nothing more was done to help Death Valley with such a large safety concern that will require more funds than available. If some folks expect us to mitigate these concerns soon, please at this time let all know, it will not happen."

### Details:

### Methodology:

N/A

### Management Response to Draft Report:

----- Forwarded by Jack Rouch/DEN/OIG/DOI on 09/27/2007 09:45 AM -----

JT\_Reynolds@nps.gov

09/13/2007 03:47 AM

To Jack\_Rouch@doioig.gov

cc David\_Ek@nps.gov, Linda\_Greene@nps.gov

Subject Re: OIG Notice of Potential Finding and Recommendations - Death Valley

Howdy Jack,

I do not have the program to save this document in such a way to sign.

However, as you can see, I received it. I am on travel at this time.

I am disappointed that nothing more was done to help Death Valley with such a large safety concern that will require more funds than available. At the rate funds could be received, it will take forever to mitigate these concerns, as you know. Now that this report is complete by your office, what are the expectations of your office and Death Valley. I will say, if some folks expect us to mitigate these concerns soon, please at this time let all know, it will not happen.

David Ek will draft a letter describing some of the specific projects we will complete almost immediately and over the next few years.

J.T. Reynolds

Off 760-786-3243  
FAX " 786-3246  
Cell 702-286-4268 (outside of DEVA)

"Always demanding the best of oneself, living with honor, and devoting one's talents and gifts to the benefit of others - these are the measures of success that endure when material things have passed away."

**OIG Comments to Management Response:**

N/A

Submission:	Submitted	Sean Pettersen	10/12/2007 01:55:05 PM
Level 1 Approval:	Approved	William McMullen	10/22/2007 09:43:18 AM
Level 2 Approval:	Approved	John Illson	04/28/2008 01:02:06 PM

**History**

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**In Progress Edit:** Sean Pettersen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

**Current Editor List:**

## Management's Response to Draft Report

Prepared by: William McMullen 07/14/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Origination Doclink:** ■

**Report Section:** NPS response to draft report.

**Purpose:**

Review and analyze NPS response to draft report.

**Scope:**

NPS comments on draft report.

**Source:**

NPS comments included as attachment to email:

**Jack Rouch/DEN/OIG/DOI**

07/14/2008 12:05 PM

To Sean Pettersen, Greta Bloomfield, William McMullen/DEN/OIG/DOI@OIG

cc

Subject Fw: Office of Inspector General Draft Audit Report on Abandoned Mine Lands in the Department of the Interior (Assignment No. C-IN-MOA-0004-2007)

Here was NPS response for your information.

----- Forwarded by Jack Rouch/DEN/OIG/DOI on 07/14/2008 12:05 PM -----

**Cristopolis Dieguez/WDC/OIG/DOI**

07/14/2008 09:21 AM

To Kimberly Elmore/WDC/OIG/DOI@OIG, Robert Romanyshyn/ARL/OIG/DOI@OIG, Jack Rouch/DEN/OIG/DOI@OIG, John Illson/DEN/OIG/DOI@OIG

cc

Subject Office of Inspector General Draft Audit Report on Abandoned Mine Lands in the Department of the Interior (Assignment No. C-IN-MOA-0004-2007)

Greetings all,

Please find attached the memorandum entitled; Office of Inspector General Draft Audit Report on Abandoned Mine Lands in the Department of the Interior (Assignment No. C-IN-MOA-0004-2007)

Best regards,

Cristopolis Dieguez  
Administrative Assistant for Audits  
U.S. Department of the Interior  
Office of Inspector General  
(202) 208-5414 Office  
(202) 208-6062 Fax  
cristopolis\_dieguez@doioig.gov



Scan001.PDF

**Conclusion:**

NPS concurred with all recommendations in the draft report and provided comments to correct misstatements or to amplify information in the report.

■ We are encouraged that NPS is committed to implementing the recommendations provided in our report. However, NPS did not provide the detailed information requested on actions taken or planned to implement the recommendations, including target dates and the names of officials responsible for their implementation.

**Details:**

■ With regard to cost estimates for mitigation of AML sites (page 10 of the attachment), NPS provided the following:

**ATTACHMENT 3**

**BACKLOG – UNFUNDED ABANDONED MINERAL LANDS PROJECTS**  
 Summary Chart (February 1995)

<b>1995 TOTAL ESTIMATED COSTS FOR THE NPS AML PROGRAM</b>		
<b>PROGRAM ELEMENT</b>	<b>TOTAL PROGRAM COST (\$)</b>	<b>IMMEDIATE NEEDS COST (\$)</b>
<b>INVENTORY AND SITE CHARACTERIZATION</b>		
Inventories	210,000	210,000
Detailed Site Characterization	7,500,000	7,500,000
General Data Collection/Management	500,000	500,000
<b>ELIMINATE PUBLIC SAFETY HAZARDS</b>		
Underground Mine Hazards	27,000,000	1,440,000
Orphaned Oil and Gas Wells	1,020,000	1,020,000
<b>REHABILITATE NATURAL RESOURCES AFFECTED BY AML</b>		
NPDES Compliance	unknown	unknown
Water Quality Impacts Evaluation	1,650,000	1,650,000
Water Quality Impacts Mitigation	25,000,000	12,500,000
Rehabilitate Surface Disturbances	98,000,000	14,700,000
<b>EDUCATIONAL PROGRAMS - HISTORICAL INTERPRETATION</b>		
Education/Public Awareness	500,000	500,000
Historic Preservation and Interpretation	2,870,000	2,870,000
<b>MAINTAIN CRITICAL WILDLIFE HABITAT</b>		
T&E Habitat Protection (e.g., Bat Gates)	360,000	360,000
<b>TOTAL ESTIMATED COSTS</b>	<b>\$165,000,000</b>	<b>\$43,250,000</b>

### April 2008 Estimated Costs

The current cost estimate for an Servicewide AML program is \$233 million and \$60 million for immediate needs.<sup>1</sup> This was derived by removing the oil and gas well mitigation costs, which are beyond the scope of the OIG report, and then indexing the remaining 1995 costs to April 2008 dollars. As noted above, the NPS is creating a new, more detailed and accurate database of AML sites that will better identify specific mine features and proposed mitigation costs.

■ **[Auditor opinion]** In our opinion, simply escalating 1995 costs to 2008 dollars does not represent a credible estimate of current funding needed to mitigate AML hazards and address immediate high risk sites because this calculation did not consider any changes in conditions that occurred since 1995 and did not reflect any updated inventory and risk information that could impact mitigation costs. Because this estimate does not reflect the current inventory of abandoned mine hazards. ■

■ With regard to closure of the Keane Wonder Mine (page 12 of the attachment), NPS noted:

Keane Wonder Mine and Mill site is being closed. The mill site has recently been determined to have elevated levels of lead and mercury and Death Valley is beginning the process of further evaluation and analysis. The milling history of other sites is under review to determine if other sites may potentially be contaminated.

■ NPS defined an "adit" on page 5 of the attachment as a "horizontal mine entrance"):

p. 10, ¶ 2 - Grand Canyon National Park: Grandview Mine. The NPS suggests the following sentences to replace the last two sentences in this paragraph: "The Grandview Mine has a series of adits (*horizontal* mine entrances) *on multiple levels interconnected by winzes (vertical or near-vertical shafts underground)*. We found no signs in the area to warn visitors of the dangers at the mine, and all *three* adits were open to visitors. We understand that the park previously had installed signs and chains to warn visitors and prevent entrance to the mine adits, but they have been vandalized over time. The park is installing new signs and barriers to protect visitors from the hazards associated with the site."

■ NPS noted the web address of the Desert Manager's Group (page 4 of attachment):

The NPS accepts this recommendation. As pointed out in the report, the Desert Managers Group (<http://www.dmg.gov/>) is a great example of interagency cooperation, involving at least 30

**Methodology:**

Reviewed and analyzed NPS response to draft report and prepared OIG response to NPS comments.

**Management Response to Draft Report:**

The attachment to the source email outlines NPS's response to the draft report.

**OIG Comments to Management Response:**

OIG summarized the NPS response in the left hand column of the table below and prepared an analysis and response shown in the right hand column of the table.

NPS Response	OIG Analysis
<p><b>Findings and Recommendations</b></p> <p>NPS stated that it accepted the findings and recommendations in the report. While NPS has mitigated many of its high-risk, easily accessible abandoned mine sites, it agrees that a substantial workload remains to address hazards and reclamation issues associated with abandoned mines in parks.</p>	<p>We are encouraged that NPS is committed to implementing the recommendations provided in our report. However, NPS did not provide the detailed information requested on actions taken or planned to implement the recommendations, including target dates and the names of officials responsible for their implementation.</p>
<p><b>Observations and Hazards on NPS Land</b></p> <p>NPS generally agreed with our observations at the parks we visited. However, the response provided additional information concerning the abandoned mine programs at the parks and additional actions that the parks have taken to address the hazards that we observed.</p>	<p>We considered the additional information provided and made revisions to the report where we considered necessary.</p>
<p><b>Program Funding</b></p> <p>NPS disagreed with our conclusion that it did not have a current estimate of the total costs needed to mitigate its abandoned mine hazards. It stated that it performed a detailed analysis in February 2005 which reported</p>	<p>We were aware of the 1995 estimate, however, we found during our audit that NPS had not updated this estimate or reestimated the costs since 1995. In April 2008, near the completion of our audit, NPS prepared</p>

<p>estimated total costs of \$165 million with immediate needs of \$43 million. NPS referred to an April 2008 estimate as a current estimate that quotes total needs of \$233 million with immediate needs of \$60 million.</p>	<p>the new estimate. However, this estimate simply adjusted the 1995 aggregate estimate for inflation to derive costs in 2008 dollars. This calculation did not consider any changes in conditions that occurred since 1995 and did not reflect any updated inventory and risk information that could impact mitigation costs. Because this estimate does not reflect the current inventory of abandoned mine hazards, we do not consider it to be a credible estimate of NPS' needs. NPS stated that it is creating a new, more detailed and accurate database of abandoned mine sites that will better identify specific mine features and proposed mitigation costs.</p>
<p><b>Other Comments</b></p> <p>NPS comments included a number of clarifications concerning its abandoned mine program as well as recommended report wording changes. Additionally, the response provided more detailed information concerning its program for our consideration.</p>	<p>We considered the additional information provided and made revisions to the report where we considered necessary.</p>

Submission: Submitted William McMullen 07/18/2008 09:33:49 AM

Level 1 Approval:

Level 2 Approval: Approved John Illson 07/21/2008 03:29:11 PM

**History**

**Status:** Approved **Request Review:**

**In Progress Edit:** William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie

All deletions have been made under 5 U.S.C. §§ 552(b)(5) and (b)(6) unless otherwise noted.

Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

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32 pages of a  
Draft Report are  
being withheld in  
their entirety under  
5 U.S.C. §§ 552(b)(5)

Draft Report

**History**

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**Confidentiality:** Standard

**Add Document Readers:**

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**Current Editor List:**

Submission:	Submitted	John Illson	06/03/2008 10:54:48 AM
Level 1 Approval:			
Level 2 Approval:	Approved	Jack Rouch	06/03/2008 07:19:53 PM

## Final Report

RAM NOTE: This final report incorporates my comments as well as comment from HQ. Primary changes resulted from review of NPS and BLM response to the draft report.

JR

### Highlighting Legend:

**Pink Highlighting: Substantive Changes that need to be referenced**

**Yellow Highlighting: Non-substantive changes that do not need to be referenced.**

Memorandum [referencer:] To and From addressees found in A.08 DOI Organizational Chart (6) A.08 DOI Organizational Chart CW

To: C. Stephen Allred  
Assistant Secretary, Land and Minerals Management

Lyle Laverty  
Assistant Secretary, Fish, Wildlife and Parks

From: Earl E. Devaney CW  
Inspector General CW

Subject: Final Audit Report, Abandoned Mine Lands in the Department of the Interior (C-IN-MOA-0004-2007) see title in A. Administration (7) [referencer: revised subject title to correspond to report title below] CW

This final report presents the results of our audit of abandoned mine lands managed by the Bureau of Land Management (BLM) and National Park Service (NPS). We visited approximately 45 areas with abandoned mines from March 2007 through April 2008 and talked to over 75 employees from 13 BLM offices and 5 national parks. CW

We concluded that BLM and NPS are putting the public's health and safety at risk by not addressing hazards posed by abandoned mines on their lands. CW Although NPS has been more effective at protecting the public, there are still many more sites that need to be

mitigated. ■ **CW** Mines located on BLM and NPS lands primarily in the western states of California, Arizona, and Nevada have dangerous physical safety and serious environmental hazards. ■ **CW** We identified abandoned mines where members of the public had been killed, injured, or exposed to dangerous environmental contaminants. Growth of the population and use of off-road vehicles in the West will increase the likelihood of additional deaths or injuries. ■ **CW**

We received responses on the draft audit report from BLM **\*Reporting Management's Response to Draft Report** ■ **CW** and NPS **\*Reporting Management's Response to Draft Report** ■ **CW**. BLM stated that it accepted the recommendations and would work diligently to implement them. see **"Recommendations"** section in **Appendix E \*Reporting Final Report** ■ **CW**. However, BLM disagreed with our overall conclusion that BLM has an ineffective abandoned mine land program that has been undermined, neglected and marginalized. see **"Conclusions Concerning Overall AML Program"** in **Appendix E \*Reporting Final Report** ■ **CW**. After considering the response, our overall conclusion concerning BLM's program remains the same. see **[Auditor Conclusion]** in **OIG Analysis column in Appendix E \*Reporting Final Report** ■ **CW**. NPS generally accepted our findings and recommendations and indicated that it would implement the recommendations. see **"Findings and Recommendations"** in **Appendix F \*Reporting Final Report** ■ **CW**. Where necessary, we made changes to the report to address BLM's and NPS' specific comments. Detailed analyses of the responses are included in Appendices E and F of the report. see **Appendices E and F \*Reporting Final Report** ■ **CW**.

We are pleased that both BLM and NPS took immediate steps to address many of the hazards that we brought to their attention during the course of our audit. In some cases, they installed fencing and signs to warn the public of the dangers. ■ ■ **CW** In other cases, they took more permanent steps. For example, in the Rand Mining District, BLM diverted a road away from a tailings pile that was contaminated with arsenic. ■ **CW**

Please provide us with your written response to this report by August 21, 2008. The response should provide the information required in Appendix G. see **Appendix G \*Reporting Final Report** ■ **CW**. Please address your response to:

Mr. Robert Romanyshyn  
Assistant Inspector General for Audits  
U.S. Department of the Interior  
Office of Inspector General  
1849 C Street, NW, MS 4428  
Washington, D.C. 20240 ■ **A.08 DOI Organizational Chart** **CW**

The legislation, as amended, creating the Office of Inspector General requires that we report to the Congress semiannually on all audits report issued ■ **A.08 DOI Organizational Chart**, **CW** actions taken to implement our recommendations, and recommendations that have not been implemented. ■ **A.08 DOI Organizational Chart** **CW**

If you have any comments or questions regarding this report, please call me at (202) 208-5745. ■ **A.08 DOI Organizational Chart** **CW**

Attachment **CW**

## U.S. Department of the Interior

### Office of Inspector General

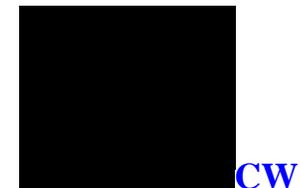
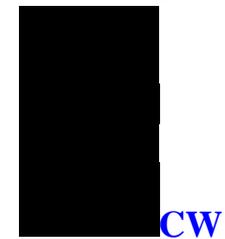
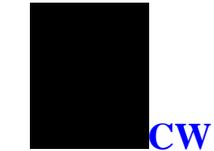
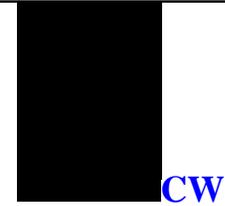
# Audit Report



## *Abandoned Mine Lands in the Department of the Interior*

**C-IN-MOA-0004-2007**

**July 2008** **CW**



photos previously referenced in body of report (see below)

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**RESULTS IN BRIEF**

We are gravely concerned that the Department of the Interior (DOI or Department) CW has put the public's health and safety at risk by not addressing hazards posed by abandoned mines on federal lands.

■ Mines located primarily in the western states of California, Arizona, and Nevada have dangerously dilapidated structures, serious environmental hazards, and gaping cavities – some capable of swallowing an entire vehicle. [Auditor opinion based on entire report] CW

■ During our audit, we identified serious environmental and safety hazards where members of the public had been killed, injured, or exposed to dangerous environmental contaminants. A number of adults and children have fallen to their deaths over the past several decades due to hazards associated with abandoned mines. ■ [see Section "Injuries and Deaths"] CW The potential for more deaths and injuries is ominous. ■ D.Survey-Injuries/Fatalities at AML Sites CW ■ Growth of the population and use of off-road vehicles CW in the West will increase the likelihood of additional deaths or injuries.

We focused our audit of abandoned mines on Bureau of Land Management (BLM) and National Park Service (NPS) lands because the majority of abandoned mines are located there. ■

C.Survey-Inventory CW We visited approximately 45 ■ K. BLM (Site Visits) ■ (b) CW areas with abandoned mines from March 2007 through



Vehicle being hoisted from a mine shaft on BLM land. (BLM Photo) (4) ■ J.BLM.34 Vehicle Recovery ■ CW

April 2008 and talked to over 75 employees from 13 BLM offices and 5 national parks. ■ [see linked section] (1) ■ CW

At several BLM sites we visited, we found dangerous levels of environmental contaminants, such as arsenic, lead, and mercury – easily accessible to visitors and local residents, often without their knowledge. CW We also found instances of trespassing at abandoned BLM mine sites, including residential and commercial development on the land. ■ [see Section "Site Trespass"] CW

Even more disturbing, we found that BLM supervisors told staff to ignore these problems, and employees were criticized or received threats of retaliation for identifying contaminated sites. One employee stated that adding sites to an inventory list and declaring them unsafe was more detrimental to BLM because doing so acknowledged a hazard and a potential liability. ■ [see Section "BLM Field Office Management"] CW

■ While BLM has the clear majority of abandoned mine sites on DOI lands, ■ C.Survey-Inventory CW we found that it has an ineffective program to address them. BLM's abandoned mines program has long been undermined, neglected, and marginalized by poor management practices ■ [see Section "BLM Field Office Management"] CW and insufficient staffing and resources. ■ [see Section "BLM Program Budget and Funding"] CW

■ We found that NPS has mitigated many of its high-risk, easily accessible abandoned mine sites;( H. NPS (Overall) ■ ■). CW however, there are hundreds, if not thousands, CW of sites that still need to be addressed ( H. NPS (Overall) ■ ■)CW

At one park, the abandoned mine inventory includes over 600 sites, and NPS officials have inspected less than half of the sites on the 1.4

million acres (I.NPS.MOJA.01 Mojave National Preserve [REDACTED] [REDACTED] CW) comprising the park (I.NPS.MOJA.01 Mojave National Preserve [REDACTED]). While NPS has a more effective program, CW current funding for NPS' abandoned mines program is inadequate to address these hazards, and NPS has failed to develop a credible [REDACTED] NPS response to draft report. CW estimate of CW the total cost of mitigation. (2) [REDACTED] B.NPS.03 Funding for NPS AML [REDACTED] CW

We believe that working in consort, BLM and NPS would- [REDACTED] CW make greater strides toward a solution for abandoned mines than doing so independently. The agencies should explore opportunities to share resources, expertise, and best practices to improve their programs. (Auditor Opinion based on a best practice identified in the best practices section of the report [REDACTED]). (3) [REDACTED] CW

While the expense of cleaning up abandoned mine sites is a concern, with figures estimated in the billions, [REDACTED] [see linked section] CW we believe simple (b) (5) [REDACTED] CW precautions can easily be taken at the most dangerous sites, including posting warning signs and building fences. [REDACTED] K.BLM (Site Visits) CW At environmentally contaminated sites, staff can reduce air and water-borne contamination through dust control with sprinklers CW J.BLM.22 AML Strategic Plan Budget Needs [REDACTED] [referencer: see para below tab "Physical Safety Projects"; could not index to w/p as their was a server error] and temporary covers. [REDACTED] J.BLM.13 BLM AML Program Policy Handbook CW

The overall solution for cleaning up abandoned mines is not simple. It calls for a complex and concerted effort on the part of the Department, including the immediate mitigation of known hazardous sites, a calculated effort to identify and inventory unknown sites, a methodical design to address abandoned mines comprehensively, and a strategy to secure the necessary funding for this costly endeavor. [Auditor Opinion based on entire report] CW



Warning sign that could be used as a minimum precaution at abandoned mine sites. (OIG Photo) (5) [REDACTED]

I.NPS.DEVA.19 Photos - Death Valley Mine Sites [REDACTED] CW

The findings from this audit paint a picture of compelling urgency, which should trigger a swift call to action by both the Department and Congress. We are providing recommendations designed to help develop a comprehensive solution to this multi-faceted problem, not of DOI's making, but now, certainly, in the Department's realm of responsibility. [Auditor Opinion based on entire report] CW

## BACKGROUND

Since the 1850s, mining of hard rock minerals such as gold, silver, copper, and lead has been an important part of the economy of the Western United States. Congress passed the General Mining Law of 1872, which established a process to allow individuals to explore, claim, and mine public lands containing mineral deposits. The General Mining Law required little mitigation of physical and environmental hazards created by mining activities. In 1976, Congress passed the Federal Land Policy Management Act that enhanced federal management of mining activity and its safety and environmental effects. ■ G.DOI.03 FLPMA CW However, historical mining activity left hundreds of thousands of unmitigated abandoned mine sites. CW

Within DOI, the majority of abandoned mine CW sites are located on lands managed by BLM, primarily in Arizona, Nevada, and California. CW Typically, no mining operations have been conducted at these sites for many years, although valid mining claims may still exist. The vast majority of abandoned mine sites on NPS lands are located in the California desert area of the Pacific West Region. The California desert area, specifically Death Valley National Park, (b) (5) ■ CW Mojave National Preserve, and Joshua Tree National Park, contains most of the mine hazards on NPS land. CW (b) (5) ■ - ■ C.NPS.01 NPS AML Inventory ■ (6) ■ CW

Many abandoned mine CW sites present an immediate danger of physical injury or death due to open vertical shafts and horizontal adits (entrances to a mine) G.BLM.01 BLM AML Background ■ CW and mill sites with deteriorating buildings and equipment. Dangers include deadly gases and asphyxiation, collapsing mine walls, explosive and toxic chemicals, and rotting structures. Physical hazards require the least funding to fix CW or mitigate and the least expertise to identify and evaluate. Mitigation can range from temporary measures including fencing and signs to more costly permanent measures, including steel and concrete covers. The only permanent mitigation action is to fill in shafts and adits and demolish or remove CW buildings and structures.

Some sites also present long-term dangers to people from exposure to piles of waste rock or mine tailings (mine waste) containing hazardous materials such as arsenic, lead, and mercury. CW These sites can cost hundreds of millions of dollars to remediate and require extensive expertise to identify, evaluate, and mitigate. Potential sites must be sampled to identify hazardous contamination. Mitigation can include temporary measures such as reducing air and water-borne contamination through dust control with sprinklers and temporary covers. Other temporary measures that can be taken to protect the public at these sites include installing fencing and signs and taking

appropriate steps to notify the public of the dangers. CW Permanent mitigation can include reprocessing of mine CW tailings to treat contaminants, removal of materials to safer locations, or onsite disposal in a properly designed facility. Clean-up of all significant sites with environmental hazards will CW cost ■ billions of dollars.

#### DETAILS OF AUDIT

■ We visited approximately 45 (b) (5) [referencer: see reference above in "Results in Brief"] K. BLM (Site Visits) ■ CW areas with abandoned mines from March 2007 through April 2008 and talked to over 75 G.NPS.1 Total Number of Employees Contact during Audit ■ employees from 13 BLM offices and 5 national parks. We also reviewed hundreds of pages of related documents and traveled through California, Arizona, and Nevada for site visits and interviews. H.NPS.11 Number of Parks and personnel visited ■ K.BLM (Site Visits) (1) ■ CW Our objective was to determine if BLM and NPS CW were effectively protecting the public from physical safety and environmental hazards at abandoned hard rock mine sites located on federal lands. The results of our audit are chronicled below. CW

#### ■ Injuries and Deaths

Comprehensive records of abandoned mine CW accidents are not maintained by DOI or its bureaus. However, physical safety hazards continue CW to result in visitor injuries and deaths. The U.S. Mine Safety and Health Administration identified 33 abandoned mine fatalities between 1999 and 2007 on all public and private lands in the Western United States. ■ G.07 MSHA Incident Data CW We performed a limited search of accident records and found that between 2004 and 2007, at least 12 people were killed in accidents at abandoned mines. We also visited six abandoned mine sites on BLM and NPS land where 7 deaths had occurred since 1984. [referencer: see paragraphs below] CW

At the Keane Wonder Mine in Death Valley National Park, CA, a visitor fell 30 feet down a mine shaft in 1984 and died of massive head injuries. We found that NPS' visitor literature advertised the abandoned site and NPS had signs directing visitors to the area, which had a visitor parking lot. We also found that other mine openings in Death Valley National Park were easily accessible by visitors using park roads and trails. After the death at Keane Wonder, NPS did install a steel net across the opening, but during our visit, we noticed that the net had been vandalized and other nearby openings had no fences or signs (C.NPS.DEVA.01 Death Valley National Park Site Visit ■ I couldn't anchor link to the actual section in the wp where this information is located, but it's easy to find when scrolling). CW

Note to referencer: Most of this information was already referenced. Your initials can be seen at the following anchor link.

A.31 Index 16 Appendix A Injuries and Fatalities ■ ■

  
 Vandalized mitigation measure at the Keane Wonder Mine where a visitor died.  
 (OIG Photo)  
 ■ I.NPS.DEVA.19 Photos Death Valley Mine Sites ■  
 (image caption is "IMG\_1819 small.jpg") CW

In 1991, a visitor to the Goat Basin Mine, Barstow Field Office, CA, bypassed a fence around an open mine shaft and attempted to lower himself into the shaft using chains attached to the bumper of his truck. The chains slipped and he fell 200 feet to his death. This type of site is commonly called an “ant trap” because it has steeply sloping sides that prevent escape if a person begins to slide into the shaft. After the accident, BLM did install a barbed wire fence around the shaft; however, during our site visit, we saw only remnants of the fence and no warning signs. This site was not on BLM’s abandoned mine inventory and was not effectively mitigated. According to a BLM official, there are many such openings in the area but BLM has not inventoried these sites and has no plans to mitigate the hazards.

■ **CW** After our site visit, we made recommendations to BLM about the safety concerns at the Goat Basin Mine, and BLM took immediate action and erected a fence around the opening (“**Reporting Management’s Response to Draft Report**” ■, also previously referenced see ■).

**CW**

In 1996, at the American Flat Mill near Virginia City, NV, a teenager died while climbing stairs on his all-terrain vehicle inside the structure. ■ **K.BLM.American Flat.01 Safety Issues CW** This extremely dangerous, dilapidated structure, ■ **CW** which was built in the 1920s,

■ **CW** has unrestricted access ■ **K.BLM.American Flat.01 Safety Issues CW** and is a popular hang-out site for teens. ■ **K.BLM.American Flat.01 Safety Issues CW** While not documented, a BLM official told us that many other serious injuries have occurred at the site requiring flight-for-life helicopter rescues. ■ **K.BLM.American Flat.01 Safety Issues CW** BLM has not mitigated the site because of concerns about the mill’s “historical value.” ■ **K.BLM.American Flat.01 Safety Issues CW**

We found that in Virginia City, NV, a local high school teacher and a friend were killed in 1996 after entering the New Savage Mine. The men ignored a large “Keep Out-Bad Air” warning sign at the mine entrance, bypassed a fence, and were (b) (5) -asphyxiated. ■

**K.BLM.VirginiaCity.03 AML Deaths CW** The site was subsequently more



Open mine shaft at the Goat Basin Mine where a visitor died.  
(OIG Photo)

photo previously referenced (see below) ■ **CW**



American Flat Mill where teen ■ vehicle ATV.

**CW**(OIG Photo)

photo previously referenced

(b) (5)

■ **K.BLM.American Flat.01 Safety Issues CW**



Photo deleted in latest version **CW**

(b) (5)

<p>permanently fenced and closed. ■ <a href="#">K.BLM.VirginiaCity.03 AML Deaths</a> CW</p> <p>The New Savage Mine is one of hundreds of mines near Virginia City. ■ <a href="#">K.BLM.VirginiaCity.05 Comstock Lode</a> CW</p>	<p>■ <a href="#">K.BLM.VirginiaCity.03 AML deaths</a> CW</p>
<p>In 1999, near Beatty, NV, a young girl was killed after she fell into an open mine shaft while attending a BLM-authorized cross-country race. During the race, she wandered away from her family and fell into the mine. During our site visit, BLM staff told us that race organizers, not BLM, were responsible for safety during the race. To expedite the mine closure, local residents back-filled the hole after the accident. <a href="#">D.BLM.04 Fatality near Beatty, NV</a> ■ CW</p>	<p></p> <p>Site near Beatty NV where a young girl fell to her death in an open shaft. (OIG Photo) photo previously referenced</p> <p>■ <a href="#">A.31 Index 16 Appendix A Injuries and Fatalities</a> CW</p>
<p>More recently, in 2007, near BLM's Windy Point Recreation Area, Kingman, AZ, a young girl was killed after falling into an open abandoned mine. CW The girl and her sister were riding an all-terrain vehicle, ran off a trail, and fell into a 125-foot mine shaft. CW The sister was seriously injured and spent the night in the mine before being rescued. CW The shaft is on a small privately owned parcel surrounded by BLM property. CW BLM maintains a nearby campground and a road leading to the area where the death occurred. CW A barbed-wire fence, provided by BLM, and warning signs were erected around the abandoned mine shaft shortly after the accident. (7) ■ <a href="#">K.BLM.Arizona.08 ATV Death and Mitigation</a> ■ CW</p> <p>■ previously referenced see <a href="#">A.31 Index 16 Appendix A Injuries and Fatalities</a> ■</p> <p>BLM stated that “in light of the hundreds of millions of acres of public lands for which BLM is responsible, some accidents will inevitably take place.” While this may be true, it does not relieve BLM from responsibility for taking reasonable steps to prevent injury or death from abandoned mine hazards, especially those hazards that are already known by BLM. ■ <a href="#">BLM response to draft report</a> CW</p>	<p></p> <p>Photo deleted in latest version CW</p> <p>(b) (5)</p> <p>photo previously referenced</p> <p>■ <a href="#">A.31 Index 16 Appendix A Injuries and Fatalities</a> CW</p>

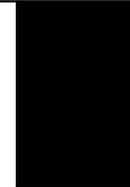
## Observations and Hazards on BLM Land

During our site visits to abandoned mines on BLM lands, we observed alarming examples of dangerous mines that continue to pose a threat to the public and the environment. [\[Auditor opinion based on section that follows\]](#) **CW** We have highlighted the most distressing examples below. [\[see section that follows\]](#) **CW**

### Rand Mining District

In March and May 2007, we visited the Rand Mining District near Ridgecrest, CA, **B. Background [C-IN-BLM-0012-2007]** **CW** because soil samples taken by BLM in 2006 identified dangerous levels of arsenic contamination **E.05.02 Environmental Investigations [C-IN-BLM-0012-2007]** **CW** thousands of times higher than Environmental Protection Agency (EPA)-recognized safe levels. **E.04.02 BLM CERCLA Handbook and Action Memo [C-IN-BLM-0012-2007]** **CW** BLM had known about this potential contamination for decades **D.01.01 Interview with Linn Gum [C-IN-BLM-0012-2007]** **CW** but had never taken samples to assess the danger to the public. **D.01.01 Interview with Linn Gum [C-IN-BLM-0012-2007]** **CW** We confirmed these serious environmental hazards **D.01.05 Photos of Red Mountain Environmental Issues** **D.01.06 Photos of Randsburg Environmental Issues** **CW** and also found numerous physical safety hazards. **D.01.04 Photos of Red Mountain Safety Issues** **CW** These hazards were endangering the residents of Randsburg and Red Mountain as well as thousands of off-road vehicle recreationalists who routinely visit the area. **E.Mitigation Efforts [C-IN-BLM-0012-2007]** **CW** BLM estimates that costs to mitigate environmental and safety hazards in the District could exceed \$170 million. **E.Mitigation Efforts [C-IN-BLM-0012-2007]** **CW** Due to the potential risks to the public, we issued Flash Report No. C-IN-BLM-0012-2007, “Environmental, Health and Safety Issues at Bureau of Land Management, Ridgecrest Field Office, Rand Mining District, CA.” **\*Reporting Draft Report** **[C-IN-BLM-0012-2007]** **CW**

We found that arsenic contamination in the District is widespread in over 3,000 acres of mine tailings and 500,000 tons of additional mining-related waste rock. **E.Mitigation Efforts [C-IN-BLM-0012-2007]** **CW**



Off-road vehicle trail on contaminated tailings in Randsburg, CA (BLM Photo)

**D.01.06 Photos of Randsburg Environmental Issues** (photo caption is "Rt 110\_8 compressed OIG.jpg") **CW**



Open shaft near road in Red Mountain, CA (OIG Photo)

**D.01.04 Photos of Red Mountain Safety Issues** (photo caption is "shaft by RM road closeup compressed OIG.jpg") **CW**

The area's dry climate and winds have routinely exposed residents to arsenic-laden dust. ■ E.04.05 CA State Director Briefings [C-IN-BLM-0012-2007] CW Contaminated tailings have also migrated onto residential properties in Red Mountain. ■ D.Environmental & Safety Issues [C-IN-BLM-0012-2007] CW Near Randsburg, a BLM-authorized trail crossed a 60-acre highly contaminated mine tailings dam ■ E.04.03 Discussions with Richard Forester [C-IN-BLM-0012-2007] ■ E.05.01 Sample Data [C-IN-BLM-0012-2007] CW and was used seasonally by thousands of off-road riders as recently as April 2007. ■ D.01.06 Photos of Randsburg Environmental Issues [C-IN-BLM-0012-2007] CW

The District includes about 480 open mine shafts and unstable mining structures. Many of the mine shafts are located in and around residential areas or near existing roads and trails. ■ E.04.05 CA State Director Briefings [C-IN-BLM-0012-2007] CW Some mine shafts are extremely dangerous due to their depth and location, and we found no fences or warning signs. D.01.04 Photos of Red Mountain Safety Issues ■ CW A local BLM official told us that temporary mitigation measures could be delayed for up to a year while wildlife and archeological surveys are conducted. ■ K.BLM.RosamondCA.01 Site Visit CW

■ In response to our Flash Report, BLM reported that several safety hazards had been fenced and posted with warning signs. The off-road vehicle route on the tailings dam was closed and an ■ alternative route was constructed. BLM also began a formal process to assess health risks to the public from environmental contamination at the site. Periodic public meetings are being conducted to inform residents of BLM's progress in mitigating site hazards. \*Reporting Management's Response to Draft Report ■ [C-IN-BLM-0012-2007] CW We are encouraged by the steps being taken as a result of our Flash Report to address hazards in the Rand Mining District. However, the disturbing fact remains that hazards in the District were suspected or known to BLM for many years before anything was done to evaluate

and mitigate them. ■ BLM response to draft report CW

### American Flat Mill

In July 2007, we visited the American Flat Mill site, located near the town of Virginia City, NV, where a teenager died climbing the stairs on his all-terrain vehicle. The mill is a large, two-story, dilapidated concrete structure where ore was processed in the 1920s using cyanide. ■ The site is an extremely dangerous physical safety hazard. It is easily accessible, with few fences, and is a popular “party” hangout for local teens. Most of the structure has no outside walls and there are large holes in the floors that could easily result in a serious injury or death. ■ K.BLM.AmericanFlat.01 Safety CW Issues

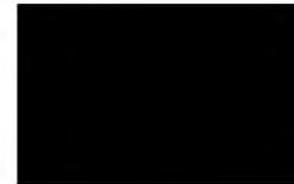
An adjacent mill site was demolished ■ (b) (5) CW in 2006 (8) ■ CW after a visitor sustained a serious injury due to a fall. The potentially responsible party performed and paid for the demolition work. ■ BLM response to draft report CW (b) (5)

■ CW Concerning the site, a BLM official said, “This is a matter of physical safety. The buildings are a public nuisance and have to be dismantled. There's no reason for this to remain a potentially dangerous site.” ■

K.BLM.AmericanFlat.01 Safety Issues CW

To the contrary, in 2006, another CW (b) (5) ■ BLM official was quoted in the *Reno Gazette-Journal* in 2006 saying, “Nothing is going to be disturbed at the older [remaining] site. People in the area have a strong connection to it and it’s staying just as it is.” ■

K.BLM.AmericanFlat.01 Safety Issues CW



Dilapidated mill buildings at American Flat Mill (OIG Photo) photo previously referenced

■ K.BLM.American Flat.01 Safety Issues CW





of this office since 1976 **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED] **CW**

The Goat Basin Mine is identified on BLM maps [REDACTED] **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED] **CW** and a road leads visitors to the site **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED] **CW** The opening at the mine is extremely dangerous and there was evidence that visitors were passing within feet of the opening on off-road vehicles [REDACTED] **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED] **CW** The edges of the opening have eroded, creating an “ant trap”; once a visitor goes over the edge, there is no way to stop falling into the hole **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED] **CW**

Little had been done to mitigate the known hazards even where visitors had been killed **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED], [REDACTED], [REDACTED] **CW** According to BLM, the area surrounding Barstow has many similar hazardous mine openings that are easily accessible **K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED] **CW** After we notified BLM of our observations, BLM informed us that it provided temporary mitigation of the physical safety hazards with the installation of fencing and warning signs at each of the sites. **\*Reporting Management's Response to Draft Report** [REDACTED] **CW**

Caselton Tailings

In August and September 2007, we visited the Caselton Tailings site. [REDACTED] **K.BLM.Caselton.01 Site Visits** **CW** The site covers about 90 acres [REDACTED] **K.BLM.Caselton.04 CERCLA Action Memorandum** **CW** and is located in southeast Nevada [REDACTED] **K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis** **CW** about 6 miles north of the town of Panaca. [REDACTED] **K.BLM.Caselton.01 Site Visits** **CW** The site is easily accessible from State Highway 320 [REDACTED] **K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis** **CW** and contains about 3 million cubic yards of mine tailings, or mine waste, from a nearby abandoned mill. The tailings contain potentially dangerous levels of

Open mine shaft at the Goat Basin Mine were a visitor died.  
(OIG Photo)

photo previously referenced and cleared after referencer comment

**K.BLM.04 Fatality at the Goat Basin Mine** [REDACTED], [REDACTED] **[11]** This number is from the first referencing

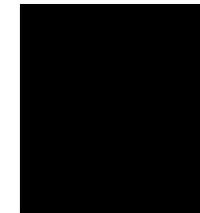
**\*Reporting Management's Response to Draft Report** [REDACTED] SRP 1/16/07 **CW**



Open shaft near Barstow (OIG Photo)

photo previously referenced

photo is "coolgardie shaft 3c. JPG" **CW**



Acidic pond at Caselton Tailings site (OIG Photo)

both photos previously referenced

[REDACTED] **K.BLM.Caselton.01 Site Visits** **CW**



Dan Netcher, Ely Field Office CW and [REDACTED] CW constructed CW a diversion channel to minimize erosion. [REDACTED] K.BLM.Caselton.03 Interview with Dan Netcher, Ely Field Office CW However, the site is still easily accessible with only two small "No Trespassing" signs posted. [REDACTED] K.BLM.Caselton.01 Site Visits [referencer: see photos captioned "Sign at entrance to tailings.jpg" and "Sign in tailings.jpg" and note that the entrance has boulders in the road but they could be easily bypassed by an off-road vehicle] CW A BLM official also noted that the tailings cover needed to be replaced in the near future. [REDACTED] K.BLM.Caselton.03 Interview with Dan Netcher, Ely Field Office CW

Over the last decade, BLM, with recent assistance from the DOI Office of the Solicitor CW [REDACTED] K.BLM.Caselton.05 Reprocessing Negotiations [referencer: see response to question 2 that notes a date in 2007 of Solicitor Memo] has negotiated without success with two parties interested in [REDACTED] reprocessing CW the tailings. CW [REDACTED] CW Reprocessing can help to reduce environmental contamination, and negotiations could provide additional resources to further mitigate the site. BLM has stated that it has made an informed decision that continuing with these negotiations is justified and in the best interests of the government and the general public. Having a third party perform the work would significantly reduce the cost to the government, currently estimated to be between \$8 & 14 million if done unilaterally by BLM. [REDACTED] BLM response to draft report CW Where practical, we support these efforts. CW However, public safety must be the first priority and we are concerned that the public has not been adequately protected from these environmental hazards for over a decade while these negotiations have taken place. [referencer: see 2nd Auditor Opinion in the "Conclusion" section of the W/P] K.BLM.Caselton.03 Interview with Dan Netcher, BLM Ely Field Office [REDACTED] CW

(b) (5)  
[Redacted]  
[Redacted]  
[Redacted] W

**Observations and Hazards on NPS Land**

During our site visits to abandoned mines on NPS lands, we observed examples of dangerous mines as well as mitigated sites where NPS took action [Redacted] to protect the public. We have highlighted examples below.

Death Valley National Park

In March and May 2007 C.NPS.DEVA.01 Death Valley National Park Site Visit [Redacted], I.NPS.DEVA.03 Greenwater - Site Visit / Meeting with NPS Officials [Redacted] CW we visited Death Valley National Park, CA, where a visitor died in 1984 after falling down a mine shaft at the Keane Wonder Mine (C.NPS.DEVA.05 Fatality Accident Report [Redacted]). CW The park has numerous historical mines within its boundaries (b) (5) CW and encourages site visitation by advertising on maps and maintaining roads and trails leading to the sites C.NPS.DEVA.01 Death Valley National Park Site Visit [Redacted], [Redacted], . CW Two of the sites we visited, the Keane Wonder Mine C.NPS.DEVA.01 Death Valley National Park Site Visit [Redacted], I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS [Redacted] CW and the Greenwater Mining District I.03 Greenwater - Site Visit / Meeting with NPS Officials [Redacted], [Redacted], CW contain extremely dangerous mine openings. At the Keane Wonder Mine, we observed a family exploring the dangerous openings, and at one point we witnessed the family's toddler exiting a collapsing mine opening (C.NPS.DEVA.01 Death Valley National Park Site Visit [Redacted], [Redacted], C.NPS.DEVA.01 Death Valley National Park Site Visit [Redacted], [Redacted], CW (b) (5) [Redacted]

[Redacted]  
[Redacted]  
[Redacted]

CW Subsequent to our site visit, NPS found elevated levels of lead and mercury and stated that it was closing the site. [Redacted] NPS response to draft report. CW



Young boy exiting a mine adit with a collapsing roof in Death Valley National Park. (OIG Photo) photos previously referenced

C.NPS.DEVA.01 Death Valley National Park Site Visit [Redacted], [Redacted]

(b) (5) [Redacted] CW



Visitors camp near this mine opening in the Greenwater Mining District. (OIG Photo) photo previously referenced

(I.NPS.DEVA.03 Greenwater - Site Visit / Meeting with NPS Officials [Redacted], [Redacted]). (12) I.NPS.DEVA.19 Photos - Death Valley Mine Sites [Redacted]

■ CW

We noted three open mine shafts at the Greenwater Mining District. Two of the shafts were well fenced; I.03 Greenwater - Site Visit / Meeting with NPS Officials ■, ■ CW however, the third was easily accessible and posed a danger to park visitors. CW This shaft was several hundred feet deep and within close proximity to an area where visitors had been camping. CW A fence around this mine shaft (b) (5) was dilapidated (b) (5) CW and was not effective in keeping visitors away from the “ant-trap”-like opening. I.03 Greenwater - Site Visit / Meeting with NPS Officials ■, ■) (13) ■ CW added I.NPS.DEVA.19 Photos - Death Valley Mine Sites ■ CW

We visited other abandoned mine land sites within Death Valley where NPS mitigated hazards. CW Many mine openings have been temporarily sealed with steel netting, while others have more permanent closures in the form of steel gates. I.NPS.DEVA.18 Death Valley - Abandoned Mine Visit(s) ■, ■, ■, ■ (14) ■ We also observed extensive stabilization work that has been performed at the Skidoo Mill site, as well as several signs posted in the area, warning the public to stay off the structure. I.NPS.DEVA.18 Death Valley - Abandoned Mine Visit(s) ■, ■, ■) (14) ■

#### Grand Canyon National Park

In August 2007, we visited two abandoned mine sites located along hiking trails in the Grand Canyon National Park, AZ.

I.NPS.GRCA.15 Grandview Mine Site Visit ■

I.NPS.GRCA.20 Orphan Mine Site Visit ■ CW

The first site we visited was the Grandview Mine, which was located several miles into the canyon. CW Although it took over 3 hours to hike into this area, the trail is still popular and is used by visitors. CW Both the trail and the Grandview Mine are well marked on NPS maps. (15) ■ I.NPS.GRCA.03 Summary of Grand Canyon ■ ■ CW The Grandview Mine has a series of adits (horizontal ■ NPS response to draft

report. CW mine entrances) connected by shafts. CW We found no signs in the area to warn visitors of the dangers at the mine, and all mine entrances were open to visitors. CW

In addition to the physical safety hazards we found at the Grandview Mine, there has been concern about visitor safety due to high levels of radiation that have been recorded at the site. CW Past assessments at the site have shown extremely high levels of radiation; however, during our site visit, NPS measured radiation at all of the mine openings and all readings showed low levels of radiation. CW We were told that the low levels may have been the result of recent weather patterns in the area and increased air movement in the adits.

CW

Note to referencer:

Unable to anchor link to the section, however, if you scroll through you should see the information highlighted I.NPS.GRCA.15 Grandview Mine Site Visit

The other site we visited was the Orphan Mine located on the popular South Rim Trail. This easily accessible site has both high levels of radiation and significant physical hazards; however, NPS has erected a fence around the site, posted signs warning of the environmental hazards, and diverted the trail further away than originally constructed. We see this as a successful temporary mitigation of the site.

Note to referencer:

Unable to anchor link to the section, however, if you scroll through you should easily see the information I.NPS.GRCA.20 Orphan Mine Site Visit (16)

CW

Added to support the south rim and the levels of contamination. I.NPS.GRCA.21 Contamination levels at Orphan

Mojave National Preserve

In April 2008 (I.NPS.MOJA.01 Mojave National Preserve [REDACTED]), CW we visited several dangerous abandoned mine sites within the Mojave National Preserve. Although several dangerous shafts in the area had been covered or fences had been installed, there were still many dangerous mine openings easily accessible to the public. CW

At two sites, we found mine shafts on roads that were large enough to easily swallow entire vehicles. In both cases, there were no fences or signs warning the public of the danger. At the Gold Cycle site in the Preserve, a ladder going into the mine provided easy access to the mine shaft

I.NPS.MOJA.01 Mojave National Preserve [REDACTED]. CW

At the Johnny Shaft site, we observed that the road led directly to a mine (b) (5) [REDACTED] – with a (b) (5) [REDACTED] -400 foot shaft CW

I.NPS.MOJA.01 Mojave National Preserve [REDACTED]. CW

At the Oro Fino site in the Preserve CW, NPS personnel pointed out what they considered one of the most dangerous mine hazards in the Preserve. The entrance to the mine was collapsing, the roof was caving in, and dangerous shafts inside the mine created the risk of people falling. There was also a dilapidated ladder in an open mine shaft at this site. There was vehicle access near the opening, and there were no signs warning the public of the dangers or fencing to prevent access.

I.NPS.MOJA.01 Mojave National Preserve [REDACTED]. CW



Dangerous mine shaft at the Johnny Shaft site. (OIG Photo) [REDACTED] CW

### BLM Abandoned Mine Lands Program

#### [REDACTED] Field Office Management

[REDACTED] Overall, we found that BLM’s abandoned mine lands program has long been neglected, undermined, and marginalized by CW poor management practices. As a result, public health and safety have been seriously compromised. [REDACTED] K.BLM (Site Visits) CW The program is

decentralized, giving operational control and authority to field office managers. BLM has a national abandoned mine lands program coordinator who has developed many policies and procedures for implementing an effective program; however, this coordinator is rendered ineffective, [REDACTED] J.BLM (Overall) CW as field office management and staff often ignore the guidance. CW We also noted many examples of serious unmitigated abandoned mine CW hazards that were tolerated because program managers discouraged identifying and mitigating these hazards. Specifically, we found the following:

- Employees were discouraged from identifying abandoned mine CW sites. An employee was told by a field office manager not to identify abandoned mine CW sites as it got in the way of other land management activities. Another employee stated that putting sites on an inventory was more detrimental to BLM than leaving them off because listing them acknowledged a hazard and therefore created CW a potential liability.
- Employees were criticized or received threats of retaliation for site identification. An employee who CW told DOI officials that there were thousands of dangerous abandoned mines within the employee's jurisdiction [REDACTED] CW was subsequently criticized for making such a statement. Several other employees told us management made threats against their careers [REDACTED] C.BLM.FolsomFO.01 Site Inspections [REDACTED] B.02.02 Discussion with Peter Graves [C-IN-BLM-0012-2007] CW for raising these issues.
- A BLM Field Office Manager stated that management CW had never asked him to take samples of potentially contaminated sites. CW (b) (5) [REDACTED] D.01.02 Interview with Hector Villalobos [C-IN-BLM-0012-2007] CW
- Employees did not use warning signs and fences because they considered them ineffective or costly to maintain.
- A BLM official opined [REDACTED] CW that fencing a site was an acknowledgement that BLM knew about the site; and therefore if someone was subsequently injured at the site, BLM could face increased liability.
- (b) (5) [REDACTED]
- BLM management did not allow an employee to formally contact a claimant about dangerous physical hazards at a claim site. CW
- Employees did not identify and report residential and commercial trespassing at dangerous BLM abandoned mine sites. CW

BLM is in the process of developing and implementing several new program management initiatives that may enhance the effectiveness of the abandoned mine lands program. These include the Fix a Shaft Today (FAST) program, National Mine Land Inventory prototype, abandoned mine land distance learning program, and a project management handbook. We are encouraged by these efforts. [REDACTED] BLM response to draft report CW

### CW Staffing [REDACTED]

Mitigating BLM abandoned mine CW sites and making them safe for the public CW is often neglected because the job is a collateral (b) (5) CW duty for field office personnel, and CW there are conflicts with the BLM surface management program responsible for regulating operating mines. (b) (5) [REDACTED] CW

Collateral (b) (5) [REDACTED] Duty CW

According to BLM records, 107 field office employees in California, Nevada, and Arizona charged time to the abandoned mine lands **CW** program in 2007. Because the abandoned mine lands program **CW** is a collateral **CW** duty for most employees, the total time charged to the program for labor accounted for only about 9 full-time employees. We found that many of these employees have never performed simple **CW** duties such as posting warning signs and fences, let alone identifying abandoned mine sites. **CW**

#### Conflicting Objectives

Many abandoned mine land field staff **CW** are funded primarily by the surface management program. This program is responsible for implementing surface management regulations 43 CFR 3809 **B.BLM.05 Mitigation of other mining activities CW** concerning minerals exploration and mine operations. This includes approval of proposed mining operations, reclamation, bonding, and inspection and enforcement activities. **J.BLM.25 Surface Management under Mining Laws CW** Some BLM surface management personnel (with collateral **CW** abandoned mine land duties) were reluctant to mitigate sites because of potential conflicts with mine claimants and operators who may oppose such **CW** mitigation. **CW** Mitigating abandoned mines may restrict a claimant's **CW** ability to mine minerals that are accessible from abandoned mine openings or located in mine waste piles. **CW**

(b) (5)

**J.BLM.29 AML Staff Qualifications CW**

#### BLM **CW** Program Budget and Funding

BLM does not have a dedicated line **CW** item identified in its the **CW** budget for the **CW** abandoned mine lands program, and the program's funding needs receive **CW** little visibility. **CW** As a result, the program is not a priority and has not been allocated sufficient resources to mitigate dangerous abandoned mine sites. **CW**

BLM's abandoned mine lands program has been chronically and drastically under-funded. In its abandoned mine lands **CW** strategic plan, BLM identified funding needs of about \$130 million through fiscal year (FY) 2013 for high-priority sites. Even the identified needs are drastically under-estimated. **[Auditor opinion based on \$130 million in Strategic Plan but \$170 million estimated for one area, the Rand Mining District] CW** We found that clean-up of environmental hazards in California's Rand Mining District alone will **CW** cost over \$170 million, and total costs to mitigate abandoned mine sites bureau-wide could ultimately be billions of dollars. Currently, **CW** BLM's abandoned mine lands program receives **(b) (5) CW** less than \$10 million in annual funding **CW** from various sources including appropriations for soil,

water and air; hazard management; and resource restoration. ■ BLM response to draft report CW Significant progress to permanently address physical safety and environmental hazards at BLM abandoned mine CW sites will not be achieved unless substantial additional resources are made available.

Even with its (b) (5) CW current funding, however, BLM should be more effective in protecting the public. BLM could better use existing funds to identify and evaluate abandoned mine CW sites, post warning signs, and install fences. ■ (b) (5) -CW

■ Site Trespass

Historical trespass on BLM land is known to exist at many locations throughout the West, according to a BLM official. CW This trespassing includes commercial activities and residential development on abandoned mine sites on federal land. CW Two of the abandoned mine sites we visited had residential and commercial development in areas with safety and potential environmental hazards. [see sections below] CW This residential and commercial trespass hinders BLM’s efforts to mitigate sites because of the regulatory and legal delays associated with evicting trespassers and physically removing (b) (5) -CW homes and commercial facilities. ■

J.BLM.13 BLM AML Program Policy Handbook CW

Rand Mining District

In California’s Ridgecrest Field Office, the Rand Mining District towns of Red Mountain and Randsburg had residential trespass issues. BLM allowed residents to purchase titles to their properties in 1984 and 1997. In Randsburg, land titles were conveyed with clauses requiring the purchasers to indemnify (hold harmless) the government against residents’ exposure to hazardous materials from mining and other activities. Such indemnification was required even though the appraiser noted that hazardous wastes were “very likely” present in the area due, in part, to many old mines. BLM officials did not take steps to assess the validity of the appraiser’s concern. In addition, BLM environmental assessments performed prior to the conveyances were inadequate in that they did not assess the levels of arsenic contamination.

Virginia City, NV

We found recent residential and commercial development at an CW

abandoned mine **CW** sites **CW** in Virginia City, NV, identified as public land **CW**. Virginia City has a population of about 1,100 people and is a major tourist attraction in the area. BLM acknowledged that ownership of the land for most of Virginia City is in dispute and has been since about 1860. **BLM response to draft report**  
A 1991 letter from BLM NV State Director to a U.S. Senator identified land title issues in Virginia City and possible options for resolution. However, the issue remains unresolved. **K.BLM.VirginiaCity.08**

**State Director Letter CW**

(b) (5)

**CW**

We **CW** found commercial enterprises, including an operation that offered tours of a mill, recently built homes, and undeveloped residential lots offered for sale. The tour site included a large and dangerously dilapidated mill building and a mine adit where two residents exploring the mine in 1996 were killed by suffocation. The adit has been gated since that incident. Until BLM resolves the title disputes in Virginia City, trespass may continue on public lands that include abandoned mine sites with safety hazards and potential environmental contamination. **CW**

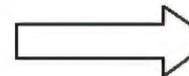
**K.BLM.VirginiaCity.08 State Director Letter CW**

(b) (5)



BLM aerial photo of Virginia City, NV, showing public land highlighted in yellow.

**K.BLM.VirginiaCity.01 Trespass Issues (17) K.BLM.VirginiaCity.07 Aerial Photo of Section 29 CW**



**K.BLM.VirginiaCity.01 Trespass Issues [referencer: labels, arrows and circles were added to the report based on the discussion in the para linked here]**



Lot for sale in trespass in Virginia City, NV (OIG Photo)

**K.BLM.VirginiaCity.01 Trespass Issues CW**

(b) (5) [REDACTED] CW

(b) (5) [REDACTED]

[REDACTED]

[REDACTED] CW

Based on the existence of the Rand Mining District and Virginia City CW sites, it is very possible that other similar CW sites exist on public lands where safety or environmental hazards may endanger people in trespass. In these cases, there is an increased risk of injury or death due to safety hazards and environmental contamination. DOI's efforts to mitigate these sites will be more complicated because DOI has allowed this trespassing CW to continue for decades.

### CW Site Inventory

BLM's national abandoned mine land inventory is in poor condition. ■ J.BLM.02 BLM AMM Data - AMM Deficiencies CW BLM has a national inventory of about 12,000 abandoned mine CW sites included in its Abandoned Mine Module. The inventory CW must include data necessary for budget justification and project monitoring, tracking, and management at the national level. We found that BLM's inventory CW was incomplete, inaccurate, and inconsistent. For example, much of the data in the inventory CW was derived from the U.S. Bureau of Mines ■ J.BLM.02 BLM AMM Data - AMM Deficiencies CW over 10 years ago CW and was never validated by field surveys.

■ In addition, BLM field office abandoned mine CW staff are not identifying or entering known, high-priority abandoned mine CW sites into the inventory CW database. For California, the inventory CW lists only about 400 abandoned mine CW sites on public land while BLM estimates the California Desert District alone has as many as 20,000 sites. We also found that many BLM field office staff keep local lists of dangerous abandoned mine CW sites that are not being entered in the inventory CW database.





Preserve [REDACTED], [REDACTED]. CW Mojave was established in 1994 when approximately 1.4 million acres were transferred from BLM to NPS ( I.NPS.MOJA.01 Mojave National Preserve [REDACTED], [REDACTED]).(20) [REDACTED] CW At the time, the abandoned mine lands inventory included over 600 sites. These sites required field verification. Mojave staff has [REDACTED] (b) (5) -inspected, evaluated, and prioritized 274 sites; (I.NPS.MOJA.02 Mojave AML Inventory [REDACTED], [REDACTED]).(21) [REDACTED] (b) (5) CW has continued to develop and refine an extensive and detailed targeted inventory of its most dangerous sites; (I.NPS.MOJA.02 Mojave AML Inventory [REDACTED], [REDACTED]) CW and has pursued CW project funding from the Pacific Region( I.NPS.MOJA.03 Mojave AML Funding Requests [REDACTED], [REDACTED]). CW However, since Mojave was created, it has received little or no funding for site mitigation ( I.NPS.MOJA.03 Mojave AML Funding Requests [REDACTED], [REDACTED]).(21) [REDACTED] CW

### NPS CW Program Funding

According to NPS, current funding is inadequate to address known abandoned mine issues within parks, and the process of “budget erosion” – no fund increases coupled with rising costs – has limited funds available for abandoned mine site mitigation. CW However, NPS does not have a good estimate of the total costs necessary CW to mitigate abandoned mine hazards. In 1995, NPS developed an estimate of unfunded abandoned mine land projects. This estimate totaled \$165 million with immediate high risk needs of approximately \$43 million. We found that NPS had not updated this estimate and did not have a current estimate of funding needed to address abandoned mine hazards. At the conclusion of our audit in April 2008, NPS updated this estimate to \$233 million with \$60 million for immediate high risk needs. However, this estimate simply adjusted the 1995 aggregate estimate for inflation to derive costs in 2008 dollars. This calculation did not consider any changes in conditions that occurred since 1995 and did not reflect any updated inventory and risk information that could impact mitigation costs. NPS stated that it is creating a new, more detailed and accurate database of abandoned mine sites that will better identify specific mine features and proposed mitigation costs. [REDACTED] NPS response to draft report. CW

NPS’ abandoned mine lands program is funded as part of the broader NPS Disturbed Land Restoration Program, CW which restores lands that have been affected by development or agriculture back to the unimpaired natural conditions. These funds can be used to address restoration activities resulting from camping, farming, grazing, timber harvest, or abandoned facilities such as buildings, roads, dams, and mines. B.NPS.03 Funding for NPS AML [REDACTED], [REDACTED] CW Since 2000, specific abandoned mines funding within NPS has been inconsistent, ranging from a high of approximately \$650,000 in FY 2001 to a low of \$121,000 in FY 2003. CW These funding issues have prevented needed mitigation of abandoned mine hazards in Mojave (I.NPS.MOJA.01 Mojave National Preserve [REDACTED], [REDACTED]) CW and delayed mitigation of many hazards at the other four parks we visited (I.NPS.JOTR.19 Meeting with Luke Sabala - JOTR Scientist and AML Lead [REDACTED], [REDACTED], I.NPS.GRCA.03 Summary of Grand Canyon [REDACTED], [REDACTED], I.NPS.DEVA.17 Meeting with David Ek - Assistant Chief of Resource, NPS [REDACTED], [REDACTED], C.NPS.LAME.01 Lake Mead Recreation Area Site Visit [REDACTED], [REDACTED]) (b) (5)

[REDACTED] CW (b) (5) [REDACTED]

Note to referencer: This information was included in the first referenced version of the draft report. See A.19 Index 4 Budget [REDACTED], [REDACTED] (22) [REDACTED]

CW

In 2008, Congress appropriated approximately \$2 million to address abandoned mine hazards in California; [REDACTED] CW \$600,000 was allocated to Mojave. Mojave has developed a plan to use these funds to mitigate high priority sites (I.NPS.MOJA.01 Mojave National Preserve [REDACTED]). CW

### BLM AND NPS BEST PRACTICES

#### Dedicated Abandoned Mine Land Staff

We found that the BLM Arizona State Office CW had responded aggressively to address the issues identified in OIG Flash Report No. C-IN-MOA-0013-2005, "Public Safety Issues at Saginaw Hill Property," issued in March 2005 (23). [REDACTED] CW The office hired an abandoned mine lands CW program lead with significant experience in large environmental projects and a full-time abandoned mine lands CW coordinator with an environmental background who was assigned to the Phoenix District Office. This coordinator [REDACTED] has responsibilities for abandoned mines and hazardous materials in the 10 field offices included in the Gila and Phoenix districts. BLM Arizona State Office officials stated that this approach was more effective than using collateral [REDACTED] CW staff. [REDACTED] K.BLM.Arizona.03 AZ Zoned AML Management CW

#### Targeted Environmental Site Inventory

(b) (5) [REDACTED] The CW BLM California State Office implemented a multidisciplinary team approach in the California Desert District to identify and assess sites with serious environmental contamination. CW The team uses experts from BLM offices including the California State Office and National Operations Center and [REDACTED] other agencies including the U.S. Geological Survey. CW The team is targeting sites in areas where residential and commercial development is occurring or is likely to occur in the near future. CW To date, the team has conducted site visits to one of the District's five field offices and has identified eleven sites with significant actual or suspected environmental contamination. [REDACTED] K.BLM.California.01 Rapid Assessment Technical Team CW

(b) (5) [REDACTED] CW [REDACTED] K.BLM.RosamondCA.01 Site Visit

(b) (5) [REDACTED]

(b) (5)

Partnerships with Other Organizations

BLM CW initiated the Nevada Abandoned Mine Land Environmental Taskforce in March 1999 to address environmental hazards associated with abandoned and inactive mines in Nevada. The taskforce includes 13 federal and state agencies that work together to (1) foster regulatory cooperation, (2) identify priority sites for cleanup, and (3) provide administrative oversight for funded projects. The taskforce allows several agencies to leverage their funding cooperatively to mitigate abandoned mine CW hazards.

In September 2007, CW a joint BLM and U.S. Forest Service report was issued titled, "Abandoned Mine Lands: A Decade of Progress Reclaiming Hardrock Mines." CW The report addresses [referenced: see Report's Table of Contents] collaborative progress made in protecting and remediating three western watersheds and other environmental and physical safety hazards. CW Additionally, the report addresses future planned efforts to enhance site inventories, leverage resources, and share technological innovations. CW We believe this collaborative effort is another example of successful partnerships being utilized by BLM. ■ J.BLM.21 BLM/USFS AML 10 Year Report CW

The Desert Manager's Group (<http://www.dmg.gov>) ■ NPS response to draft report. CW is a regional interagency partnership among federal, state, and local entities that CW manage California's 20-million-acre desert region. The desert region includes three ■ (26) ■ L.e Desert Managers Group ■. ■ CW national parks, 72 wilderness areas, and six military bases and has a large portion of the abandoned mine CW sites that are located in the Southwest. The Desert Manager's Group CW has recently kicked off a 5-year effort to form partnerships to leverage funding and mitigate the highest priority abandoned mine sites in the California Desert Region.

In 2006, the Desert Manager's Group CW began developing the list of abandoned mine CW sites in the desert region, identifying the capabilities of the different agencies within the Desert Manager's Group CW and prioritizing the mitigation of abandoned mine CW sites. The Desert Manager's Group's CW latest 5-Year Plan for FY 2007 through FY 2011 identifies goals to (1) form partnerships to leverage funding, (2) develop a central database of abandoned mine CW sites within the desert region, and (3) mitigate the highest priority environmental and physical safety sites.

This collaborative effort among agencies such as BLM, NPS, the Department of Defense, and the State of California could provide a

benchmark for maximizing efficiency in mitigating abandoned mine sites.

Prefabricated Materials for Mitigation

At Joshua Tree National Park, NPS has the capabilities to mass produce prefabricated mine covers and gates. This enables a large number of sites to be mitigated economically and efficiently. CW We believe this approach is a good model that could be expanded within NPS and adopted by [REDACTED] BLM. CW



Utilizing Volunteers to Address Abandoned Mine Issues

We learned that volunteers assist NPS and BLM in identifying and inventorying abandoned mine sites. CW For example, at Joshua Tree National Park, a retired sheriff helps locate and map abandoned mine CW sites within the park.

In Nevada, BLM is supported by the state's Division of Minerals, which uses college students to identify and inventory abandoned mine features. ■ J.BLM.11 State of NV - Division of Minerals CW BLM has also developed a grassroots effort to mitigate physical hazards using volunteer labor and donated fuel, heavy equipment, and materials. ■ L.Best Practices CW

We believe using volunteers can be beneficial if they are properly trained and supervised. ■ L.Best Practices CW

Site Closures

In August 2006, BLM closed several environmentally contaminated abandoned mine land sites in California to protect the public. CW These closures included public lands at the Pond, Poore, Gold Run, Poison Lake, Davis, and Longfellow sites located in the California counties of Amador, Placer, Nevada, and Tuolumne. ■ L.g Withdrawal, Segregation and Closure of Lands CW The closure included all forms of entry by the public, including mineral access, (27) ■ and facilitated environmental remediation actions. We believe site closures could be used more often to protect the public. CW

**CONCLUSION**

As it stands, public safety is at risk because physical and environmental hazards at abandoned mine lands CW have been ignored by DOI for decades. Abandoned mine lands programs in DOI are in need of a firm commitment to protect the public, sustained funding, and dedicated staff. [Auditor opinion based on entire report] CW

## RECOMMENDATIONS

This report makes ~~89-10~~ **CW** recommendations that, if implemented, should help the bureaus address these long-standing issues. **CW**

We recommend that the ~~(b) (5)~~ **CW** BLM Director do the following:

1. Issue a clear policy statement that:

- Supports the abandoned mine lands program and its goals. **CW**
- Forbids retaliation against employees for identifying or reporting abandoned mine sites. **CW**
- Requires field-office management and staff to comply with all abandoned mine lands **CW** policies and procedures. **CW**

2. Employ experienced, trained **CW** full-time staff dedicated to the abandoned mine lands program at the state- and field-office levels in California, Arizona, and Nevada and other states where appropriate. **CW**

3. Establish a specific line **CW** item ~~(b) (5)~~ **CW** in the budget for the abandoned mine lands program and request ~~(b) (5)~~ **CW** - funding to accomplish project goals identified in the abandoned mine strategic plan. **CW**

4. Identify and resolve trespassing on abandoned mine sites and assess and mitigate hazards associated with these sites. **CW**

5. Validate existing inventory data and develop procedures for ongoing data collection to ensure that data in the inventory is complete, accurate, and consistent. **CW**

~~(b) (5)~~

~~(b) (5)~~ **CW**

We recommend that the ~~(b) (5)~~ **CW** NPS Director do the following:

6. ~~7.~~ **CW** Request adequate ~~(b) (5)~~ **CW** funding to support program goals and to **CW** mitigate sites identified by the abandoned mine lands program. **CW**

~~(b) (5)~~

(b) (5) ~~CW~~

We recommend the (b) (5) ~~CW~~ BLM Director and NPS Director to do the following:

7. 8. ~~CW~~ Implement immediate temporary or permanent measures to mitigate known dangerous sites, including those identified in Appendix A of this report. ~~CW~~

8. 9. ~~CW~~ Explore and exploit (b) (5) ~~CW~~ opportunities for sharing resources, expertise, and best practices between the agencies to strengthen their abandoned mine lands ~~CW~~ programs. ~~L.e Desert Managers Group~~ ~~CW~~

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**Version:** Final Report  
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**Referencer Comments**

Prepared by: Constance Wardle 01/11/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Subject:** Referencer Comments



Referencer Comment Sheet.pdf

**Referencer's Comment Sheet (Blank)**

	Referencer's Comments (Referencer's Name/Initials(XXX))	Audit Staff / Managers Proposed Disposition of Comments: Staff Name/Initials(XXX), Manager's Name/Initials (XXX)	Initials for Change or Disposition
[1]	<u>Appendix C</u> Ruth Mine 4th bullet. The Report says Recent Trespass in residence. Do you mean that the people in the picture are trespassing or do you mean that the residence is in trespass?	We observed evidence of transients living in the residence, e.g. open bottle of wine and fresh salad; people were gone when we arrived. WHM 1/22/07	CW 05/01/08
[2]	<u>Appendix A</u> Did we get documentation that the shaft was on private land? If not, we should say that BLM stated that the shaft was on private land.	Agree. added ....K.BLM.Arizona.09 Map showing location of accident site SRP 1/16/07	CW 1/29/2008
[3]	<u>Appendix C</u> I could not find this on the sited work paper.	Agree. Added *Reporting Management's Response	CW 1/29/2008

		to Draft Report ■ SRP 1/16/07	
[4] ■	<u>Appendix C</u> Conclusions need to be in the work papers. Please add this to the work paper.	Agree. Added conclusion to w/p. K.BLM.04 Fatality at the Goat Basin Mine ■ SRP 1/16/07	CW 1/29/2008
[5] ■	<u>Appendix C</u> This bullet needs to be indexed.	Agree. Added I..NPS.JOTR.20 JOTR Mill Site Inspection Report ■ SRP 1/16/07	CW 1/29/2008
[6] ■	<u>Appendix C</u> Please clarify the "little input" The AML coordinator had never seen the list. Should this be not input?  When the appendix was revised and changed to Appendix A this bullet was added back in?	Agree. Deleted the bullet . SRP 1/16/07 Deleted bullet in Appendix A WHM 5/2/08	CW 5/15/2008
[7] ■	<u>Appendix C</u> Please clarify in the work paper that Alpha radiation is the same as radon.  When the appendix was revised and changed to Appendix A radon was left in and radiation was taken out?	Changed "radon" to "radiation" SRP 1/16/07  Changed "radon" to "radiation" WHM 5/2/08	CW 5/15/2008
[8] ■	<u>Appendix B</u> The work paper says that the site is North of Panaca. Please add clarification that the site is upstream of Panaca.	Added wording to W/P and cross indexed to K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis ■ (See Risk Assessment tab, next	CW 1/29/2008

		to last para) WHM 1/22/07	
[9]	<u>Appendix B</u> The work paper sited states 90 acres not 150?	Agree. Changed in AA and in the report. SRP 1/16/07	CW 1/29/2008
[10]	<u>Appendix B</u> The report says "In February 2006, the Bureau of Land Management (BLM) identified evidence of serious environmental contamination in the District." Please furnish support showing that site hazards were largely ignored until 2006. How can you ignore something you have not identified?	Added link to W/P D. Environmental & Safety Issues See paras in Conclusion starting with "Prior to 2005..." and "As part of a study..." WHM 1/22/07	CW 1/29/2008
[11]	<u>Appendix B</u> Please furnish support for "BLM has erected another wire fence recently."	*Reporting Management's Response to Draft Report SRP 1/16/07	CW 1/29/2008
[12]	<u>Appendix B</u> The work paper that the shaft is 800 feet deep?	Changed 600 to 800. Couldn't provide a link because the wp is in line to be reviewed and I didn't have access. SRP 1/16/07	CW 1/29/2008
[13]	<u>Appendix B</u> The link takes me to the picture. Please add a link that takes me to support for the text.	Deleted the original link and provided a link to the correct w/p. Sorry. SRP 1/16/07	CW 1/29/2008
[14]	<u>Appendix D</u> The statements were found in the work paper indicated, but the work paper needs to be cross indexed to examples for each of the statements.  I found all but one statements on the indexed work papers. Please indicate where on the work papers I can find the information on how you selected your sites.	Cross indexed Audit Methodology to most relevant workpapers. WHM 1/22/07	CW 5/15/2008

[15]	Appendix D Please link this sentence to examples in the Results of Audit section of the report.	Added... to show list of deficiencies in the report. SRP 1/16/07	CW 1/30/2008
[16]	Appendix E The title of the report should be "Environmental, Health and Safety Issues at Bureau of Land Management Ridgecrest Field Office Rand Mining District, CA"	Agree. Changed in AA and in the report. SRP 1/16/07	CW 1/30/2008
[17]	Appendix F DOI - Departmental Offices. Shouldn't this be DO? Is Departmental Offices referred to any where in the report?	Deleted DOI - Departmental Offices. SRP 1/16/07	CW 1/30/2008
[18]	Appendix F SMIS is mentioned numerous times in the cross indexed work paper, but it is never defined?	Deleted SMIS...not mentioned in the report. SRP 1/16/07	CW 1/30/2008
[19]	<p>Appendix F Abbreviations that need to be added. AMM, DMG, OHV, NPFR, LMNRA, and PAR. You also establish FLPMA, DLR, and NAMLET as acronyms but I do not see where you used these after they were defined. They need to be added to the appendix or deleted from the report. Should we also define AZ, CA, and NV?</p> <p>The abbreviations were added to the Abbreviation work paper (G.09) and to the report, but they were not added to Auto Audit.</p> <p>ORV was not added to the Appendix, but it is still being used on pages 20 and 27 of the report. Should we spell it out in the report or added it to the Appendix?</p>	<p>Red text means abbreviations added to the appendix. Strikethrough means abbreviation not needed. Blue means I kept the abbreviation and added to the appendix. We decided not to add state abbreviations to the appendix. SRP 1/17/07</p>	<p>CW 5/15/2008 I am closing this note. There are still concerns in the new version of the report, but they are in reference note 28 of Reference r Comments HQ Version</p>



	<p>pose hazards. not C.NPS.01 NPS AML Inventory. . Please correct the indexing.</p> <p>Also do we need to show that this information came from the BLM website and a NPS employee? These numbers are not supported by anything. Especially NPS number.</p>	<p>changed.</p> <p>SRP 02/08/08</p>	<p>5/12/2008 This statement is no longer in the report.</p>
[26]	<p><u>Background</u> The links do not support the statement "has been an important part of the economy of the Western United States." Please add additional indexing.</p>	<p>G.DOI.02 Seymour Article added link WHM 1/25/07</p>	<p>CW 1/31/2008</p>
[27]	<p><u>Background</u> The document indexed does not mention concrete covers?</p>	<p>added link to K.BLM.Arizona.02 Site Visits WHM 1/28/07</p>	<p>CW 1/31/2008</p>
[28]	<p><u>Background</u> The work paper indexed does not mention the demolition of or removal of buildings and structures.</p>	<p>added summary conclusion with cross indexing and added link to K.BLM (Site Visits) WHM 1/28/07</p>	<p>CW 1/31/2008</p>
[29]	<p><u>Background</u> I do not see arsenic or lead mentioned on the work paper?</p>	<p>added link to K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis WHM 1/28/07</p>	<p>CW 1/31/2008</p>
[30]	<p><u>Background</u> The picture was not found on the indexed work paper? OK the K.BLM.Arizona.06 linked in the report, links to a work paper marked for deletion. If I go to the Work Paper Index there is a K.BLM.Arizona.06 that does have this picture.</p> <p>Also is this the site on private land? The caption makes it sound like it is on BLM land.</p>	<p>New Cross-indexing provided SGC 2/7/2008.</p>	<p>CW 2/7/2008</p>
[31]	<p><u>Results/Field Mgmt/Staffing</u> The work paper does not indicate that the math was verified.</p>	<p>math verified on 1/28/08 WHM 1/28/08</p>	<p>CW 1/31/2008</p>

<p><b>[32]</b> ■</p>	<p><u>Results/Field Mgmt/Staffing</u> This work paper does not show the Flash Reports Number and Title. There is a link, but I do not have the authority to access the link.</p> <p>Since ", Bureau of Land Management" is a part of the title, should it be included as part of the title in the current report?</p>	<p>added report # and title to W/P ■ WHM 1/28/07</p>	<p><b>CW</b> 5/16/2008 See Note 23 of the Revised Draft Report</p>
<p><b>[33]</b> ■</p>	<p><u>Budget and Funding</u> The conclusion of the work paper agrees with the numbers in the report, but the numbers in the details do not agree with the conclusion. I could not find the \$439,000 anywhere and the \$190,000 looks like it is for 2007.</p> <p>The Conclusion in the work paper needs to be corrected.</p>	<p>The work-paper is correct...the Word version has been changed to "\$650K in FY00 to \$121K in FY03" AA version and Word have been changed.</p> <p>SRP 02/05/07</p> <p>Conclusion in the wp has been corrected. SRP 05/13/08</p>	<p><b>CW</b> 5/15/2008</p>
<p><b>[34]</b> ■</p>	<p><u>Site Trespass</u> I could not find 2005 in the work paper or in the Rand Mining District report. Should this be 2006?</p> <p>The Report number was C-IN-BLM-0012-2007 not MOA.</p> <p>The Report title should have ", CA" at the end.</p>	<p>Changed to 2006 in Report</p> <p>Changed to BLM in Report</p> <p>Added CA at end of title in Report WHM 1/28/07</p>	<p><b>CW</b> 1/31/2008</p>
<p><b>[35]</b> ■</p>	<p><u>Inventory</u> This conclusion was not found on the indexed work paper.</p>	<p><i>Additional Cross</i></p>	<p><b>CW</b></p>

		<i>indexing provided SGC 1/28/08</i>	<i>1/31/2008</i>
<b>[36]</b>	<u>Inventory</u> I could not find the 10 years on the indexed work paper.	<i>Additional Cross indexing provided SGC 1/28/08</i>	<i>CW 1/31/2008</i>
<b>[37]</b>	<u>Inventory</u> I could not find the "California desert District alone has as many as 20,000 sites." on the indexed work paper.	<i>Additional Cross indexing provided SGC 1/28/08</i>	<i>CW 1/31/2008</i>
<b>[38]</b>	<u>Inventory</u> I could not find the "needed to locate, evaluate, monitor and track AML hazards." on the indexed work paper.	<i>Additional Cross indexing provided SGC 1/28/08</i>	<i>CW 1/31/2008</i>
<b>[39]</b>	<u>Inventory</u> The handbook's definition requires BLM not to enter data after 1980, but do we have anything that shows that they are not entering later data?	<i>Additional Cross indexing provided SGC 1/28/08</i> <i>(sites after 1980 are post FLPMA sites - which as indicated by the additional index are not identified or inventoried by BLM)</i>	<i>CW 1/31/2008</i>
<b>[40]</b>	<u>Best Practices - Volunteers</u> I could not find that the volunteer was a retired sheriff on the work paper.	Added clarification to the WP. The volunteer was a retired San Bernadino County Sheriff. SRP 02/05/08	<i>CW 2/7/2008</i>
<b>[41]</b>	<u>Best Practices - Volunteers</u> I could not find the State's Division of Minerals on the indexed work paper. I did find it on the indexing for the second sentence. The second indexed work paper talks about Eagle Scouts not college students. I did not find college students on any of the three indexes. I could not find that materials were being donated. I also do not see that the last sentence in this section has been indexed.		<i>CW 5/12/2008 The revised report added indexing that answered this</i>

			reference note.
[42]	<u>Best Practices - Partnerships</u> The support shows Taskforce as two words - Task Force.	Changed to Task Force in both AA and in Word. SRP 02/13/08	CW 2/15/2008
[43]	<u>Best Practices - Closures</u> The word "access" is not a quote. The wording needs to be changed or the quote marks need to be removed.	Revised W/P and report (02-13-08 version) to say "entry" instead of "access" WHM 2/13/08	CW 2/15/2008
[44]	Some of the work papers do not follow the Working Paper Handbook and the QAR Results document sent out by Jack on 1/14/2008. Specifically, I noted "N/A" in the "Details" and "Methodology" sections of some of the work papers. According to the Handbook and the QAR Results, this is not allowed.	So noted, RAM decision to let workpapers pass per email on 7/16/08 to Illson.  "Jack, I spoke to Bill this morning. Connie wants us to go back to all W/P's without a methodology and put one in. This will be quite time consuming with little substantive value. Would you be will to pass on this comment?"  REPLY FROM RAM: "I will be willing to pass on this - but please fill that out in the future."  WHM 7/18/08	Pass for draft. Please ensure complete for final. Per Jack Rouch 6/2/2008
[45]	In the fifth arrow bullet on page 10 AML is spelled ALM.	Corrected in both AA and in Word. SRP 02/05/08	CW 2/7/2008

[46]	<p><u>Results/Field Mgmt/Staffing</u> GRD needs to be spelled out and the abbreviation needs to be added to Appendix F.</p> <p>Needs to be spelled out in the word document.</p>	Spelled out and added to abbreviation page in AA and in Word. SRP 02/05/08	<p>CW 5/12/2008 This statement is no longer in the report.</p>
[47]	On page 5 of the Word copy of the report (1/28/2008), AML Staffing and Training section, the M in Mitigation (first word) is crossed out and when you put the document in Final the M is not shown.	Corrected the Word version. SRP 02/05/08	<p>CW 2/7/2008</p>
[48]	<u>Results/Field Mgmt/Staffing</u> The word report and the work paper state 59 percent have not received AMM training. The Auto Audit report states 59 percent have received AMM Training.	Added "not" to the AA version. SRP 02/05/08	<p>CW 2/7/2008</p>
[49]	On page 6 of the word version of the report, shouldn't the chart be at the end of the bullets?		<p>CW 5/12/2008 This statement is no longer in the report.</p>
[50]	On page 7 of the Word copy of the report (1/28/2008), Budget and Funding, last sentence of the second paragraph, the words "line items" after the work "budget" need to be deleted.	Deleted "line items" in the Word version SRP 02/05/08	<p>CW 2/7/2008</p>
[51]	<p>On page 8 of the Word copy of the report (1/28/2008), Virginia City, the first sentence is not the same in Auto Audit. Also the "at" needs to be moved over.</p> <p>"We found recent trespass including residential and commercial development at an AML site (b) (5) -in Virginia City, NV identified as public land on BLM maps." The statement in red above is not in the word document.</p> <p>In the second paragraph, the second sentence is not the same in the Word document and the Auto Audit document.</p>	<p>Changed AA version to match Word version.</p> <p>The word "who" was</p>	<p>CW 5/12/2008 A new report has been written and I will check it for this type of issue.</p> <p>CW 2/7/2008</p>

		missing in the Word Version. Added. SRP 02/05/08	
[52]	On page 9 of the Word document (1/28/2008) there is text for the map that is not in Auto Audit.		CW 5/12/2008 A new report has been written and I will check it for this type of issue.
[53]	On page 9 of the Word document (1/28/2008) the Left Column heading "BLM AML Inventory" is missing in the Word document.	Added heading to the AA version. SRP 02/05/08	CW 2/7/2008
[54]	<u>Best Practices</u> In the statement "NPS personnel from Jashua Tree NP installing..." NP is spelled out in the word document, but not in Auto Audit.	Corrected the AA version and spelled out National Park. SRP 02/05/08	CW 2/7/2008
[55]	<u>Appendix A</u> Goat Basin, the wording in the first bullet is different between the word document and auto audit.	Wording is the same...but one ward was hidden behind an arrow. Will fix formatting. SRP 02/05/08	CW 2/8/2007
[56]	<u>Appendix D</u> In the Audit Scope USFWS should be just FWS to match the word document  When the appendix was revised and changed to Appendix C FWS was changed back to USFWS?	Corrected the AA version. SRP 02/05/08  Changed AA and Word version to "FWS" WHM 5/2/08	CW 5/15/2008
[57]	<u>Appendix D</u> Need to add (PAR) to match word document.	Added PAR to the	CW 2/7/2008

		AA version SRP 02/05/08	
[58]	<u>Appendix E</u> BLM is not spelled correctly in Auto Audit and in the word document.	Corrected the AA ond in Word SRP 02/05/08	CW 2/7/2008
[59]	<u>Appendix C</u> Abbreviation for Lake Mead is in the word document but not in auto audit.	Added aabbreviation to the AA version SRP 02/05/08	CW 2/7/2008
[60]	<u>Appendix A</u> There are two <b>C.NPS.DEVA.01 Death Valley National Park Site Visit</b> . The link in the left column links to the work paper without the picture.  When John reviews the work paper, he needs to state in the linkage section that he has reviewed and is aware that new information was added.	I added the picture to the w/p. SRP 02/13/08 I have no idea how I created two of the same work-paper.  Illson so noted in the linkage section of the workpaper WHM 7/18/08  Added Language to linkage section JI 7/18/08	This work paper is currently locked do to AutoAudit issue. Pass for draft, but will need to be done for final. Per JI 6/2/2008
[61]	<u>Appendix A</u> The holes were filled in between 1977 and 1978, but do we have something that says the death occurred in 1977?	Good catch Connie. the death occurred in 1970 not 1977. See page two of the attachment in the supporting	CW 5/12/2008 This statement is no longer in the report.

	<p>The change was made in AA and in the 2/8/2008 version of the word document, however, the 2/13/2008 version of the word document does not show the change???</p>	<p>work-paper added  <b>D.NPS.01 NPS- Injuries and Fatalities</b> ■.                  Chnagne made to Word and AA.                  SRP 02/12/08</p>	
<p><b>[62]</b> ■</p>	<p><u>Appendix A</u> I do not see this picture on the work paper or on the see photo links in the work paper.  <b>C.NPS.LAME.01 Lake Mead Recreation Area Site Visit</b> ■</p> <p>When John reviews the work paper, he needs to state in the linkage section that he has reviewed and is aware that new information was added.</p>	<p>Picture added to the work-paper                  SRP 02/13/08</p> <p>Illson so noted in the linkage section of the workpaper                  WHM 7/18/08</p> <p>Added Language to linkage section JI                  7/18/08</p>	<p><b>This work paper is currently locked do to AutoAudit issue. Pass for draft, but will need to be done for final. Per JI 6/2/2008</b></p>
<p><b>[63]</b> ■</p>	<p><u>Results/Field Mgmt/Staffing</u> The auditor's conclusion needs to be added to the work paper.</p> <p>Also the last sentence in the paragraph needs to be indexed.</p>	<p>Opinion added to the conclusion of the work-paper.                  SRP 02/13/08</p>	<p><b>CW 2/22/2008</b></p> <p><b>CW 5/12/2008 This statement is no longer in the report.</b></p>
<p><b>[64]</b></p>			

[65]			
[66]			
[67]			
[68]			
[69]			
[70]			

Submission: Submitted John Illson 06/03/2008 08:21:01 AM  
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## Referencer Comments

Prepared by: Constance Wardle 07/15/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Subject:** Referencer Comments Final Report and Appendices



Signed Referencers Comment Sheet.pdf All Notes have been cleared. CW 7/18/2008

### Referencer's Comment Sheet

Comment #	Referencer's ( <i>referencing Auditor or Evaluator name / initials</i> ) Comments	Audit Staff Proposed Disposition of Referencer's Comments	Initials for Change or Disposition
<a href="#">[1]</a>	Please add the OIG Analysis of NPS' Response to Draft Report to the Table Of Contents and correct the page number for the Status of Recommendations. - In AutoAudit	Added information WHM 7/15/2008	CW 7/18/2008
<a href="#">[2]</a>	<b>Abbreviations in the Report</b> <ol style="list-style-type: none"> <li>EPA is only used once, so please delete (EPA) on page 5.</li> <li>SOL is only used once, so please delete (SOL) on page 9.</li> <li>FAST is only used once, so please delete (FAST) on page 12.</li> <li>ORV is only used once, so please spell out ORV on page 16.</li> <li>AML is only used once, so please spell out AML on page 25.</li> </ol> <b>Appendix D</b> <ol style="list-style-type: none"> <li>FWS is not used in the report.</li> </ol>	Per conversation with Jack Rouch, Regional Audit Manager, we determined that numbers 1 and 3 would be left as is. Numbers 2, 4, and 5 were changed and FWS was deleted from Appendix D. CW 7/15/2008	CW 7/15/2008
<a href="#">[3]</a>	<b>Appendix E</b>	Per conversation with Jack	CW 7/15/2008

	Field Office Management - in the last sentence "...condoned or tolerated and it when it" please delete the first "it".	Rouch, Regional Audit Manager, the "it" has been deleted. CW 7/15/2008	
<a href="#">[4]</a>	<b>Appendix E</b> In our response to Field Office Management comments - "and questionnaire reponses from almost all remaining BLM employees with significant abandoned mine lands responsibilities in California, Arizona, and Nevada." This information needs to be added to the work paper. It is not clear from just the list of field offices.	added link to <b>J. BLM (Overall)</b> and modified W/P to explain that AML coordinators at field offices in the three states were contacted by phone or questionnaire to answer relevant questions. WHM 7/15/08	CW 7/15/2008
<a href="#">[5]</a>	<b>Appendix E</b> In our response to Field Office Management comments - I do not see in the report that we have stated (referenced) the last sentence on this cell.	added link to <b>J.BLM.29 AML Staff Qualifications</b> WHM 7/15/08	CW 7/15/2008
<a href="#">[6]</a>	<b>Transmittal</b> Plese add the names to the work paper for the Assistant Secretaries.	added link to <b>A.08 DOI Organizational Chart</b> WHM 7/15/08	CW 7/15/2008
<a href="#">[7]</a>	<b>Transmittal</b> Shouldn't this be "Abandoned Mine Lands in the Department of the Interior"? - The actual title of the report.	Made change to transmittal letter in AA and WORD WHM 7/15/08	CW 7/15/2008
<a href="#">[8]</a>	We still need to address notes 44, 60, and 62 on the original Review Comments Document.	addressed in <b>*Reporting Referencer Comments</b> WHM 7/18/08	Comment Added to prior reference notes Note Cleared CW 7/15/2008
<a href="#">[9]</a>			
<a href="#">[10]</a>			
<a href="#">[11]</a>			
<a href="#">[12]</a>			
<a href="#">[13]</a>			
<a href="#">[14]</a>			
<a href="#">[15]</a>			

<a href="#">[16]</a>			
<a href="#">[17]</a>			
<a href="#">[18]</a>			
<a href="#">[19]</a>			
<a href="#">[20]</a>			
<a href="#">[21]</a>			
<a href="#">[22]</a>	Additional rows can be added using the tab key.		

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**Current Editor List:** [C MGT], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI

**Referencer Comments**

Prepared by: Constance Wardle 05/06/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Subject:** Referencer Comments HQ Version



Referencer Comment Sheet.pdf This is the signed Referencer Comment Sheet

**Referencer's Comment Sheet**

Comment #	Referencer's ( <i>referencing Auditor or Evaluator name / initials</i> ) Comments	Audit Staff Proposed Disposition of Referencer's Comments	Initials for Change or Disposition
[1]	<p>1. It looks like we visited over 40 areas (39 BLM and 5 NPS), do we want to change this?</p> <p>2. For BLM the work paper states "We also talked in person or by phone to over 60 DOI (5 DOI) and BLM (65 BLM) staff" The 5 and 65 total 70 not 60? We also talked to 15 employees at NPS. Should the total be 85?</p> <p>Also, the 30(40) and 75(85) should be totaled in a work paper somewhere.</p>	<p>1. Agree. Changed to 40 in AA and Katie Balestra changed the Word version.</p> <p>2. Added <b>G.NPS.1 Total Number of Employees Contact during Audit</b> to show that we talked to more than 75 employees from BLM and NPS. Since we say BLM and NPS, did not count the 5 DOI people.</p> <p>3. Over 40 areas totaled in <b>K. BLM (Site Visits)</b> Number of people contacted totaled in <b>G.NPS.1 Total Number of Employees Contact during Audit</b></p>	<p>CW 5/16/2008</p> <p>CW 5/15/2008</p> <p>CW 5/15/2008</p>
[2]	Needs to be referenced.	<p>Added <b>B.NPS.03 Funding for NPS AML</b>. I could not get access to this work-paper to put in an anchor link. The second sentence of the conclusion explains that NPS estimated costs back in 1994, the estimate back then was a "WAG". They don't have a current estimate and we're not going to give them credit for the old one since it was 14 years ago. SRP 05/13/08.</p> <p>Also provided cross-indexing to the statements made in the rest of the paragraph. SRP 05/13/08</p>	CW 5/15/2008

<a href="#">[3]</a>	Needs to be referenced.	Added that this was an auditor opinion based on a best practice identified in the best practices section of the report. Added an anchor link to that section. SRP 05/15/08	CW 5/16/2008
<a href="#">[4]</a>	This picture was not indexed in the original draft. Please add indexing.	Added autodoc link to <a href="#">J.BLM.34 Vehicle Recovery</a> that shows relevant photo WHM 6/2/08	CW 6/2/2008
<a href="#">[5]</a>	I cannot find this picture in the original draft. Please add indexing.	Added <a href="#">I.NPS.DEVA.19 Photos - Death Valley Mine Sites</a> SRP 05/13/08	CW 5/14/2008
<a href="#">[6]</a>	<p>1. The work paper and the attached document need to have independent math verification performed.</p> <p>2. The attached document needs verification because the total for Pacific West does not include the Channel Islands. The Pacific West site total should be 1,601.</p> <p>3. Also, the wording in the report indicates to me that the 4 areas are all in California and they total 82 percent of all NPS openings. The work paper indicates that the whole Pacific West is 82 percent not just the 4 areas. Are all 4 areas in California? I though Lake Mead was in Nevada.</p>	<p>1. Math verified by Greta Bloomfield 05/13/08</p> <p>2. Agree. I check the formula in the spreadsheet and the Channel Islands was not included in the total. The total should be 1,601 SRP 05/13/08</p> <p>There are two formulas in the attached spreadsheet that were incorrect. The correction brings the total openings to 9,218 instead of 9,205. The 82% does not change. <math>7,544/9,218=81.83</math> percent. SRP 05/14/08</p> <p>I called John Burghardt at NPS and informed him of the errors in the formulas. SRP 05/14/08</p> <p>3. We could get rid of the "California desert area" Lake Mead is so close to Death Valley...only an hour drive, but I can't find anything that says that it's part of the California desert.</p>	<p>CW 5/14/2008</p> <p>The spreadsheet attached to the work paper is not mathematically correct. I checked the numbers that affect the report and determined that the errors do not change the 82 percent so I am signing off on this part of the reference note. CW 5/14/2008</p> <p>This works for me but the number needs to be added to the work paper and verified. I come up with 96 percent.</p>

		<p>(b) (5)</p> <p>Changed to this in the report:                  The California desert area, specifically Death Valley National Park, (b) (5) Mojave National Preserve, and Joshua Tree National Park, contains most of the mine hazards on NPS land.                  CW (b) (5) -                  C.NPS.01 NPS AML Inventory</p>	<p>New wording in yellow and blue in the draft report can be supported.                  CW 5/15/2008</p>
[7]	The last sentence was not part of the information previously referenced. Please add indexing for this sentence.	Agree. Added K.BLM.Arizona.08 ATV Death and Mitigation SRP 05/13/08	CW 5/14/2008
[8]	The visitor fell in 2001, but the work paper says the mill was demolished in 2006.	Changed wording to "2006" in AA version and Word Version WHM 5/13/08	CW 5/15/2008
[9]	The link for this paragraph goes to a work paper that has been "Marked for Deletion". There is a K.BLM.Arizona.06 Site Visits work paper in the index that has not been deleted, but this is not what the report is linked to.	Agree. Added cross-indexing to the correct work-paper. SRP 05/15/08	CW 5/15/2008
[10]	Yes I did sign off on this before but I at that time did not notice that the work paper was "Marked for Deletion"	Agree. Added cross-indexing to the correct work-paper. 05/15/08	CW 5/15/2008
[11]	The work paper does not say that the Caselton Wash is a seasonal waterway that flows only during rains.	Added definition of "wash" to workpaper K.BLM.Caselton.02 Engineering Evaluation/Cost Analysis WHM 5/16/08	CW 5/16/2008
[12]	This is not one of the photo that was in the original report that I referenced. Also (I.NPS.DEVA.03 Greenwater - Site Visit / Meeting with NPS Officials, ) does not have any photos attached. The photos I referenced were on work paper I.NPS.DEVA.19 Photos - Death Valley Mine Sites, .	Added I.NPS.DEVA.19 Photos - Death Valley Mine Sites SRP 05/13/08	CW 5/15/2008
[13]	1. The work paper does not mention that the fence had been vandalized or that is was an "ant-trap" like opening.	<p>1. Agree. I don't know why we have "vandalized" here. In the original NPFR to Death Valley we said the fence was "dilapidated." See the Greewater Mining District Section of *Reporting Draft Report</p> <p>The mine does have an "ant-trap" like opening but I could not get access to the work-paper to provide an explanation. Will do when I get access.</p>	CW 5/15/2008

	<p>2. Also the photo now in the report does not appear to have a fence around it. Should be put the original photo back into the report, so the narrative matches the photo?</p>	<p>Also added <b>I.NPS.DEVA.19 Photos - Death Valley Mine Sites</b> [REDACTED]</p> <p>2. This image of the same hole shows part of the fence that is still in place. It also show the sloping entrance to the shaft...the "ant-trap" like opening.</p> 	
<p><a href="#">[14]</a></p>	<p>This work paper is not complete. The conclusion in not complete and there is no source or methodology.</p>	<p>Work-paper completed in the "indexing" section. The creator of the work-paper is no longer with us, so I put the information in the indexing section. SRP 05/13/08</p> <p>Reviewed JI 6/2/2008</p>	<p>CW 6/2/2008</p>
<p><a href="#">[15]</a></p>	<p>The work paper does not mention NPS maps.</p>	<p>Added: <b>I.NPS.GRCA.03 Summary of Grand Canyon</b> [REDACTED]</p>	<p>CW 5/15/2008</p>
<p><a href="#">[16]</a></p>	<p>The work paper does not state that the trail is the "South" Rim Trail.</p> <p>The work paper does not mention high levels of radiation.</p> <p>Please add narrative of what the signs say, I cannot see</p>	<p>Added <b>I.NPS.GRCA.21 Contamination levels at Orphan</b> [REDACTED] to show the "South Rim" and the levels of contamination at the mine</p>	<p>CW 5/15/2008</p>

	that it is warning of environmental hazards.	 <p>The top part of this sign is the Community Fact Sheet that is provided in <a href="#">I.NPS.GRCA.21 Contamination levels at Orphan</a> ■ You can read the warning at this link. SRP 05/14/08</p>	
<a href="#">[17]</a>	This photo was not found on the indicated work paper.	Added doclink to <a href="#">K.BLM.VirginiaCity.07 Aerial Photo of Section 29</a> ■	CW 5/16/2008
<a href="#">[18]</a>	<p>1. I did not find the" (thousands compared to hundreds of thousands)" in the work paper.</p> <p>2. I did not find "A culture within NPS that does not hinder site identification and mitigation." in the work paper.</p>	<p>WHM 5/16/08</p> <p>1. This link shows the "thousands" of sites for NPS <a href="#">H. NPS (Overall)</a> ■ ■ 3,351 sites for NPS. Added link to ■ <a href="#">G.DOI.02 Seymour Article</a> regarding thousands of sites on public land most of which is managed by BLM. WHM 6/2/08</p> <p>2. Added <a href="#">H. NPS (Overall)</a> ■ to address the culture within NPS SRP 05/14/08</p>	<p>CW 6/2/2008</p> <p>CW 6/2/2008</p>
<a href="#">[19]</a>	This sentence needs to be indexed.	<p>Agree...but I can't get access to the work-paper...will correct as soon as I get access.</p> <p>Added link to ■ <a href="#">H.NPS (Overall)</a> and autodoclink to <a href="#">I.NPS.MOJA.03 Mojave AML Funding Requests</a> ■ WHM 6/2/08</p>	CW 6/2/2008
<a href="#">[20]</a>	The work paper says 1996?	1994 is correct. I added more information and changed the date in the conclusion. SRP 05/13/08	CW 5/15/2008
<a href="#">[21]</a>	1. In the work paper please identify where the numbers in the conclusion came from. If we developed the	1. Added a link to the conclusion to a discussion we had with Mojave to get the numbers. Also, I added to the conclusion that	CW 5/15/2008

	<p>numbers, they need to be independently verified.</p> <p>2. Also please provide support for the first sentence of the conclusion. The Details and the documents attached do not support the statement that since Mojave was created, it has received little or no funding for site mitigation.</p>	<p>636 sites can be seen in the attached spreadsheet.</p> <p>2. I added clarification to <b>I.NPS.MOJA.03 Mojave AML Funding Requests</b> to show Mojave has not received any funding to mitigated AML sites even though there have been several requests over the years.</p> <p>I also added <b>I.NPS.MOJA.01 Mojave National Preserve</b> to show that a small amount of funding was received from GRD to inventory sites.</p>	
<a href="#">[22]</a>	<p>1. The information highlighted in yellow was not in the original report I referenced. (I added the yellow highlighting.)</p> <p>2. I do not see the \$30,000 for 2007. The excel spreadsheet says \$192,100. The low was in 2003 for \$121,000</p> <p>3. Reference note 33 from the original report needs to be answered.</p>	<p>1. Agree. Added <b>B.NPS.03 Funding for NPS AML</b> and other indexing as needed. I provided links to each of the parks to show that the funding has been an obstacle. I couldn't provide you with an anchor link (access issue) for Lake Mead, but there is a section on Funding that is easy to find.</p> <p>2. Agree. I cannot find how I arrived at the \$30,000 figure for 2007. We should changed to a "low of 121,000 in 2003."</p> <p>3. Note 33 has been answered...I changed the conclusion in the work-paper to reflect the correct numbers.</p>	<p>CW 5/15/2008</p> <p>CW 5/15/2008</p> <p>CW 5/15/2008</p>
<a href="#">[23]</a>	<p>Since ", Bureau of Land Management" is a part of the title, should it be included as part of the title in the current report? (Note 32 on the original report reference sheet)</p> <p>The date, March 2005, was not in the original report. Please add cross indexing.</p>	<p>The team decided to leave out "Bureau of Land Management" from the title for simplicity. Per John Illson and Bill McMullen. SRP 05/15/08</p> <p>The date of the report can be found in the source of: <b>B.OIG.01 OIG AML Audit Report - Saginaw Hill</b></p>	<p>CW 5/15/2008</p> <p>CW 5/15/2008</p>
<a href="#">[24]</a>	<p>The date should be January 2008 instead of 2007.</p> <p>The work paper does not mention that the "sites vary in size from small, which could be mitigated within current funding levels"</p>	<p>This entire paragraph was eliminated in the latest HQ draft. WHM 5/13/08</p>	<p>CW 5/16/2008</p>
<a href="#">[25]</a>	<p>I could not find "hiding in plain sight" in the work paper.</p>	<p>This entire paragraph was eliminated in the latest HQ draft. WHM 5/13/08</p>	<p>CW 5/16/2008</p>
<a href="#">[26]</a>	<p>Need indexing for the change from 2 parks to 4.</p>	<p>4 NPS Parks are members of the Desert Managers Group. They are Death Valley, Joshua Tree, Mojave, and Lake Mead.</p> <p><b>L.e Desert Managers Group</b></p>	<p>CW 5/15/2008</p>

		3 of these parks are in the California Desert. They are Death Valley, Joshua Tree, and Mojave. Lake Mead is certainly in a desert region but it's in NV and AZ.	
<a href="#">[27]</a>	The word "access" is not a quote. The wording needs to be changed or the quote marks need to be removed.	Removed quotation marks in AA version and latest HQ version ("Draft Audit Report 05-13-08 HQ COMMENTS" J drive, Draft Reports folder for this audit, HQ Review Draft folder) WHM 5/13/08	<a href="#">CW 5/15/2008</a>
<a href="#">[28]</a>	<p>1. <b>Appendix D</b> EPA is only used once, so please delete (EPA) on page 5.</p> <p>2. SOL is only used once, so please delete (SOL) on page 9.</p> <p>2. ORV is only used once, so please spell out ORV on page 16.</p> <p>3. AML is only used once, so please spell out AML on page 26.</p> <p>4. PAR is only used once, so please spell out PAR on page 29.</p>		<a href="#">Pass for draft. Fix for final . JR 6/2/2008</a>
	Note: It has been the office's unwritten policy to add conclusion and opinions in the work papers. The audit team was not aware of this unwritten policy. Because this was not in writing, I accepted the opinions or conclusions that I could agree with based on the information in the report.		

Submission: Submitted John Illson 06/03/2008 08:23:01 AM  
Level 1 Approval:  
Level 2 Approval: Approved Jack Rouch 06/03/2008 07:24:19 PM

### Linkage Information

### History

**Status:** Approved **Request Review:**

**In Progress Edit:** Constance Wardle/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI

**Confidentiality:** Standard

**Add Document Readers:**

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## Semi-Annual Summary

Prepared by: John Illson 08/04/2008

**Assignment Number:** C-IN-MOA-0004-2007  
**Assignment:** Audit of Public Safety Issues on Abandoned Mine Lands

**Final Report Name:** Abandoned Mine Lands in the Department of the Interior

### Narrative:

We are gravely concerned that the Department of the Interior has put the public's health and safety at risk by not addressing hazards posed by abandoned mines on federal lands. Mines located primarily in the western states of California, Arizona, and Nevada have dangerously dilapidated structures, serious environmental hazards, and gaping cavities – some capable of swallowing an entire vehicle. Although NPS has been more effective at protecting the public, there are still many more sites that need to be mitigated.

We visited approximately 45 areas with abandoned mines from March 2007 through April 2008 and talked to over 75 employees from 13 BLM offices and 5 national parks. These sites included some where members of the public had been killed, injured, or exposed to dangerous environmental contaminants. The potential for more deaths and injuries is ominous. Growth of the population and use of off-road vehicles in the West will increase the likelihood of additional deaths or injuries.

### History

**Status:** Approved

**Request Review:**

**In Progress Edit:** John Illson/DEN/OIG/DOI

**Confidentiality:** Standard

#### Add Document Readers:

**Read Authorization:** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Illson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Eric Weimer/DEN/OIG/DOI, Jacob Newell/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Lisa Raynor/DEN/OIG/DOI, Zane Michael/DEN/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI, Scott Grace/DEN/OIG/DOI

#### Current Editor List:

Submission: Submitted John Illson 08/04/2008 11:21:53 AM

Level 1 Approval:

Level 2 Approval:    Approved                    Jack Rouch                    08/21/2008 03:13:26 PM

**Quality Assurance Checklist**

Prepared by: William McMullen 09/05/2007

Assignment Number C-IN-MOA-0004-2007  
 Assignment Audit of Public Safety Issues on Abandoned Mine Lands

Subject Quality Assurance Checklist

**Policy Guidance:** ■

		Workpaper Reference	N/A	Comments
1	Is there a master index at the front of each hard copy folder?	N/A		No hardcopy file was needed or maintained.
2	Does the file contain a signed independence statement from all team members?	A.01 Statement of Independence ■		
3	Is the announcement memo included in the file?	A.02 Announcement Memo ■		
4	Is a record of the entrance conference included in the file?	A.03 Entrance Conference ■		
5	Did the file include a survey plan that:			
	- Was prepared during the pre-survey story conference?	A.06 Pre-Survey Story Conference ■		
	- Was reviewed and approved?	A.06 Pre-Survey Story Conference ■		
	- Identified Team Member assignments?	A.06 Pre-Survey Story Conference ■		
	- Identified estimated completion dates?	A.06 Pre-Survey Story Conference ■		
	- Was indexed to working papers?			
6	Does the file include basic background information? (budget justifications, prior audit coverage, strategic performance plans and GPRA goals, Key contact information, etc )	B. Background ■		
7	Did the audit work include appropriate GPRA steps? (Including identifying pertinent goals and evaluating the reporting and verification against those goals )	G.DOI.06 Relevant GPRA Goals ■ G.DOI.07 2006/2007 PARs ■		
8	Were flowcharts prepared for major processes under review?	N/A		No flow charts were determined to be necessary by the Team.
9	Does the file contain a copy of the post-survey briefing package provided to HQ and HQ's response?	A.06.02 Survey Briefings and Memos ■		
10	Does the file contain documentation of which standards (GAGAS, Inspection,) will be followed?	A.07 Audit Plan and Program ■		
	If certain standards do not apply, is there proper documentation in the work papers and scope paragraph explaining reasons and effect on the audit results?	N/A		
	Was there supervisory review and approval?	Yes		
11	Did the file include an audit plan/program that:			
	- Was prepared during the post-survey story conference?	A.07 Audit Plan and Program ■		

	- Was reviewed and approved?	Yes		
	- Identified Team Member assignments?	A.07 Audit Plan and Program █		
	- Identified estimated completion dates?	A.07 Audit Plan and Program █		
	- Was indexed to working papers?	See comments.		Audit step tables were repeated in the Assignment Summary workpapers and indexing to workpapers was done in these tables.
	- Identified the audit objective and scope?	A.07 Audit Plan and Program █		
	- Included documented reasons for changes or deletions to audit steps?	See comments.		These were made in the Audit Step tables in each Assignment Summary workpaper for specific audit sections.
	- Was updated to reflect changes to the audit objective/scope?	A.07 Audit Plan and Program █		Changes in wording of audit objective were noted.
12	Is there evidence of on-going supervisory review?	A.07.01 Audit Team Meetings █		
13	Have all review comments been answered and cleared?	N/A		
14	Did the file include an evaluation of:			
	- Compliance with applicable laws and regulations?	*Reporting Final Report █ (issue of field compliance with agency policies and procedures regarding AML sites was discussed throughout the report FLPMA law was reviewed regarding AML sites (G.DOI.03 FLPMA █); interaction of AML program with surface management program was reviewed in light of surface management regulations (B.BLM.05 Mitigation of other mining activities █ and J.BLM.25 Surface Management under Mining Laws █)		
	- Compliance with applicable management controls?	*Reporting Final Report █ (issue of field compliance with agency management control policies and procedures regarding AML sites was discussed throughout the report		
	- Agency's summary of analysis of annual FMFIA Assurance Statement?	N/A		
15	Does the file document the consideration of the risk of fraud for the selected major audit objective?	N/A		None were noted.
16	Did the file include documentation of actions taken if illegal or other noncompliant acts were detected?	N/A		None were noted.
17	Does the file include results of tests conducted to assess the reliability of IT systems that were relied upon as data sources?	N/A		
18	If a statistical sample was used, does the file include an explanation of the basis of the sample projections, universe and any attributes?	N/A		
19	Were mathematical computations independently verified?	Yes		
20	For computer generated (spreadsheet or database) calculations, were formulas verified?	N/A		
21	Were working papers properly prepared and	Yes		

	formatted?			
22	Were summaries prepared and indexed?	G. Audit Background ■ H. NPS (Overall) ■ I. NPS (Site Visits) ■ J. Assignment Program/Summary Workpaper ■ K. Assignment Program/Summary Workpaper ■ L. Assignment Program/Summary Workpaper ■ M. Assignment Program/Summary Workpaper ■		
23	Did the file contain indexed copies of any issued NPFRs?	*Reporting Draft Report ■ *Reporting Draft Report ■		Barstow NPFR Death Valley NPFR
24	Does the file contain the draft report outline prepared in the report writing story conference?	A.09 Post field work story conference ■		
25	Was the draft report indexed and referenced?	A.29 Index 14 Cover and Exec Summary ■ A.30 Index 15 TOC ■ A.24 Index 9 Introduction ■ A.20 Index 5 Background ■ A.16 Index 1 Results/Field Mgmt/Staffing ■ A.17 Index 2 Inventory ■ A.18 Index 3 Site Trespass ■ A.19 Index 4 Budget ■ A.21 Index 6 Claimant Responsibilities ■ A.22 Index 7 Best Practices ■ A.23 Index 8 Conclusion and Recommendations ■ A.31 Index 16 Appendix A Injuries and Fatalities ■ A.32 Index 17 Appendix B Observations of Hazards SAVE ■ A.26 Index 11 Appendix C OIG Site Visits ■ A.25 Index 10 Appendix D Obj, Scope, Method., ICs ■ A.27 Index 12 Appendix E Related Reports ■ A.28 Index 13 Appendix F Abbreviations ■		Report was broken into sections so that indexing and referencing could proceed in parallel due to possible need for draft report to be issued quickly prior to a Congressional hearing.
26	Were all referencer comments answered and cleared?	*Reporting Referencer Comments ■		Document in draft was changed significantly by HQ; not all comments were addressed as their relevance is uncertain for the final report.
27	Were all significant changes to the draft and final report referenced? Were all comments answered and cleared?	*Reporting Referencer Comments Final Report and Appendices ■ *Reporting Referencer Comments HQ Version ■		
28	Does the file contain a record of the exit conference?	A.33 AML Exit Conference ■		
29	Does the file contain a copy of management's response to the draft report?	*Reporting Management's Response to Draft Report ■ (Barstow NPFR) *Reporting Management's Response to Draft Report ■ (Death Valley NPFR) *Reporting Management's Response to Draft Report ■ (BLM response to Draft Report) *Reporting Management's Response to Draft Report ■ (NPS response to Draft Report)		
30	Does the file contain documentation of the team's discussions during story conferences?	A.06 Pre-Survey Story Conference ■ A.07 Audit Plan and Program ■ A.09 Post field work story conference ■		

Team Leader \_\_\_\_\_

(Date)

**Status** Approved **Request Review**

**Confidentiality** Standard

**Add Document Readers**

**Read Authorization** [Management], [C MGT], [C Reader], Brooke Bebow/DEN/OIG/DOI, Jack Rouch/DEN/OIG/DOI, Louise Nelson/DEN/OIG/DOI, John Ilson/DEN/OIG/DOI, Constance Wardle/DEN/OIG/DOI, Greta Bloomfield/DEN/OIG/DOI, Sean Pettersen/DEN/OIG/DOI, Stephanie Christian/DEN/OIG/DOI, William McMullen/DEN/OIG/DOI, Bryan Brazil/SAC/OIG/DOI, Chris Martinez/WDC/OIG/DOI, David Brenholtz/DEN/OIG/DOI, Katie Balestra/WDC/OIG/DOI, Dennis Marsh/SAC/OIG/DOI, Guest\_Theresa Gumataotao/DEN/OIG/DOI, Delaine Carpenter/DEN/OIG/DOI

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Level 1 Approval:

Level 2 Approval: Approved Jack Rouch 07/21/2008 04:29 38 PM