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Description of document: DOE (Department of Energy) Classification and UCNI (Unclassified Controlled Nuclear Information) Guide for Radiological Emergency Response, July 2002

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Source of document: Department of Energy  
FOIA Requester Service Center  
1000 Independence Avenue, SW  
Mail Stop MA-46  
Washington, DC 20585  
Fax: (202) 586-0575  
[DOE Headquarters Online FOIA Request Form](#)

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**Department of Energy**  
Washington, DC 20585

SEP 22 2018

Re: HQ-2017-01271-F

This is the final response to the request for information that you sent to the Department of Energy (DOE) under the Freedom of Information Act (FOIA), 5 U.S.C. § 552. You requested the following:

A copy of Classification Guide CG-RER-1, the classification guide used by DOE NA-40

Your request was assigned to the Office of Environment, Health, Safety and Security (AU) to conduct a search of its files for responsive documents. AU began its search on August 23, 2017, which is the cutoff date for responsive documents. AU has completed its search and has identified one (1) document responsive to your request. The document is being provided to you as described in the accompanying index.

Upon review, DOE has determined that certain information should be withheld from the document pursuant to Exemptions 1, 3 and 7(E) of the FOIA, 5 U.S.C. § 552(b)(1), (b)(3) and (b)(7)(E).

Exemption 1 of the FOIA provides that an agency may exempt from disclosure matters that are "(A) specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and (B) are in fact properly classified pursuant to such Executive Order." The portions deleted from the subject document(s) pursuant to Exemption 1 contain information about foreign government information and are classified under section 1.4 of Executive Order (E.O.) 13526. It has been determined that release of the information could reasonably be expected to cause damage to the national security.

Exemption 3 protects from disclosure information "specifically exempted from disclosure by statute (other than section 552(b) of this title), if that statute--(A)(i) requires that the matters be withheld from the public in such a manner as to leave no discretion on the issue; or (ii) establishes particular criteria for withholding or refers to particular types of matters to be withheld[.]" 5 U.S.C. § 552(b)(3). The Atomic Energy Act of 1954 (AEA), 42 U.S.C. § 2011, is one such statute that falls within the coverage of Exemption 3. Sections 141-146 of this Act (42 U.S.C. 2161-2166) and/or section 148 of this Act (42 U.S.C. 2168) prohibits the disclosure of information concerning atomic energy defense programs that is classified as either Restricted Data (RD) or Formerly Restricted Data and/or determined to be Unclassified Controlled Nuclear Information (UNCI) pursuant to the AEA, as amended.



The portions deleted from the subject document pursuant to Exemption 3 contain information about weapon design that has been classified as RD and/or nuclear materials in transit that has been safeguarded as UCNI. Disclosure of the exempt data could jeopardize the common defense and the security of the nation and/or have a significant adverse effect on the health and safety of the public.

Exemption 7 protects from disclosure “records or information compiled for law enforcement purposes” that fall within the purview of one or more of six enumerated categories. To qualify for protection under Exemption 7, the information must have been compiled, either originally or at some later date, for a law enforcement purpose, which includes crime prevention and security measures, even if that is only one of the many purposes for compilation.

Exemption 7(E) provides that an agency may exempt from disclosure records compiled or recompiled for law enforcement (including national security) purposes if they could reasonably be expected to (e) disclose techniques and procedures for law enforcement investigations or prosecutions, or would disclose guidelines for law enforcement investigations or prosecutions if such disclosure could reasonably be expected to risk circumvention of the law. The portions deleted from the subject document(s) pursuant to Exemption 7(e) contain information that would provide insight into the relative sensitivity of still-classified information or would materially assist efforts to compile sensitive information through the association of declassified information and/or publicly released information. The release of this information could impair the Department’s ability to enforce the laws regarding classification and has been safeguarded as Official Use Only under the FOIA and is therefore exempt from disclosure.

This satisfies the standard set forth in the Attorney General’s March 19, 2009, memorandum that the agency is justified in not releasing material that the agency reasonably foresees would harm an interest protected by one of the statutory exemptions. This also satisfies DOE’s regulations at 10 C.F.R. § 1004.1 to make records available which it is authorized to withhold under 5 U.S.C. § 552 when it determines that such disclosure is in the public interest. Accordingly, we will not disclose this information.

Pursuant to 10 C.F.R. § 1004.7(b)(2), Dr. Andrew P. Weston-Dawkes, Director, Office of Classification, Office of Environment, Health, Safety and Security, is the individual responsible for the determination to withhold the information described above. The FOIA requires that “any reasonably segregable portion of a record shall be provided to any person requesting such record after deletion of the portions which are exempt.” 5 U.S.C. § 552(b). As a result, a redacted version of the documents is being released to you in accordance with 10 C.F.R. § 1004.7(b)(3).

This decision, as well as the adequacy of the search, may be appealed within 90 calendar days from your receipt of this letter pursuant to 10 C.F.R. § 1004.8. Appeals should be addressed to Director, Office of Hearings and Appeals, HG-1, L’Enfant Plaza, U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585-1615. The written appeal, including the envelope, must clearly indicate that a FOIA appeal is being made. You may also submit your appeal by e-mail to [OHA.filings@hq.doe.gov](mailto:OHA.filings@hq.doe.gov), including the phrase “Freedom of Information Appeal” in the subject line. The appeal must contain all the elements required by 10 C.F.R. § 1004.8, including a copy of the determination letter. Thereafter, judicial review will be available to you in the Federal District Court either (1) in the district where you reside, (2) where you have

your principal place of business, (3) where DOE's records are situated, or (4) in the District of Columbia.

You may contact DOE's FOIA Public Liaison, Alexander Morris, FOIA Officer, Office of Public Information, at 202-586-5955, or by mail at MA-46 Forrestal Building 1000 Independence Avenue, S.W. Washington, D.C. 20585 for any further assistance and to discuss any aspect of your request. Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, e-mail at [ogis@nara.gov](mailto:ogis@nara.gov); telephone at 202-741-5770; toll free at 1-877-684-6448; or facsimile at 202-741-5769.

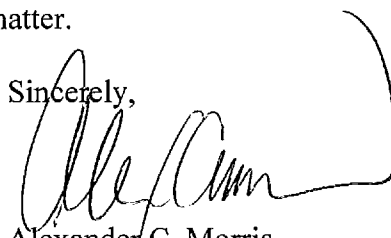
The FOIA provides for the assessment of fees for the processing of requests. *See* 5 U.S.C. § 552(a)(4)(A)(i); *see also* 10 C.F.R. § 1004.9(a). In our June 22, 2017 letter, you were informed that your request was placed in the "other" category for fee purposes. Requestors in this category are provided two free hours of search time and are provided 100 pages at no cost. Because DOE's processing costs did not exceed \$15.00, the minimum amount at which DOE assesses fees, there will be no charge for processing your request.

If you have any questions about the processing of the request or this letter, you may contact Ms. Celtia Rokebrand at:

MA-46/ Forrestal Building  
1000 Independence Avenue, S.W.  
Washington, DC 20585  
(202) 287-6814

I appreciate the opportunity to assist you with this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alex Morris', with a large, sweeping loop at the end.

Alexander C. Morris  
FOIA Officer  
Office of Public Information

Enclosures

## INDEX

**Request #: HQ-2017-01271-F**

### **Final response for the request for:**

**A copy of Classification Guide CG-RER-1, the classification guide used by DOE NA-40**

The Office of Environment, Health, Safety and Security (AU) has identified one (1) document responsive to your request.

- One (1) document *is being released in part pursuant to Exemptions (b)(1), (b)(3) and (b)(7)(E)*. Exemption 1 contains information about foreign government information and are classified under section 1.4 of Executive Order (E.O.) 13526. Exemption 3 consists of information about weapon design that has been that has been classified as Restricted Data and/or nuclear materials in transit that has been safeguarded as Unclassified Controlled Nuclear Information. Exemption 7E consists of information that would provide insight into the relative sensitivity of still-classified information or would materially assist efforts to compile sensitive information through the association of declassified information and/or publicly released information.

**REDACTED COPY**

CG-RER-1 DEL

**SECRET RD****CG-RER-1**

# **(U) DOE Classification and UCNl Guide for Radiological Emergency Response**

**July 2002**

**U.S. DEPARTMENT OF ENERGY  
Office of Classification  
and Information Control  
Washington, DC 20585**

|           |                     |
|-----------|---------------------|
| Chapter 1 | General Information |
| Chapter 2 | Broad Guidance      |
| Chapter 3 | Topical Guidance    |

| DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW   |                                    |
|--|------------------------------------|
| 1 <sup>st</sup> Review Date: <u>September 7, 2017</u>                                    | DETERMINATION (CIRCLE NUMBER(S))   |
| Authority: <input checked="" type="checkbox"/> DC <input checked="" type="checkbox"/> DD | 1. CLASSIFICATION RETAINED         |
| Name: <u>D. Ciskowski, AU63 SR</u>   | 2. CLASSIFICATION CHANGED TO:      |
| 2 <sup>nd</sup> Review Date: <u>12/18/2017</u>   | 3. CONTAINS NO DOE CLASSIFIED INFO |
| Authority: <u>DD</u>   | 4. COORDINATE WITH:                |
| Name: <u>J. Stoner, AU63</u>   | 5. CLASSIFICATION CANCELED         |
|  | 6. CLASSIFIED INFO BRACKETED       |
|  | 7. OTHER (SPECIFY):                |

~~NUCLEAR WEAPON DATA~~**RESTRICTED DATA**

**This document contains Restricted Data as defined in the Atomic Energy Act of 1954, as amended. Unauthorized disclosure is subject to Administrative and Criminal Sanctions.**

**Classified by:** Edith A. Chalk, Director  
Technical Guidance Division  
**Derived from:** CG-W-5, 10/16/95, DOE/OC

**SECRET RD**

UNCLASSIFIED

**CLASSIFICATION/CONTROL GUIDANCE REQUEST**

NAME: \_\_\_\_\_ DATE: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

ORGANIZATION: \_\_\_\_\_ PHONE NUMBER: \_\_\_\_\_

UNCLASSIFIED EMAIL ADDRESS: \_\_\_\_\_

CLASSIFIED EMAIL ADDRESS: \_\_\_\_\_

SHORT TITLE OF GUIDANCE: \_\_\_\_\_

LONG TITLE OF GUIDANCE: \_\_\_\_\_

**CHECK THE APPLICABLE AREA AND ENTER THE REQUIRED INFORMATION**

\_\_\_\_ I NEED \_\_\_\_ COPIES OF THIS GUIDANCE

JUSTIFICATION: \_\_\_\_\_

\_\_\_\_ CHANGE OF ADDRESS: \_\_\_\_\_

\_\_\_\_ PLEASE REMOVE MY NAME FROM THE DISTRIBUTION LIST

\_\_\_\_ I TRANSFERRED MY COPY OF THIS GUIDANCE TO: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

\_\_\_\_ I MADE \_\_\_\_ COPIES OF THIS GUIDANCE FOR: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

**INSTRUCTIONS:**

You may FAX this to the Classification Guidance Administrator, HS-62, at (301) 903-7444.

**Headquarters Elements:** Send this request to the Office of Technical Guidance, Office of Classification, HS-62.

**Field Elements:** Send this request to your local classification officer.

**NOTE:** THIS SAMPLE MAY BE REPRODUCED AS NEEDED; OTHER FORMATS ARE ACCEPTABLE AS LONG AS THE REQUIRED INFORMATION IS PROVIDED.

UNCLASSIFIED

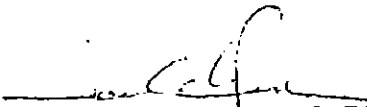
~~SECRET RD~~

CG-RER-1

# DOE Classification and UCNl Guide for Radiological Emergency Response (U)

Approved by:

U.S. DEPARTMENT OF ENERGY  
Information Classification  
and Control Policy  
Security Policy Staff  
Office of Security  
Washington, DC 20585

  
Joan G. Hawthorne  
Director  
Information Classification  
and Control Policy  
Security Policy Staff  
Office of Security

7/8/02  
Date

~~NUCLEAR WEAPON DATA, SIGMAS 1 AND 2~~

## ~~RESTRICTED DATA~~

~~This document contains Restricted Data as defined by the Atomic Energy Act of 1954, as amended. Unauthorized disclosure is subject to Administrative and Criminal Sanctions.~~

~~Classified by: Andrew P. Weston-Bawkes  
Director, Technical Guidance  
Information Classification  
and Control Policy  
Derived from: CG-W-5, 10/16/95~~

~~SECRET RD~~



~~SECRET RESTRICTED DATA~~

**CG-RER-1**

**(U) DOE Classification and UCNl Guide for Radiological  
Emergency Response**

**RECORD OF PAGE CHANGES**

| <b>Change Number:</b> | <b>Date of Change:</b> | <b>Entered by (Initial/Date):</b> |
|-----------------------|------------------------|-----------------------------------|
| Change 1              | 8/4/2005               | TGA                               |
| Change 2              | 3/21/2011              | TGA                               |
| Change 3              | 2/14/2014              | HS-62                             |
|                       |                        |                                   |
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**CG-RER-1**  
**(U) DOE Classification and UCNi Guide for Radiological  
Emergency Response**

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## CG-RER-1 (U) DOE Classification and UCNi Guide for Radiological Emergency Response

### INTRODUCTION

#### A. Use of Guide

This guide is approved for use by Derivative Classifiers, Declassifiers, and Reviewing Officials within their programmatic areas of expertise. Topics in this guide contain guidance for determining whether information is classified, Unclassified Controlled Nuclear Information (UCNi), or unclassified. Many of the topics in this guide include a range of classifications. These topics generally include an advisory note stating that the Emergency Response Officer (ERO) or Senior Energy Official (SEO) will promulgate more definitive classification guidance when a range of classifications or information control levels is listed. Only if the ERO or SEO is Certified as a DOE Derivative Classifier and UCNi Reviewing Official with authority to make classification and control decisions in the area of Radiological Emergency Response (RER), and more specifically CG-RER-1, is he or she authorized to make classification or UCNi control decisions based on this guide. If the ERO or SEO is not so certified, he or she must consult with a DOE certified derivative classifier and UCNi reviewing official who will make the decisions. If the information concerns a specific Department of Energy (DOE) or National Nuclear Security Administration (NNSA) site or program, a local guide pertaining to that site or program may have been issued and should be consulted. If the information concerns a National Special Security Event (NSSE), DOE may have issued Supplemental Guidance for the event which must also be consulted. If the work being performed is not funded by DOE or NNSA and the funding organization has not issued a classification guide, this classification guide must be used for Restricted Data (RD) and Formerly Restricted Data (FRD) subject areas and DOE UCNi subject areas. This guide may be used to determine if foreign nuclear information is Transclassified Foreign Nuclear

Information (TFNI), and, if so, at what level. This guide may be used for National Security Information (NSI) subject areas provided (1) the information is within the scope of the guide and (2) the agency funding the work agrees that the guide is valid for the work.

This guide is approved for use by any DOE or NNSA employee or contractor for determining whether information is Official Use Only (OUO).

#### B. Scope

This guide has been developed to address the activities, capabilities, operations, and procedures involving DOE's emergency response to, and preparation for, any actual or potential radiological incident and associated exercises and drills/training. This capability, hereafter known as DOE's RER, is comprised of the total capabilities of its emergency response assets. These assets, collectively known as the Nuclear Emergency Support Team (NEST), consist of: the crisis response (CR) assets, which include Nuclear Radiological Advisory Team (NRAT), the Joint Technical Operations Team (JTOT), the Accident Response Group (ARG), and the Search Response Team (SRT); the consequence management (CM) assets, which include the Aerial Measuring System (AMS), the Consequence Management Response Team (CMRT), the Federal Radiological Monitoring and Assessment Center (FRMAC), the National Atmospheric Release Advisory Center (NARAC), the Radiation Emergency Assistance Center/Training Site (REAC/TS), and the Radiological Assistance Program (RAP).

In the event of a radiological terrorism incident, DOE/NNSA RER assets provide technical support to the Department of Homeland Security (DHS), which has overall responsibility for domestic incident management, and to the Federal Bureau of Investigation (FBI), which has the lead

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responsibility for criminal investigations of terrorist acts or terrorist threats. This guide should always be used when DOE/NNSA RER assets are operating in the absence of classification guidance from another Federal agency.

When operating under the control of or in support of another Federal agency, the NNSA SEO, acting SEO, or Federal Team Leader (FTL) leading the DOE/NNSA RER shall comply with classification guidance provided by the controlling or supported Federal agency with the exception of DOE classification guidance designating information as Restricted Data (RD) or Formerly Restricted Data (FRD). Only the Director, DOE Office of Health, Safety and Security, has the authority to declassify or downgrade RD and FRD; and for FRD, the declassification or downgrading must be accomplished jointly with the Department of Defense (DoD).

While the information in the guide is designed to address all aforementioned missions (real world), exercises, and drills/training, it may be supplemented with unique requirements for specifically identified missions, exercises, or drills/training. For those circumstances when the authority or basis for determining the classification to be assigned information concerning a RER is still in question, the ERO or SEO should be consulted. References are made as "NOTE"s throughout the document where additional information from the ERO or SEO may be necessary. An ERO or SEO who is not a DOE certified Derivative Classifier can only recommend a specific classification. A Derivative Classifier is required to actually make the classification decision. This classification guide is also used in conjunction with Special Category (SPECAT) Programs and is supplemented with information that is limited in access to only those individuals who have been properly given access to and briefed on those programs.

The intent of this guide is to bring together all radiological or nuclear emergency response-related classification topics from several classification guides and policy statements from source documents related to nuclear incidents. For more specific nuclear weapon design information, please consult the appropriate topical classification guides [e.g., *Joint DOE/DoD Topical Classification Guide for Nuclear Assembly Systems (U)*

and *Joint DOE/DoD Topical Classification Guide for Safing, Arming, Fuzing, and Firing (U)*].

For nonproliferation-related classification guidance, see *DOE Classification Guide for Nonproliferation of Weapons Information (U)*.

For attribution-related classification guidance, see DHS SCG DNDO-001.1, *Domestic Nuclear Detection Office Security Classification Guide*.

For details on foreign government, intelligence-gathering, terrorist activities, and nuclear threat information, see *Classification and UCNi Guide for Safeguards and Security Information*, and Presidential Decision Directive/NSC-39, *U.S. Policy on Counterterrorism*.

For topics related to the declassification of historical NSI in this area, consult *Historical Records Declassification Guide*.

### C. Cancellation

This guide supersedes CG-WN-4, *Classification Guide for the Nuclear Emergency Search Team (U)*, 10/16/95, and TG-NEST-1, *UCNi Topical Guidelines for the Nuclear Emergency Search Team (U)*, 11/90.

### D. Authority

#### 1. Statutory/Regulatory/Executive Order Authorities

The Atomic Energy Act (AEA) of 1954, is the authority to classify certain information related to the design, manufacture, or utilization of atomic weapons and the production of special nuclear material. Government-wide regulations for classifying and declassifying RD and FRD are contained in 10 Code of Federal Regulations (CFR) Part 1045, *Nuclear Classification and Declassification*. The AEA is also the authority to control certain unclassified but sensitive Government information concerning nuclear material, weapons, and components. Government-wide requirements for the identification and protection of UCNi are detailed in 10 Code of Federal Regulations (CFR) Part 1017, *Identification and Protection of Unclassified Controlled Nuclear Information*.

Executive Order (E.O.) 13526, *Classified National Security Information*, is the authority to classify certain information that requires protection from unauthorized disclosure because it could cause damage to the national

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security. Government-wide requirements for classifying, safeguarding, and declassifying National Security Information (NSI) are contained in 32 CFR Part 2001, *Classified National Security Information*.

The Freedom of Information Act (5 U.S.C. §552) exemptions are used as the basis for DOE OUC determinations.

## 2. Agency Directives

DOE O 475.2A, *Identifying Classified Information*, establishes the program to identify information classified under the Atomic Energy Act (Restricted Data, Formerly Restricted Data, and Transclassified Foreign Nuclear Information) or Executive Order 13526, *Classified National Security Information*, so that it can be protected against unauthorized dissemination.

DOE O 471.1B, *Identification and Protection of Unclassified Controlled Nuclear Information*, contains specific responsibilities, policies, and procedures for managing and administering DOE's program for identifying and protecting information as UCNI.

DOE O 471.3, *Administrative Change 1, Identifying and Protecting Official Use Only Information*, and DOE M 471.3-1, *Administrative Change 1, Manual for Identifying and Protecting Official Use Only Information*, contain specific responsibilities, policies, and procedures for managing and administering DOE's program for identifying and protecting information as OUC.

Non-DOE, including non-NNSA, funded work that may generate classified information must have classification guidance in place prior to commencement of the work that has been certified following instructions in DOE O 475.2A, Attachment 3, paragraph 5.

## E. Classification Categories and Levels

Each topic designating information as classified must identify both the classification category and the classification level. Classification categories and levels are defined as follows:

### 1. Classification Categories

Restricted Data (RD). Classified information that concerns (1) the design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear material; or

(3) the use of special nuclear material in the production of energy, except for that information that has been declassified or removed from the RD category under Section 142 of the AEA.

Formerly Restricted Data (FRD). Classified information concerning the military utilization of atomic weapons that has been removed from the RD category under Section 142d of the AEA.

Transclassified Foreign Nuclear Information (TFNI). Classified information concerning foreign nuclear programs that has been removed from the RD category under Section 142e of the AEA.

National Security Information (NSI). Classified information that has been determined under E.O. 13526 or any predecessor Executive order to require protection against unauthorized disclosure.

### 2. Classification Levels

The following levels of classification, listed in descending order of sensitivity, are applied to any category of classified information:

Top Secret (TS). Information whose unauthorized disclosure could reasonably be expected to cause exceptionally grave damage to the national security that the appropriate official is able to identify or describe.

Secret (S). Information whose unauthorized disclosure could reasonably be expected to cause serious damage to the national security that the appropriate official is able to identify or describe.

Confidential (C). Information whose unauthorized disclosure could reasonably be expected to cause either undue risk to the common defense and security (if RD or FRD information) or damage to the national security (if NSI) that the appropriate official is able to identify or describe.

~~SECRET RESTRICTED DATA~~

~~SECRET RESTRICTED DATA~~**F. Use of the Designation "U"**

Certain topics in this guide contain the designation "U" indicating that the information is neither classified nor subject to other access controls (UCNI, OOU) addressed in this guide. (See paragraphs on UCNI and OOU below.) However, such information is not automatically approved for release to the public, as it may be subject to other controls that are outside the purview of this guide.

**G. Transclassified Foreign Nuclear Information (TFNI)**

Transclassified Foreign Nuclear Information is intelligence-related information concerning foreign nuclear programs (e.g., foreign nations, organizations, and may include non-state actors) for which comparable U.S. information would be RD or design-related FRD. Examples of U.S. design-related FRD for which comparable foreign nuclear information has the potential to be TFNI are weapon and device yields and design of nonnuclear components (e.g., safing, arming, fuzing, and firing components). While U.S. nuclear stockpile numbers and storage locations are FRD, they are not design-related; therefore, comparable foreign information is not TFNI. Intelligence information on foreign stockpile numbers and storage locations does, however, have the potential to be NSI. TFNI does not include (a) information concerning the nuclear programs for the United Kingdom (UK) or Canada, (b) information generated under the Tripartite Agreement concerning the development of gas centrifuges, and (c) information exchanged pursuant to an agreement for cooperation.

The RD and design-related FRD topics in this guide may be used to make TFNI determinations for collected intelligence on foreign nuclear programs, except for those noted above. Any technical evaluation of foreign nuclear program information by a U.S./UK/Canadian government asset that confirms or impugns its credibility, uses RD or design-related FRD in evaluating the foreign nuclear program information, gives insight to the U.S. nuclear weapons program, or reveals U.S. RD information is RD. This will occur when foreign nuclear program information is compared to U.S. RD technology or if U.S. RD technology is used as a basis analyzing the foreign information.

**H. Unclassified Controlled Nuclear Information (UCNI)**

UCNI is unclassified Government information that concerns atomic energy defense programs and contains details about (1) the design of production or utilization facilities as defined in 10 CFR 1017.4; (2) security measures (including security plans, procedures, and equipment) for the physical protection of production or utilization facilities or nuclear material, regardless of its physical state or form, that is contained in these facilities or is in transit; or (3) the design, manufacture, or utilization of nuclear weapons or components that were once classified as Restricted Data.

A topic designating exploitable security-related information as UCNI in this guide applies only to production or utilization facilities or to nuclear material in transit. To apply these topics, the Reviewing Official must first verify that the exploitable information applies to one of these items.

Widespread public dissemination of a document containing information otherwise eligible for control of UCNI does NOT preclude control of the same information as UCNI if it is contained in another document that is not widely disseminated.

**I. Official Use Only (OOU) Information**

Certain unclassified information may be OOU if it (1) has the potential to damage Government, commercial, or private interests if disseminated to persons who do not need to know the information to perform their jobs or other DOE authorized activities, and (2) may be exempt from public release under the Freedom of Information Act (FOIA). [NOTE: As of March 2011, Exemption 2 no longer applies to Circumvention of Statute and should not be used for OOU determinations.] Generally, a program or support office decides whether information under its cognizance is OOU. In this case, has decided that information identified by specific topics in this guide is OOU. Any document containing such information must be marked as OOU.

Each topic that indicates information is OOU includes a notation of the proper FOIA exemption number and category to insert in the OOU front marking. A description of the applicable categories follows.

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~~SECRET RESTRICTED DATA~~**"Exemption 3, Statutory Exemption."**

Protects information, the disclosure of which is specifically protected by law and is not otherwise controlled. (Example: The Federal Technology Transfer Act allows Federal agencies to protect for 5 years any commercial and business confidential information that results from a Cooperative Research and Development Agreement with a non-Federal party.)

**"Exemption 4, Commercial/Proprietary."**

Protects trade secrets and commercial or financial information obtained from a person that would cause damage to the source or to program effectiveness if disclosed. (Examples: scientific and manufacturing process; commercial or financial information in connection with bids, contracts, or proposals and other related information received in confidence; Agency credit card numbers or bank account numbers; security measures for commercial entities performing work for the Government.)

**"Exemption 5, Privileged Information."**

Protects the Government's decision-making process. (Examples: letters, memoranda, issue papers, reports, and other documents that contain advice, opinions, or recommendations on new or revised Government decisions and policies.)

**"Exemption 6, Personal Privacy."** Protects personnel, medical, and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy or creates a risk of identity theft. (Examples: social security numbers, date of birth associated with an individual, medical history associated with an individual.)

**"Exemption 7, Law Enforcement."** Protects information compiled for law enforcement purposes, including the prevention of illegal acts. (Examples: witness statements; identity of firms or individuals being investigated for alleged irregularities involving contracting with DOE when no indictment has been obtained; information obtained in confidence in the course of a criminal investigation; law enforcement or security manuals; security measures to protect Federal buildings or personnel.)

For more information concerning OOU, refer to DOE O 471.3, Administrative Change 1, *Identifying and Protecting Official Use Only Information*, and DOE M 471-3-1, Administrative Change 1, *Manual for Identifying and Protecting Official Use Only Information*, or the Office of Classification's Classification Training Institute webpage at <http://www.hss.energy.gov/beta/cti.html>.

Each topic that indicates information is OOU must show the exemption that applies. This should be done by including a *NOTE* either below the topic or at the beginning of the section, citing the proper exemption code number and short title. The following example illustrates the form an OOU topic might take:

**101 Information reveals...****OOU**

*NOTE:* OOU category is "Exemption 7, Law Enforcement."

An OOU determination does not mean that the information is exempt from public release. The determination as to whether a document qualifies for exemption from public release under the FOIA requires further analysis by a FOIA denying official. The OOU markings alert DOE personnel that the document must be protected appropriately and reviewed prior to release to individuals serving the U.S. Government interest.

**J. Marking Of Documents**

The originator is responsible for ensuring that classified documents are marked appropriately. DOE O 471.6 *Information Security*, contains information on marking requirements. Also refer to the CMPC Marking Resource for additional information.

Documents containing any RD or FRD should not be portion marked (unless required by agreement with another agency when preparing joint documents). However, documents containing only TFNI or NSI must be portion marked as required by E.O. 13526.

Certain RD topics contain the notation "(N)" or the statement "May be (N)." (N) is an abbreviation for Critical Nuclear Weapons Design Information (CNWDI). CNWDI applies only to the Department of Defense (DoD) and is defined as Top Secret Restricted Data or Secret Restricted Data revealing the theory of

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operation or design of the components of a thermonuclear or fission bomb, warhead, demolition munition, or test device. Specifically excluded is information concerning arming, fuzing, and firing systems, limited-life components, and total contained quantities of fissionable, fusionable, and high explosive materials, by type. Among these excluded items are the components that DoD personnel set, maintain, operate, test, or replace. Documents containing CNWDI must be marked as such prior to transfer to the DoD. (See DOE O 452.8, *Control of Nuclear Weapon Data*, for details.)

Reviewing Officials ensure that documents determined to contain UCNI are marked appropriately. 10 Code of Federal Regulations (CFR), Part 1017, *Identification and Protection of Unclassified Controlled Nuclear Information*, and DOE O 471.1B, *Identification and Protection of Unclassified Controlled Nuclear Information*, contain information on marking requirements.

The employee who determines a document contains OUI information ensures it is marked appropriately. DOE M 471.3-1, *Administrative Change 1, Manual for Identifying and Protecting Official Use Only Information*, contains information on marking requirements.

#### K. Special Considerations

**Inconsistent Guidance.** Inconsistent guidance may be ambiguous, outdated, or in conflict with other guidance. When such guidance is encountered, the Derivative Classifier or Derivative Declassifier must seek clarification from the local Classification Officer.

**No Guidance.** If a Derivative Classifier or Derivative Declassifier cannot determine the proper classification of an element of information using guidance approved for his/her use, the Derivative Classifier or Derivative Declassifier must contact the appropriate classification office for assistance.

**"No Comment" Policy.** Occasionally, classified information appears without authorization in the public domain. For information on how to respond to such information, see Classification Bulletin GEN-16 Revision, *"No Comment" Policy for Classified Information in the Public Domain*.

**Association.** The significance of information often depends upon its context. Therefore, two unique pieces of unclassified information when considered together may reveal classified

information. If the decision to classify is based on a topic, then a Derivative Classifier may make the decision. If the decision is not based on a topic, an Original Classifier must make the decision for NSI and the Director, Office of Classification, must make the decision for RD/FRD information. When two portions of a portion-marked document are classified based on their association, both portions must be portion marked at the same level and category.

**Compilation.** A document may be classified because of compilation when a large number of qualitatively similar pieces of unclassified information considered together contain some added value (such as the completeness or comprehensiveness of the information) that warrants classification. If the decision to classify is based on a topic, then a Derivative Classifier may make the decision. If the decision is not based on a topic, an Original Classifier must make the decision for NSI and the Director, Office of Classification, must make the decision for RD/FRD information. A document classified for this reason is never portion marked and must contain the following statement: "This document has been classified as a compilation and must not be used as a source document for a derivative classification decision."

#### L. Ranges in Classification Levels

A topic in a classification guide may show a range for the classification level. For example:

- |      |   |
|------|---|
| U-TS | Classification level can be from Unclassified to Top Secret             |
| U/TS | Classification level is <u>either</u> Unclassified <u>or</u> Top Secret |

In either case, subtopics or *NOTES* explain when each classification level applies.

#### M. Format of Topics

**RD and FRD Topics.** The format of these topics is as follows:

**102 Guidance topic** vCat

where

v = Classification level (TS, S, C)

Cat = Category (RD or FRD)

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**NSI Topics.** E. O. 13526 and its implementing directive require that classification guides provide consistent reasons for the classification of NSI and either prescribe declassification instructions or identify categories for exemption from automatic declassification.

**Reasons for classification of NSI are:**

1.4(a) military plans, weapons systems, or operations;

1.4(b) foreign government information;

1.4(c) intelligence activities (including covert action), intelligence sources or methods, or cryptology;

1.4(d) foreign relations or foreign activities of the United States, including confidential sources;

1.4(e) scientific, technological, or economic matters relating to the national security;

1.4(f) United States Government programs for safeguarding nuclear materials or facilities;

1.4(g) vulnerabilities or capabilities of systems, installations, infrastructures, projects, plans, or protection services relating to the national security; or

1.4(h) the development, production, or use of weapons of mass destruction.

If the information is not exempt from declassification after 25 years, the following notation is used:

**103 Guidance topic**

**vNSI  
[sched]**

where

**v** = Classification level (TS, S, C)

**sched** = Schedule for declassification. The schedule indicates a specific declassification date (date), a specific event (EV) for declassification, or the duration of time (dur) in years that the information is to remain classified.

Some topics may not include a declassification schedule. In those instances, the topic notes will refer to other topics within the guide, in another DOE guide, or in another agency guide containing specific classification and declassification instructions.

If a specific date (mm/dd/yy) is given, the information identified is declassified on that date.

If a specific event (EV) is given, the information is declassified when the event noted in the topic occurs.

If the same event applies to a group of topics within a section, the event may be noted in the appropriate section topic rather than in each individual topic.

If a duration (dur) is given, the information is declassified that number of years from the date of the document.

When the information is exempt from automatic declassification at 25 years and it may remain classified for up to 50 years, the following notation is used:

**104 Guidance topic**

**vNSI  
[25Xn; sched]**

where

**25X** indicates the information is exempt from automatic declassification after 25 years.

**n** indicates the appropriate exemption category or categories from E.O. 13526. Only the exemptions that are most likely to occur are listed in the topics. Other exemptions may apply and may be used at the discretion of the Derivative Classifier.

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**sched** indicates the schedule for declassification as previously noted. The schedule will be a date, event, or duration beyond 25 years. A specific date, event, or duration for declassification must be given unless the exemption pertains to the identity of a confidential human source or a human intelligence source or key design concepts of weapons of mass destruction. Special markings for these types of information are described in agency directives implementing E.O. 13526.

**NOTE:** If the event occurs before 25 years, the information is declassified at that time.

Twenty-five year exemption categories in E.O. 13526, are:

**25X1:** reveal the identity of a confidential human source, human intelligence source, a relationship with an intelligence or security service of a foreign government or international organization, or a nonhuman intelligence source; or impair the effectiveness of an intelligence method currently in use, available for use, or under development;

**25X2:** reveal information that would assist in the development, production, or use of weapons of mass destruction;

**25X3:** reveal information that would impair U.S. cryptologic systems or activities;

**25X4:** reveal information that would impair the application of state-of-the-art technology within a U.S. weapon system;

**25X5:** reveal formally named or numbered U.S. military war plans that remain in effect, or reveal operational or tactical elements of prior plans that are contained in such active plans;

**25X6:** reveal information, including foreign government information, that would cause serious harm to relations between the United States and a foreign government, or to ongoing diplomatic activities of the United States;

**25X7:** reveal information that would impair the current ability of United States Government officials to protect the President, Vice President, and other protectees for whom protection services, in the interest of the national security, are authorized;

**25X8:** reveal information that would seriously impair current national security emergency preparedness plans or reveal current vulnerabilities of systems, installations, or infrastructures relating to the national security;

**25X9:** violate a statute, treaty, or international agreement that does not permit the automatic or unilateral declassification of information at 25 years.<sup>1</sup>

**NOTE:** Information identified under 25X9 is exempt from declassification under the terms (which may specify a duration far beyond 25, 50, or 75 years) of the statute, treaty (which are approved by the Senate as specified by the Constitution), or international agreement, all of which do not fall under the constraints of an Executive order.

When the information is exempt from automatic declassification at 50 years and it may remain classified for up to 75 years, the following notation is used:

**105 Guidance topic**

**vNSI**  
**[50X1-HUM] or**  
**[50X2-WMD]**

where

**50X1-HUM** indicates information that can clearly and demonstrably be expected to reveal the identity of a confidential human source or a human intelligence source and is, therefore, not subject to automatic declassification for up to 75 years.

<sup>1</sup> When 25X9 is used, a determination is made that the information is subject to a statute, treaty or international agreement that formally prevents its declassification. The statute, treaty or international agreement will be identified in a topic **NOTE**.

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**NOTE:** 25X1-human is an obsolete declassification instruction. For instructions on the use of documents with 25X1-human declassification instructions, see Policy Bulletin 5, Declassification Instruction "25X1-human."

**50X2-WMD** indicates information that can clearly and demonstrably be expected to reveal key design concepts of weapons of mass destruction and is, therefore, not subject to automatic declassification for up to 75 years.

Examples:

**106 The fact that...** **CNSI**  
**[11/25/15]**

Explanation: Topic 106 is CNSI and this fact is declassified on November 25, 2015.

Per 32 CFR 2001.22 para (e)(5), the "Declassify On:" should be written as 20151125.

**107 Information reveals...** **SNSI**  
**[10]**

Explanation: The information in topic 107 is SNSI and is declassified in 10 years. A document containing such information should be marked with a date for declassification 10 years from the date of the document.

**108 Information reveals...** **SNSI**  
**[EV]**

**NOTE:** The information will be declassified when...

Explanation: The information in topic 108 is SNSI and is declassified when a particular event occurs. The **NOTE** will define a specific event as a declassification instruction; for example, when a security vulnerability has been corrected or a facility has been closed. A paraphrase of this **NOTE** must be included on the "Declassify On" line on the document. The information is not exempt from automatic declassification after 25 years.

**109 Information reveals...** **SNSI**  
**[25X2, 8; 40]**

Explanation: The information in topic 109 is SNSI and is exempt from automatic declassification after 25 years because it reveals information that would assist in the development, production, or use of weapons of mass destruction (25X2) and reveals information that would seriously impair current national security emergency preparedness plans or reveal current vulnerabilities of systems, installations, or infrastructures relating to the national security (25X8). A document containing such information should be marked with a date for declassification 40 years from the date of the document.

**110 Information reveals...** **SNSI**  
**[25X2; EV]**

**NOTE:** Declassify when the facility is closed and when no identical or similar facilities exist.

Explanation: Topic 110 is SNSI and is exempt from automatic declassification after 25 years because it reveals information that would assist in the development, production, or use of weapons of mass destruction (25X2). The **NOTE** will describe a specific event that must occur to declassify the information. A paraphrase of this **NOTE** must be included on the "Declassify On" line on the document. If the specified event occurs before 25 years, the information will be declassified at that time.

**111 The fact that...** **CNSI**  
**[25X9; EV]**

**NOTE:** This fact is subject to the Nuclear Non-Proliferation Treaty and will be declassified when...

Explanation: Topic 111 is CNSI and is exempt from automatic declassification because the release of the information would violate a statute, treaty, or international agreement that does not permit the automatic or unilateral declassification of information after 25 years (25X9), e.g., the Nuclear Non-Proliferation Treaty. The information is

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exempt from automatic declassification after 25 years and will be declassified when an event occurs. The *NOTE* will specify the statute, treaty, or international agreement that formally prevents its declassification and will define a specific event for declassification. A paraphrase of this *NOTE* must be included on the "Declassify On" line on the document. If the specified event occurs before 25 years, the information will be declassified at that time.

**112 Information reveals...****U-SNSI**

*NOTE:* Refer to the appropriate program guidance for classification and declassification instructions.

Explanation: The classification level of topic 112 may range from U to SNSI. Refer to the appropriate program guidance for classification and declassification instructions.

**113 Information revealing****SEE NOTE**

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*NOTE:* This is DoD information. Protect as SNSI pending DoD direction.

Explanation: Used when DOE is not the original classification authority. The original classification authority will be provided in the note. Topic cannot be used for a final classification determination.

**114 Information revealing****SNSI**

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*NOTE:* The DOE equity is declassified after 25 years. Refer to FBI for final declassification.

Explanation: Used when the information is a joint equity. *NOTE* will provide declassification instructions for the DOE equity and the other agency.

**N. Obtaining Copies of a Guide**

Unless otherwise indicated on the guide or by the Office of Classification, local copying of a guide is permitted. However, to ensure that each person with a copy of a guide receives change notices and revisions, the person's name must be on a distribution list for that guide maintained by Headquarters or the local Classification Officer.

Inside the front cover of this guide is a Classification/Control Guidance Request form that may be used to obtain guides or to report distribution changes.

**O. Questions/Suggestions**

Any comments or suggestions may be forwarded through the local classification office to the Director, Office of Technical Guidance, using the Classification Issue/Comment Sheet inside the back cover of this guide. The completed comment sheet can be sent, as appropriate, to the following classified or unclassified addresses:

Classified Address

Office of Classification  
Attn: Office of Technical Guidance  
HS-62, (*Intended Recipient*)  
U.S. Department of Energy  
P.O. Box A  
Germantown, MD 20875-0963

Unclassified Address

Office of Classification  
Attn: Office of Technical Guidance  
HS-62/Germantown Building  
U.S. Department of Energy  
1000 Independence Avenue, SW.  
Washington, D.C. 20585-1290

For questions concerning administrative aspects or distribution of the guide, please contact the Technical Guidance Administrator at (301) 903-3688.

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## CHAPTER 1

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### GENERAL INFORMATION

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#### **A. Overview of the DOE's Radiological Emergency Response**

Executive Order 12656 assigns emergency preparedness responsibilities to DOE for the conduct, direction, and coordination of:

- Search and recovery operations for lost or stolen nuclear materials, weapons, or devices;

- Assistance in the identification and deactivation of improvised nuclear devices (IND);

- Render-safe advice on radiation and damage probabilities in the event of the detonation of an IND.

The Department uses a phased approach in the deployment of resources in support of a radiological/nuclear emergency response. Crisis response (CR), especially to a counterterrorism operation, requires immediate deployment of limited assets with limited technical capabilities and equipment. Consequence management (CM), which deploys significant technical and logistical assets, requires an expedited but a more deliberate response to the incident.

The Department's resources include the national laboratories and DOE contractor organizations with capabilities for radiological detection and monitoring; dose assessments; weapon design; disablement; mitigation; threat assessment; and logistics. These collective resources are in reality separate and distinct response assets. Those include both the NEST CR assets (the NRAT, the JTOT, the ARG, and the SRT) and the NEST CM assets (the AMS, the NARAC, the FRMAC, the RAP, and the REAC/TS).

#### **B. Reasons for Classification**

Potential criminals—who obtain information about the Department's methods for evaluating and countering criminal acts—could seriously subvert or negate the DOE's response to nuclear incidents. Such knowledge could also

open the Department's nuclear emergency response activities to observation, compromise and future interference by potential adversaries. For these reasons, it is essential that certain information about the program be denied public disclosure.

Technology for the development of nuclear emergency response-related detection systems, diagnostic systems, and disablement systems are derived from both unclassified and classified DOE and DoD programs. Therefore, it is important to classify certain applications and capabilities of these systems. For example, while the general ability—in either ground or air-search modes—to locate radiation sources is unclassified, it is important to protect the extent or details of this capability, so that those who would seek to perpetrate a nuclear threat will be less able to protect themselves against our technical capacity to foil them.

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## CHAPTER 2

### BROAD GUIDANCE

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Many of the details about a RER mission, exercise, or drill/training may be either classified or UCNl, while other details are unclassified and not UCNl. Classification may depend on instructions from the Department's emergency response program officials and the desires of other Federal agencies and foreign governments that may be involved. For classification purposes, a NSSE shall be considered a mission. Supplemental classification guidance issued for a specific NSSE must also be consulted, however, as it may provide exceptions to topical classification guidance provided in this guide.

Certain topics in this guide have more than one classification level. Several of these topics include a *NOTE* which prompts the user to seek more specific guidance from the DOE SEO and/or the DOE ERO on which single classification level is to be applied during a specific exercise, drill/training or NSSE. To assist planning efforts, it is recommended that written supplemental classification guidance, to be used in conjunction with this guide, be developed by the appropriate DOE emergency program office early in the planning stages for every exercise, drill/training, and NSSE that involves NEST assets. It is essential that planning personnel, as well as the classification officer of each agency, laboratory, or contractor organization that supports or may support one of the aforementioned activities, be aware of the classification that has been assigned to CG-RER-1 topics that have a classification range. The assignment of a specific NSI classification level and duration to a topic is to be based on the determination of appropriate officials, both DOE and non-DOE, possessing original classification authority for NSI. The DOE SEO and/or the DOE ERO will then promulgate these classification determinations. To prevent revealing scenario information to potential exercise or drill/training players, supplemental guidance may be marked "For Exercise Planners' Use Only." In this sense, DOE Headquarters and field classification personnel are considered exercise planners.

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Only the Director, DOE Office of Health, Safety and Security, has the authority to declassify or downgrade RD and FRD; and for FRD, the declassification or downgrading must be accomplished jointly with the DoD. Once the information has been declassified or downgraded, then declassification or downgrading of documents containing that information may be carried out by the Derivative Declassifiers.

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## CHAPTER 3

### TOPICAL GUIDANCE

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#### 1000 COMMON TOPICS FOR THE NUCLEAR EMERGENCY SUPPORT TEAM CRISIS RESPONSE ASSETS

##### 1100 General

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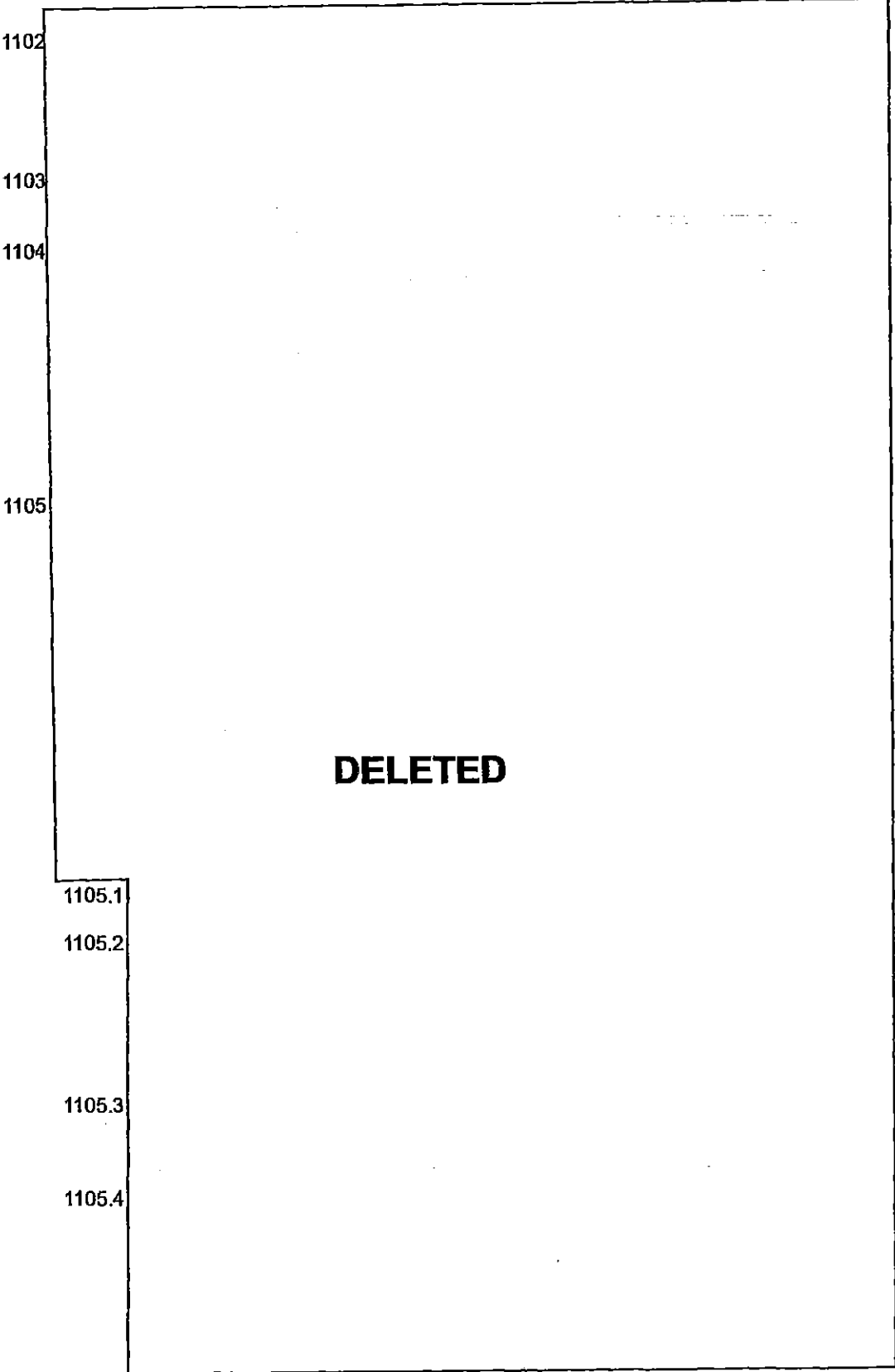
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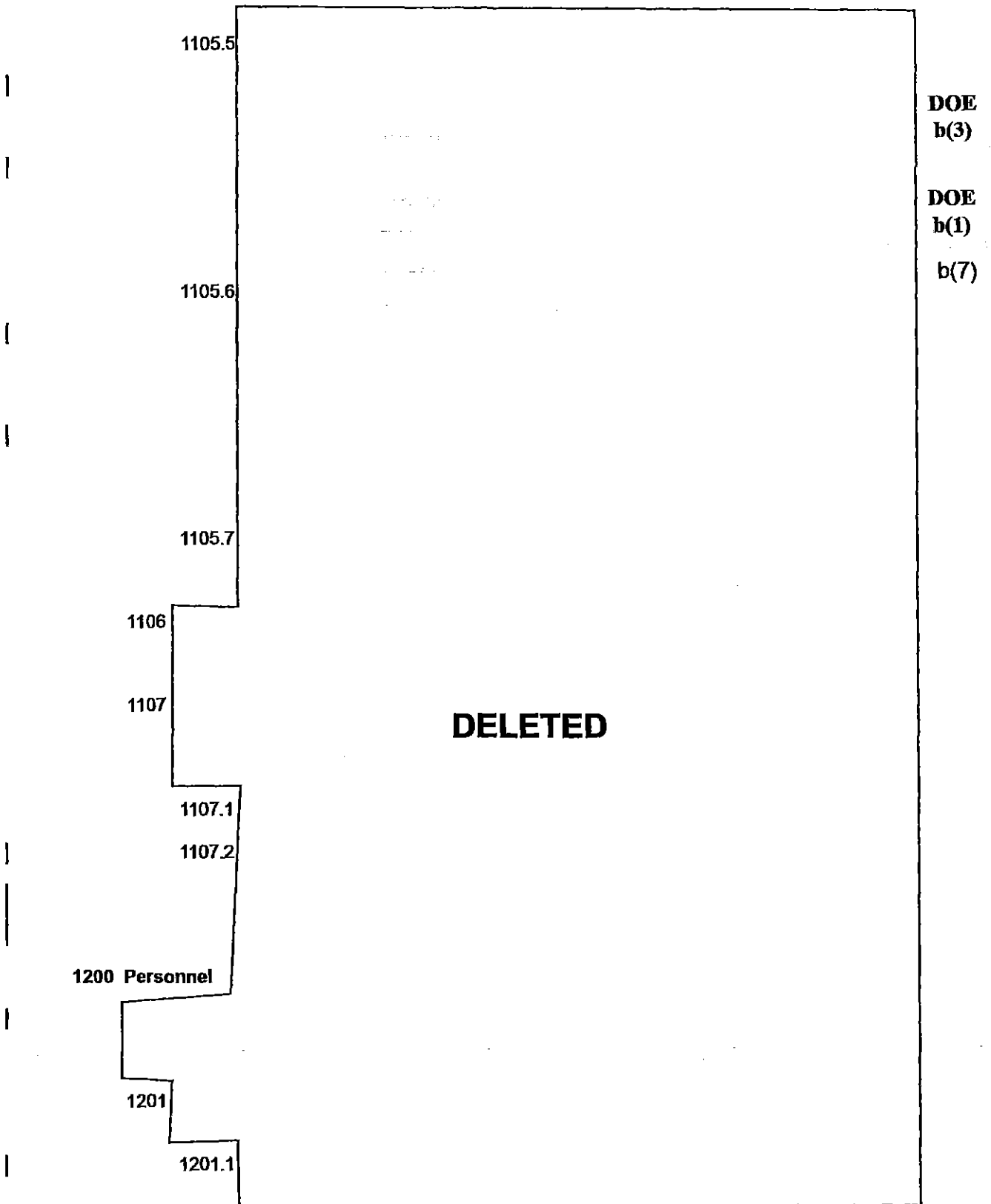
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**1300 Equipment and Capabilities**

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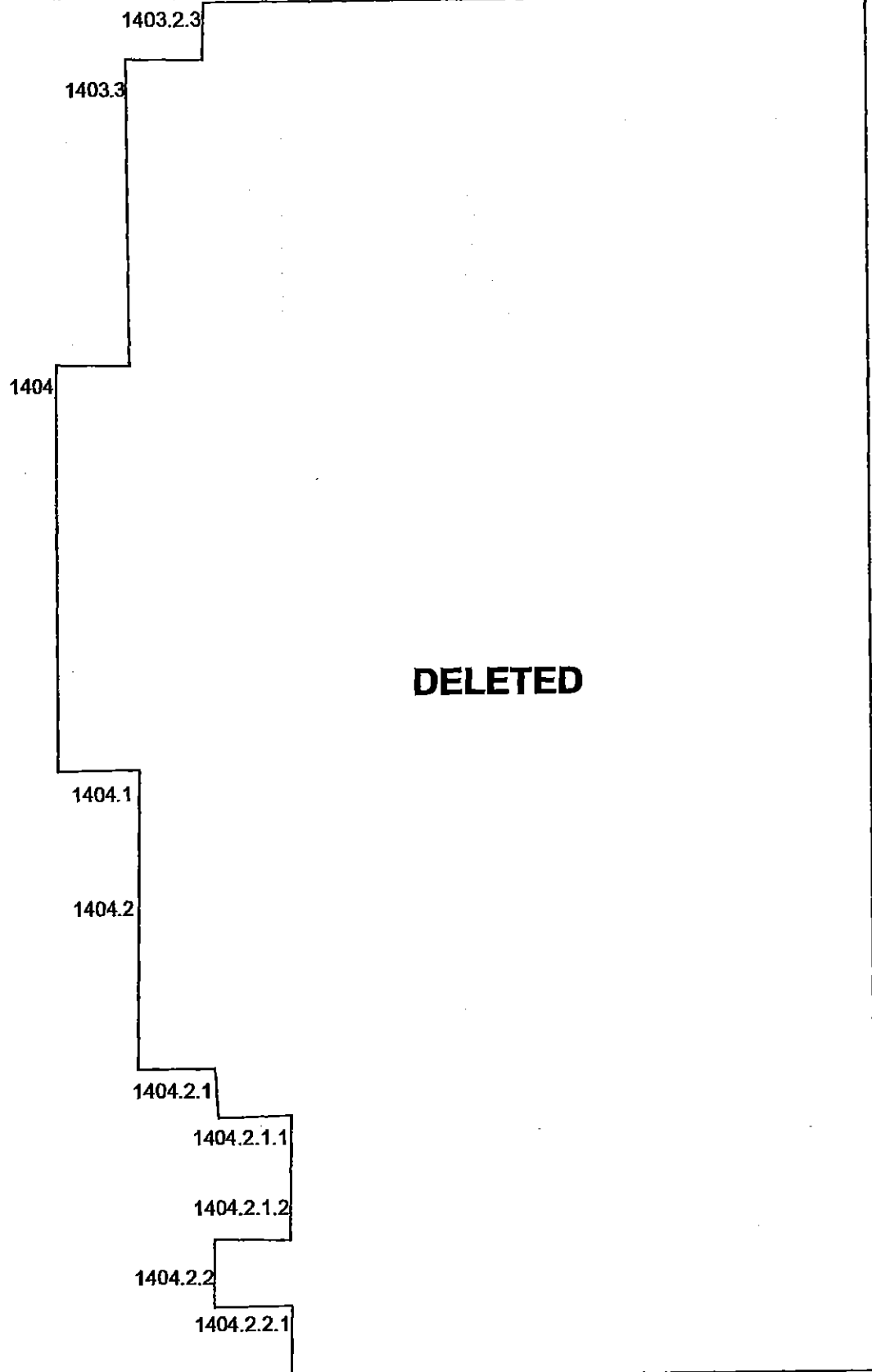
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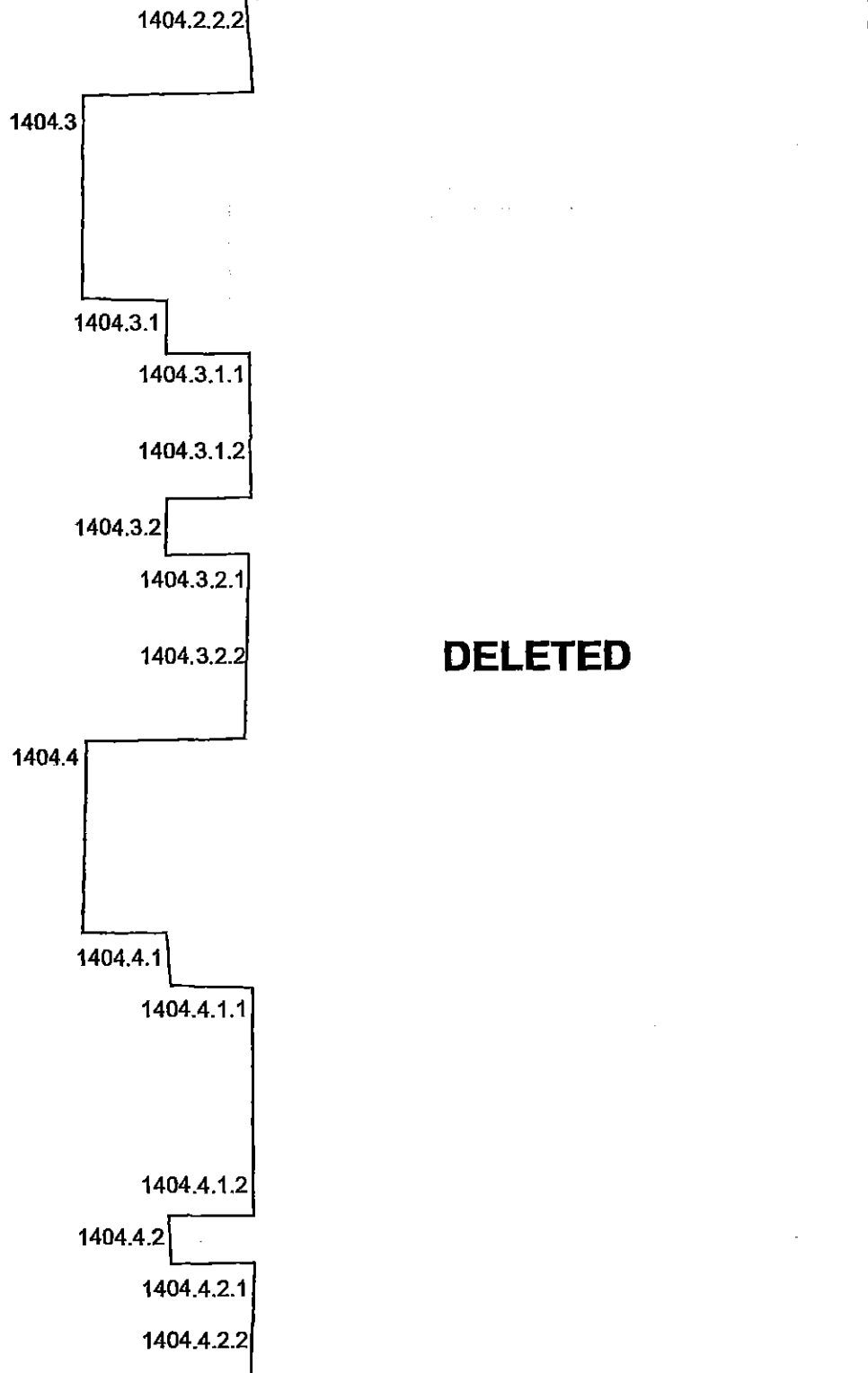
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1405.5.1.1

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b(3)

1405.5.1.2

1405.5.2

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1405.5.3

1405.5.4

1405.5.4.1

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b(3)  
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1405.5.4.2

1405.5.4.2.1

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b(3)

1405.5.4.2.2

1405.5.4.3

1405.5.4.3.1

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b(3)

1405.5.4.3.1.1

1405.5.4.3.1.2

1405.5.4.3.2

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1406

1406.1

1406.1.1

1406.1.2

1406.2

1406.3

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**DOE  
b(7)**

1407

1408

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1412

1412.1

1412.2

1413

1413.1

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1413.3

1413.4

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**1500 Data and Documentation**

1501

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1502

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1503

1503.1

1503.2

1503.3

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**b(7)**

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2000 NUCLEAR THREAT DEVICES

2100 Information About Radiological Dispersal Devices

2101

2101.1

2101.2

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b(7)

2102

2103

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2104

2104.1

2104.2

2104.2.1

2104.2.2

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b(7)

2105

2106

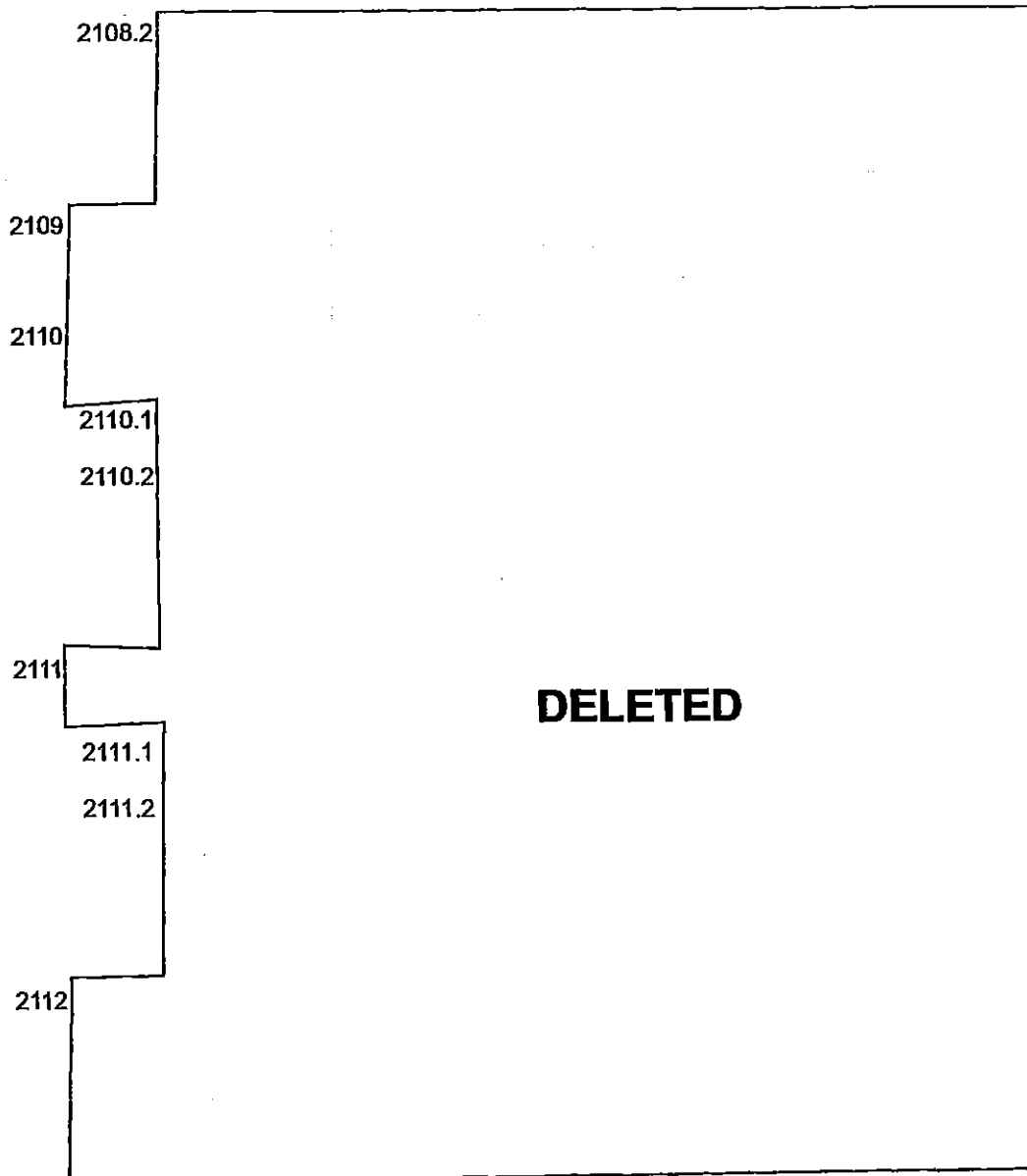
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2108

2108.1

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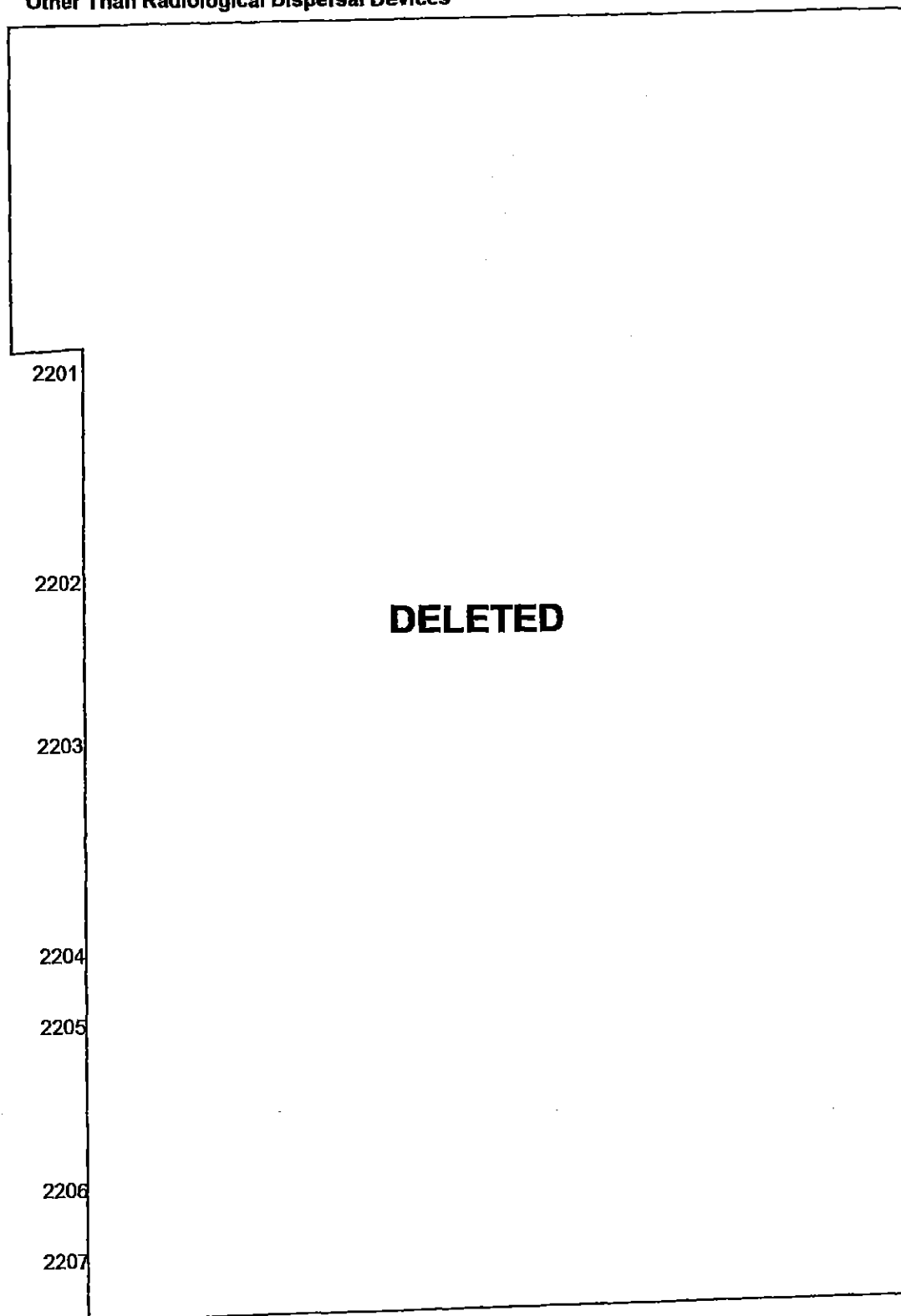


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**2200 Information About Nuclear Weapons and Improvised Nuclear Devices  
Other Than Radiological Dispersal Devices**



2201

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2208

2208.1

2208.2

2209

2210

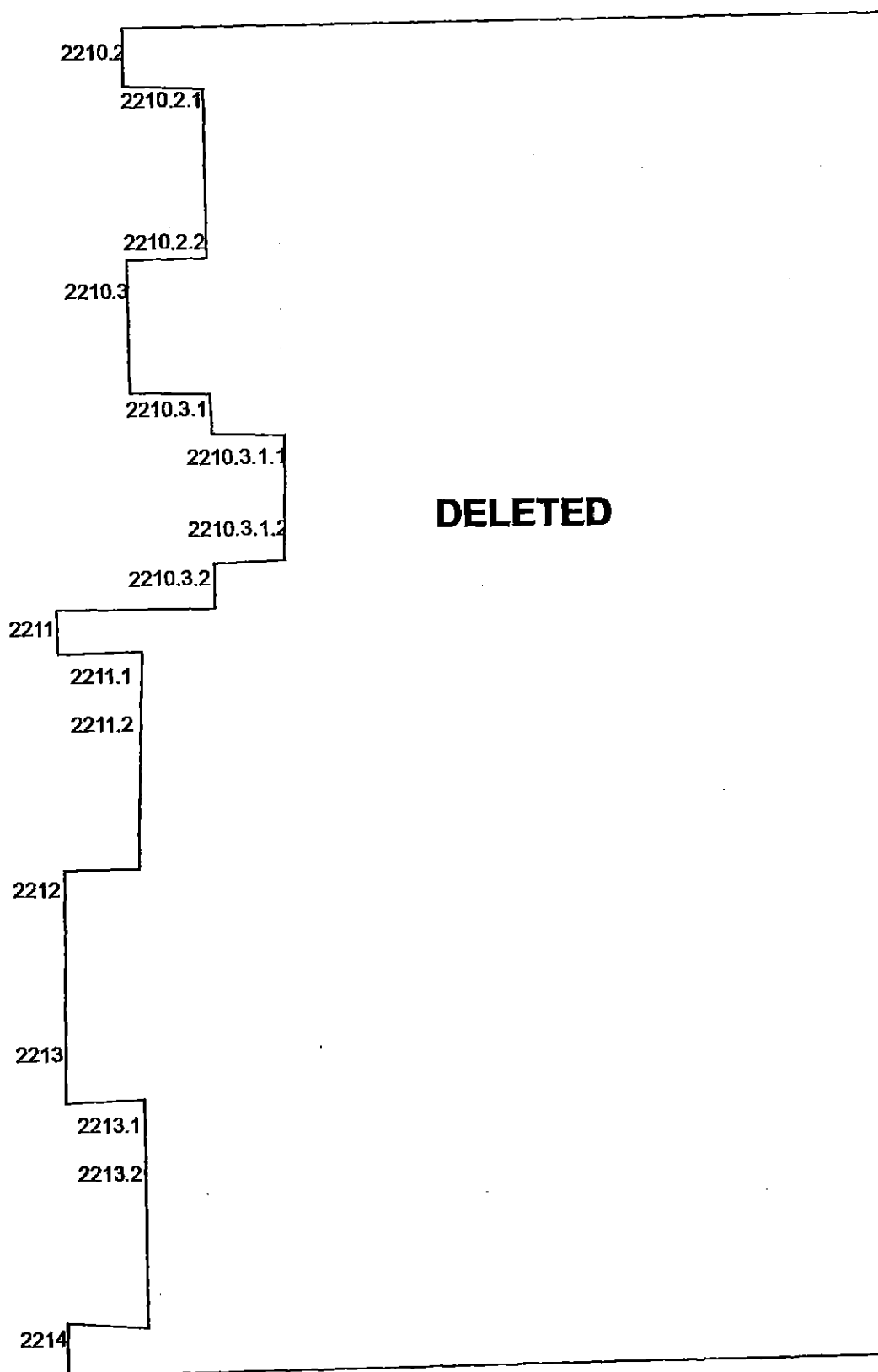
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2210.1

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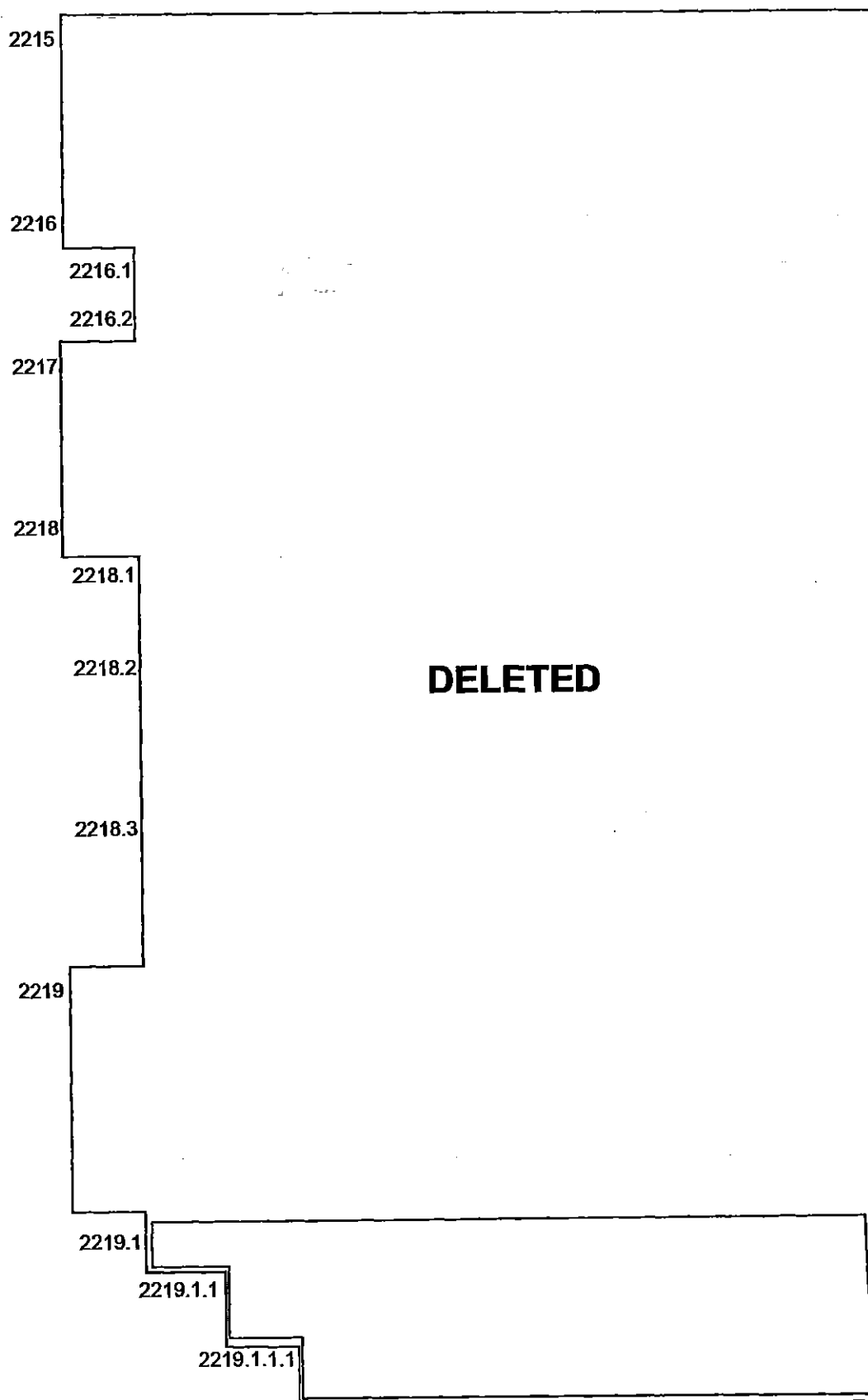
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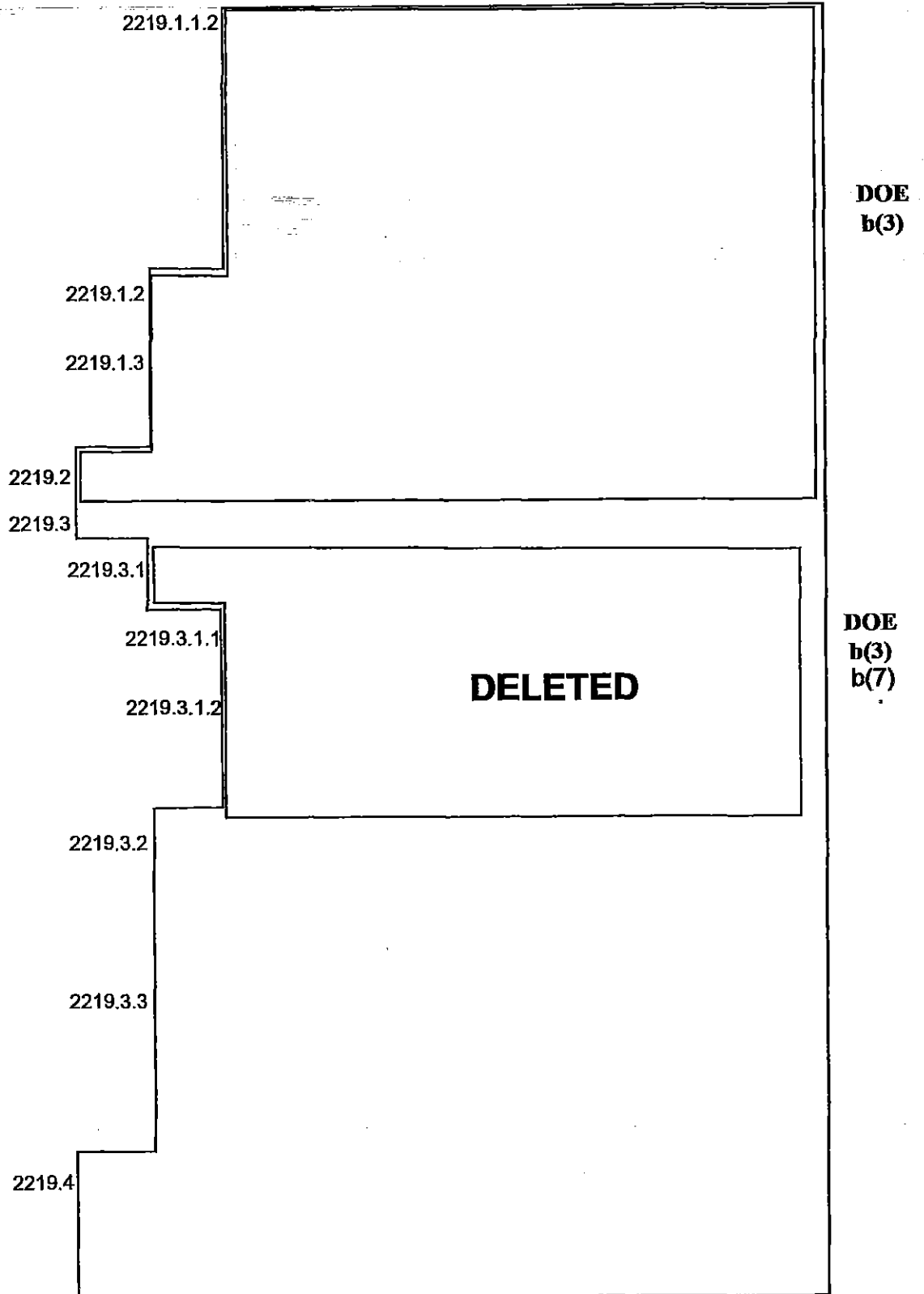


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| 2219.5   | <div>DELETED</div> |
| 2219.5.1 |                    |
| 2219.5.2 |                    |
| 2219.5.3 |                    |
| 2219.5.4 |                    |
| 2219.5.5 |                    |
| 2219.5.6 |                    |
| 2219.5.7 |                    |
| 2219.5.8 |                    |
| 2220     |                    |
| 2221     |                    |
| 2222     |                    |
| 2223     |                    |

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2224

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2225

2225.1

2225.2

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DOE  
b(3)  
b(7)

2226

2226.1

2226.2

2226.3

2226.3.1

2226.3.2

2226.4

DOE  
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2227

2227.1

2227.2

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2228

2229

2229.1

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2229.1.1

2229.1.2

2229.2

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2229.3

2229.3.1

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2229.3.2

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| 3000 RESPONSE ACTIVITIES AND EQUIPMENT FOR NEST ASSETS

3100 General

3101

3102

3103

3104

3105

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3200 Search Activities

3201

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3202

3203

3204

3204.1

3204.2

3204.3

3204.4

3204.5

3205

3206

3207

3208

3208.1

3208.2

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**DOE**  
**b(7)**

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|   |  |
|---|--|
| 3208.3                                      |  |
| 3208.4                                      |  |
| <b>3300 Threat-Device-Access Activities</b> |  |
| 3301  |  |
| 3302  |  |
| 3303  |  |
| 3304  |  |
| 3304.1                                      |  |
| 3304.2                                      |  |
| 3305  |  |
| 3305.1                                      |  |
| 3305.2                                      |  |
| 3306  |  |
| 3307  |  |
| 3307.1                                      |  |

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**DOE  
b(7)**

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3307.2

3308

3309

3310

3311

3312

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3314

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**DOE**  
b(7)

**3400 Diagnostics Activities**

3401

3402

3403

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|                                       |                |
|---------------------------------------|----------------|
| 3404                                  |                |
| 3404.1                                |                |
| 3404.2                                |                |
|                                       |                |
| 3405                                  |                |
| 3406                                  |                |
| 3407                                  |                |
|                                       |                |
| 3407.1                                |                |
| 3407.2                                | <b>DELETED</b> |
|                                       |                |
| <b>3500 Rendering Safe Activities</b> |                |
| 3501                                  |                |
| 3501.1                                |                |
| 3501.2                                |                |

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b(7)

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3502

3502.1

3502.2

3503

3504

3505

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b(7)**DELETED**

3506

3506.1

3506.2

DOE  
b(3)

3507

3507.1

3507.2

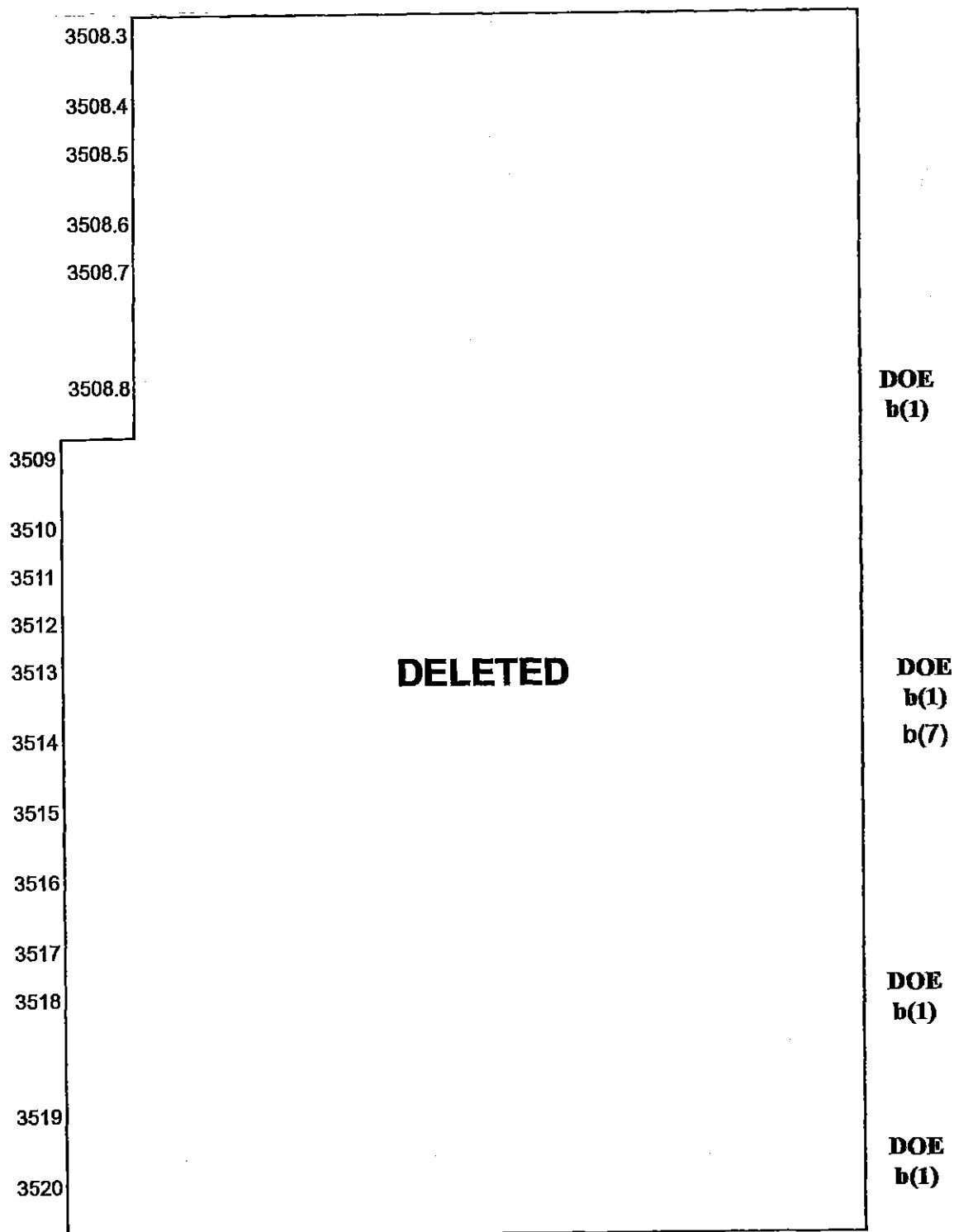
3508

3508.1

3508.2

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b(1)  
b(7)**

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**3600 Containment Activities**

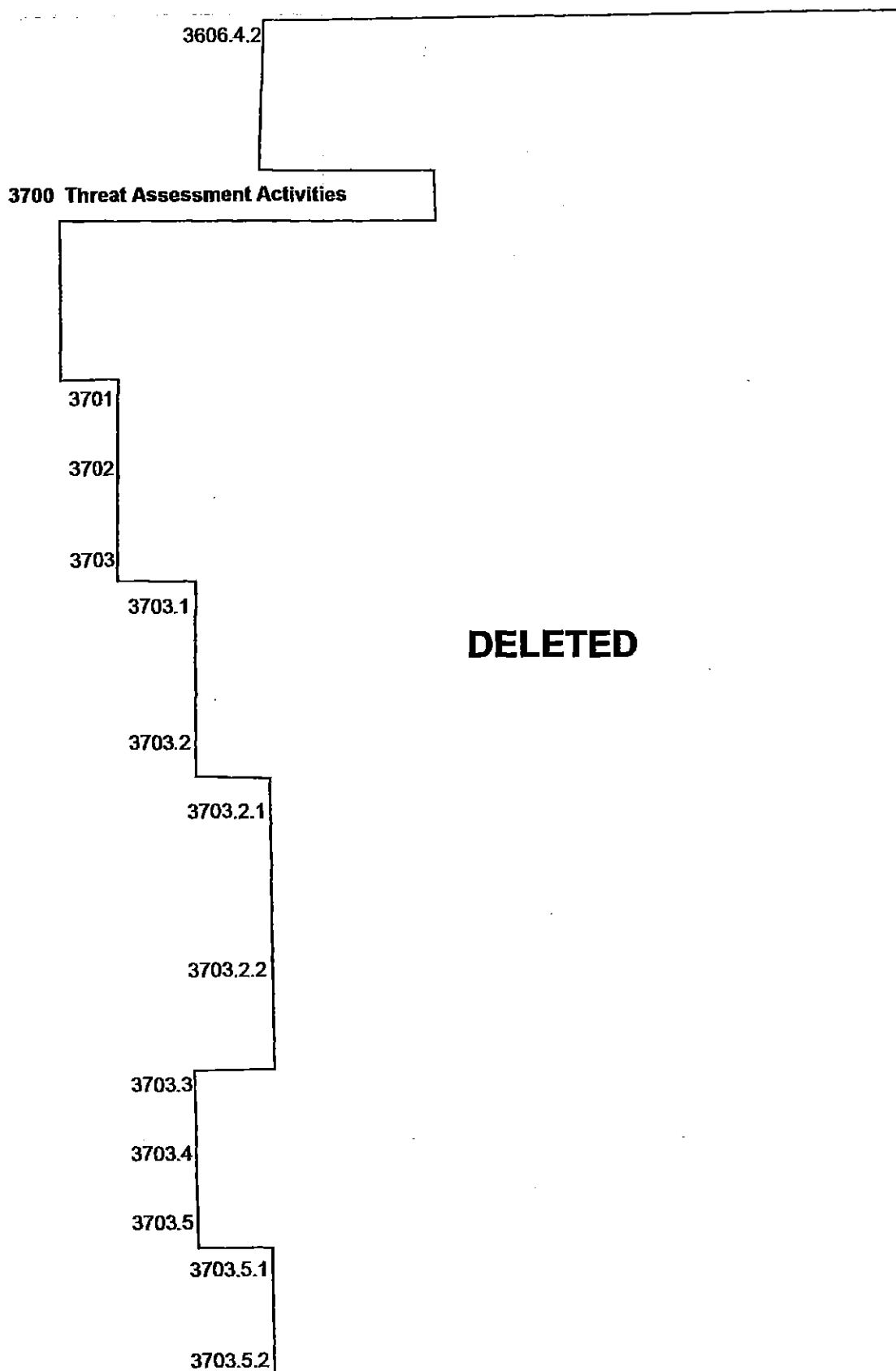
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| 3601     |  |
| 3602     |  |
| 3603     |  |
| 3604     |  |
| 3605     |  |
| 3605.1   |  |
| 3605.2   |  |
| 3606     |  |
| 3606.1   |  |
| 3606.2   |  |
| 3606.3   |  |
| 3606.4   |  |
| 3606.4.1 |  |

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|          |                |
|----------|----------------|
| 3703.5.3 | <b>DELETED</b> |
| 3703.6   |                |
| 3703.6.1 |                |
| 3703.6.2 |                |
| 3703.7   |                |
| 3704     |                |
| 3704.1   |                |
| 3704.2   |                |
| 3704.3   |                |
| 3704.4   |                |
| 3704.5   |                |
| 3705     |                |
| 3705.1   |                |
| 3705.2   |                |
| 3705.3   |                |

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3706

3706.1

3706.2

3707

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3709

3710

3710.1

3710.2

3710.3

3710.4

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**b(7)**

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3711

3712

3712.1

3712.2

3712.2.1

3712.2.2

3712.2.3

3712.2.4

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**DOE  
b(7)**

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~~SECRET RESTRICTED DATA~~**4000 ACCIDENT RESPONSE GROUP****4100 General**

4101

4102

4103

4103.1

4103.2

4103.3

4104

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4107

**4200 Personnel**

4201

4202

4203

4204

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**b(7)**~~SECRET RESTRICTED DATA~~

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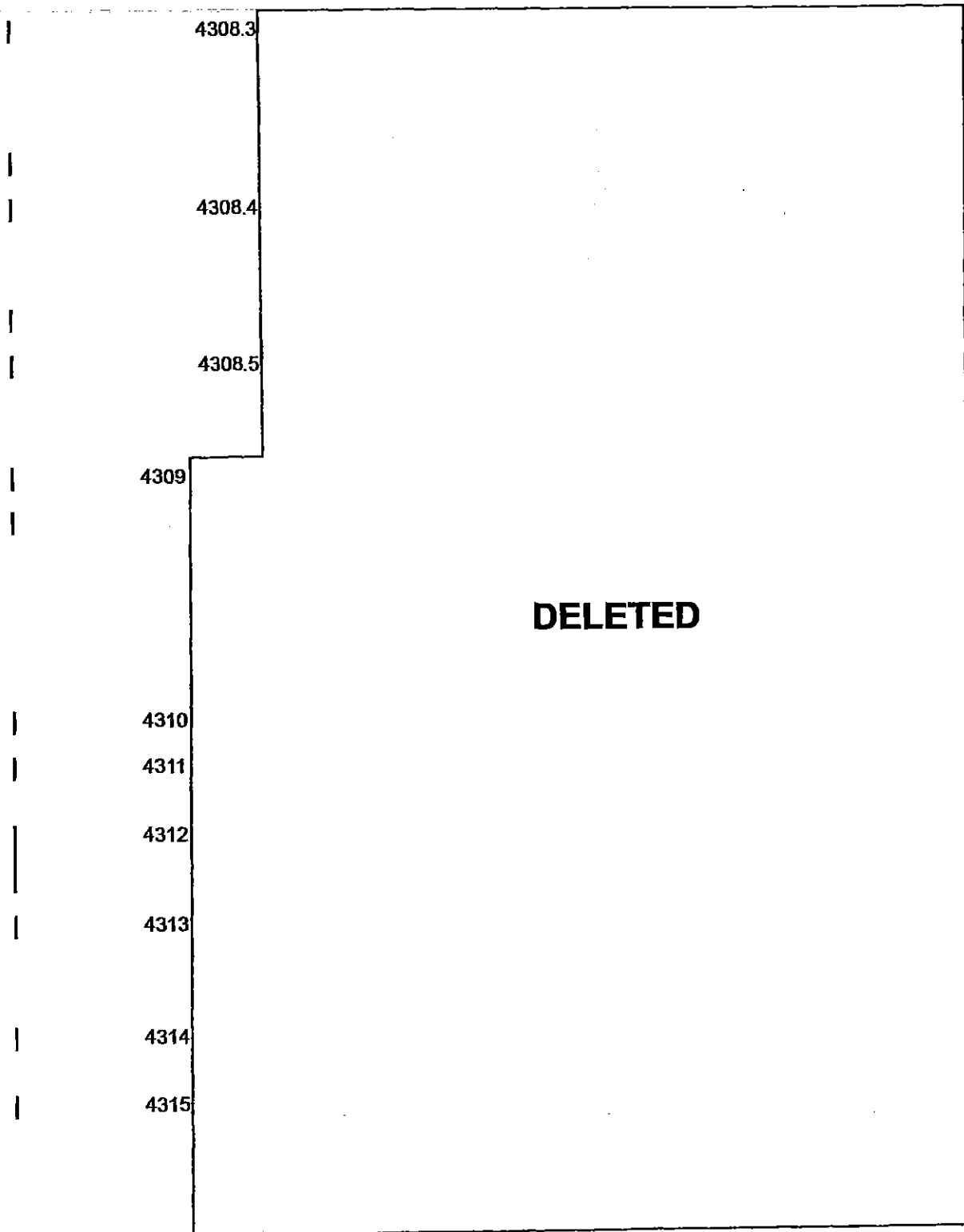
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|------|----------------------------|
| 4205 |                            |
| 4300 | Equipment and Capabilities |
| 4301 |                            |
| 4302 |                            |
| 4303 |                            |
| 4304 |                            |
|      | 4304.1                     |
|      | 4304.2                     |
|      |                            |
|      | 4304.3                     |
|      | 4304.4                     |
| 4305 |                            |
| 4306 |                            |
| 4307 |                            |
| 4308 |                            |
|      | 4308.1                     |
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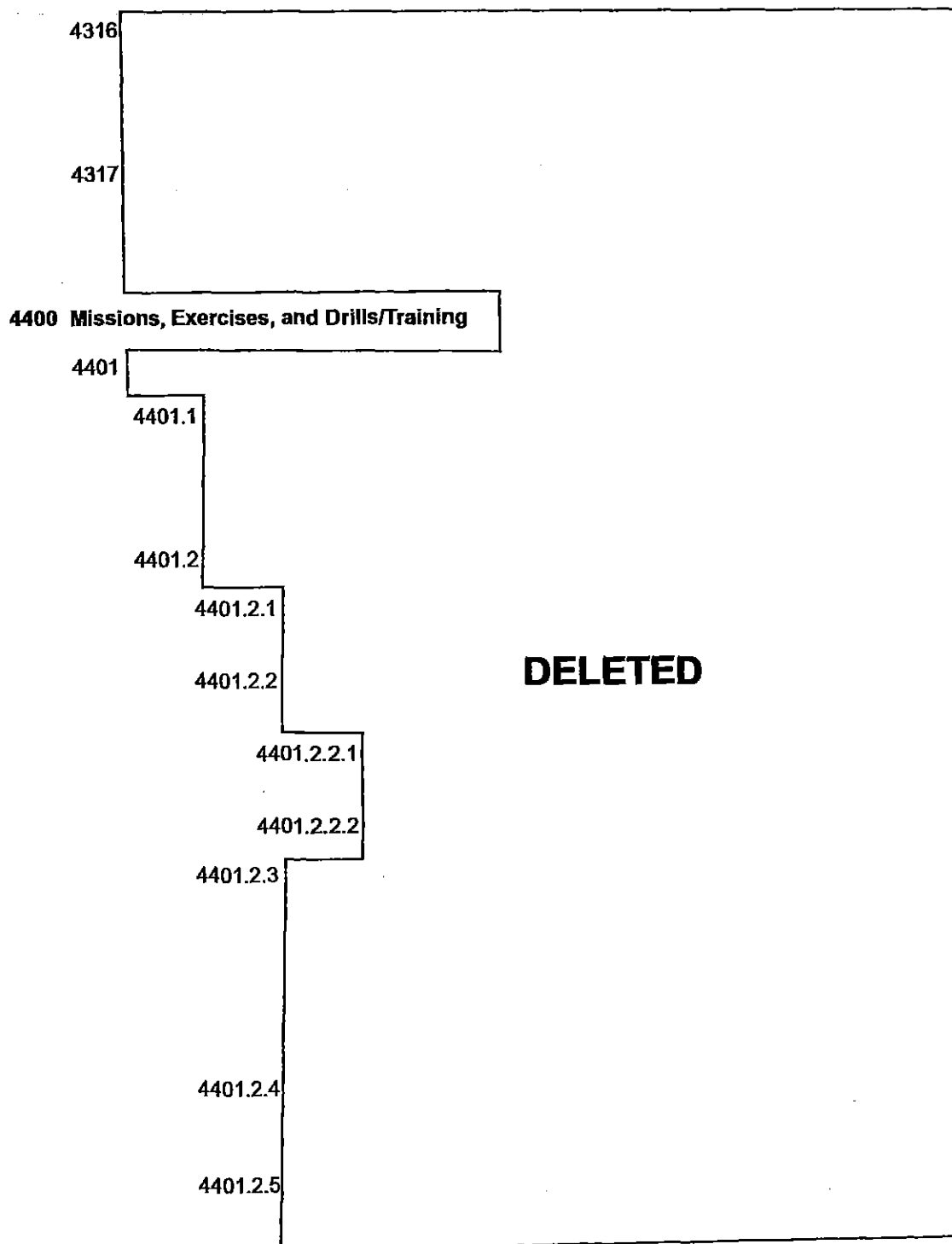
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| 4401.2.6   |  |
| 4401.3     |  |
| 4401.3.1   |  |
| 4401.3.2   |  |
| 4401.4     |  |
| 4401.5     |  |
| 4401.6     |  |
| 4401.7     |  |
| 4401.7.1   |  |
| 4401.7.2   |  |
| 4401.7.2.1 |  |
| 4401.7.2.2 |  |

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|          |  |
|----------|--|
| 4402     |  |
| 4402.1   |  |
| 4402.1.1 |  |
| 4402.1.2 |  |
| 4402.2   |  |
| 4402.3   |  |
| 4402.4   |  |
| 4402.5   |  |
| 4402.6   |  |
| 4402.7   |  |
| 4402.7.1 |  |
| 4402.7.2 |  |
| 4402.8   |  |

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4500 Designs, Data, and Documentation

4501

4502

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**b(7)**

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**5000 CONSEQUENCE MANAGEMENT RESPONSE**

**5100 General**

5101

5102

5103

5104

5104.1

5104.2

5104.2.1

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5104.2.2

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**b(3)**  
**b(7)**

5104.3

5104.4

5104.5

5104.6

5105

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|                |                |
|----------------|----------------|
| 5106           | <b>DELETED</b> |
| 5107           |                |
| 5108           |                |
| 5109           |                |
| 5110           |                |
| 5111           |                |
|                |                |
| 5112           |                |
| 5113           |                |
| 5114           |                |
| 5115           |                |
| 5200 Personnel |                |
|                |                |
| 5201           |                |
| 5202           |                |
| 5203           |                |
| 5204           |                |
| 5205           |                |
| 5206           |                |

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**5300 Equipment and Capabilities**

5301

5302

5303

5304

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5308

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5313

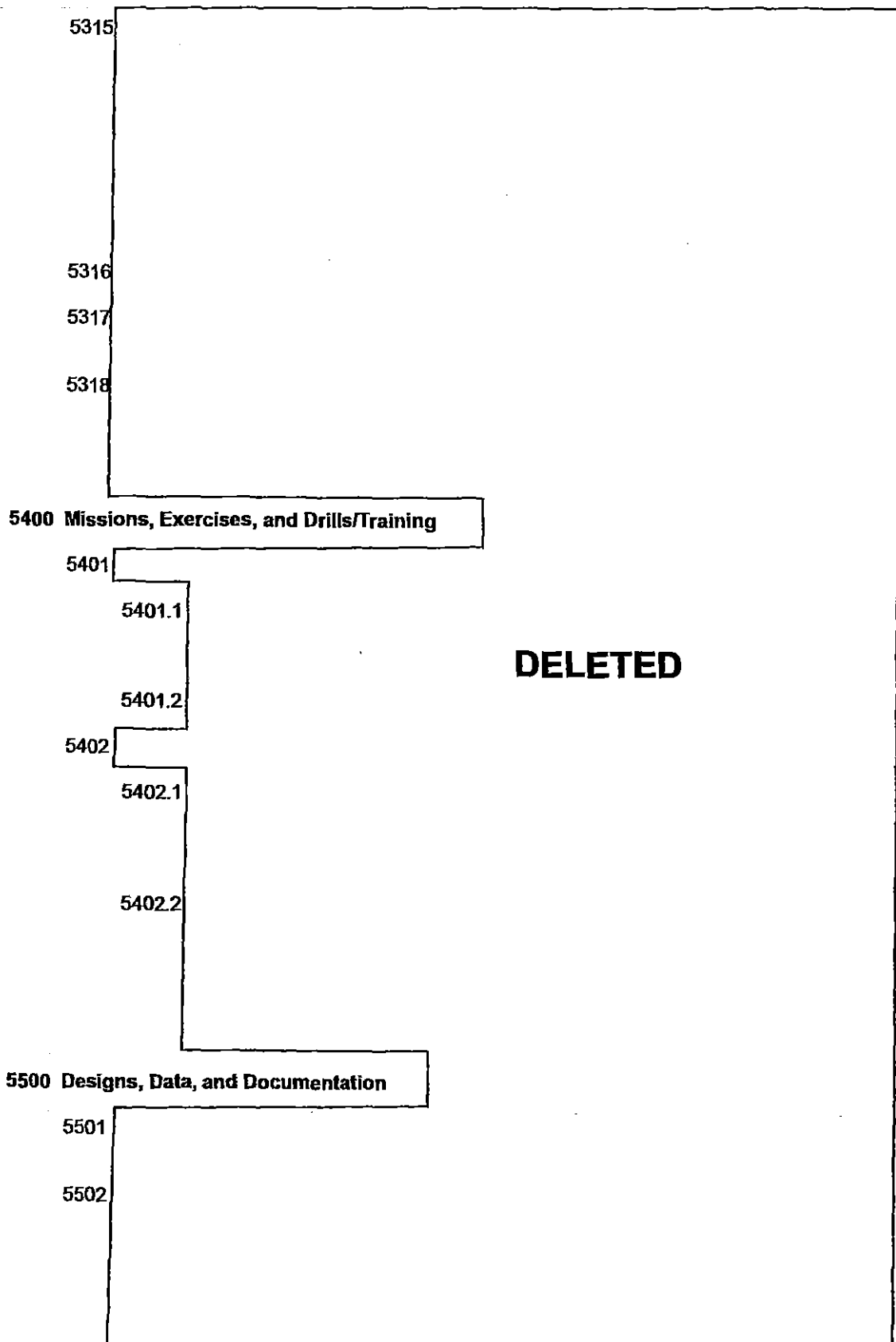
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b(3)  
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~~SECRET RESTRICTED DATA~~**5600 Disposition**

5601

5601.1

5601.1.1

5601.1.2

5601.1.3

5601.2

5601.3

5601.4

5601.5

5602

5602.1

5602.1.1

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b(7)**~~SECRET RESTRICTED DATA~~



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5602.1.2

5602.1.3

5602.2

5602.2.1

5602.2.2

5602.2.3

5602.2.4

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5602.3

5602.3.1

5602.3.2

5602.4

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6000 STABILIZATION PROGRAM

6100 General

6101

6101.1

6101.2

6102

6102.1

6102.2

6102.3

6102.4

6102.5

6102.6

6103

6103.1

6103.2

6103.3

6103.4

6104

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6200 Components

6201

6201.1

6201.2

6201.3

6201.4

6202

6202.1

6202.2

6202.3

6202.4

6202.4.1

6202.4.2

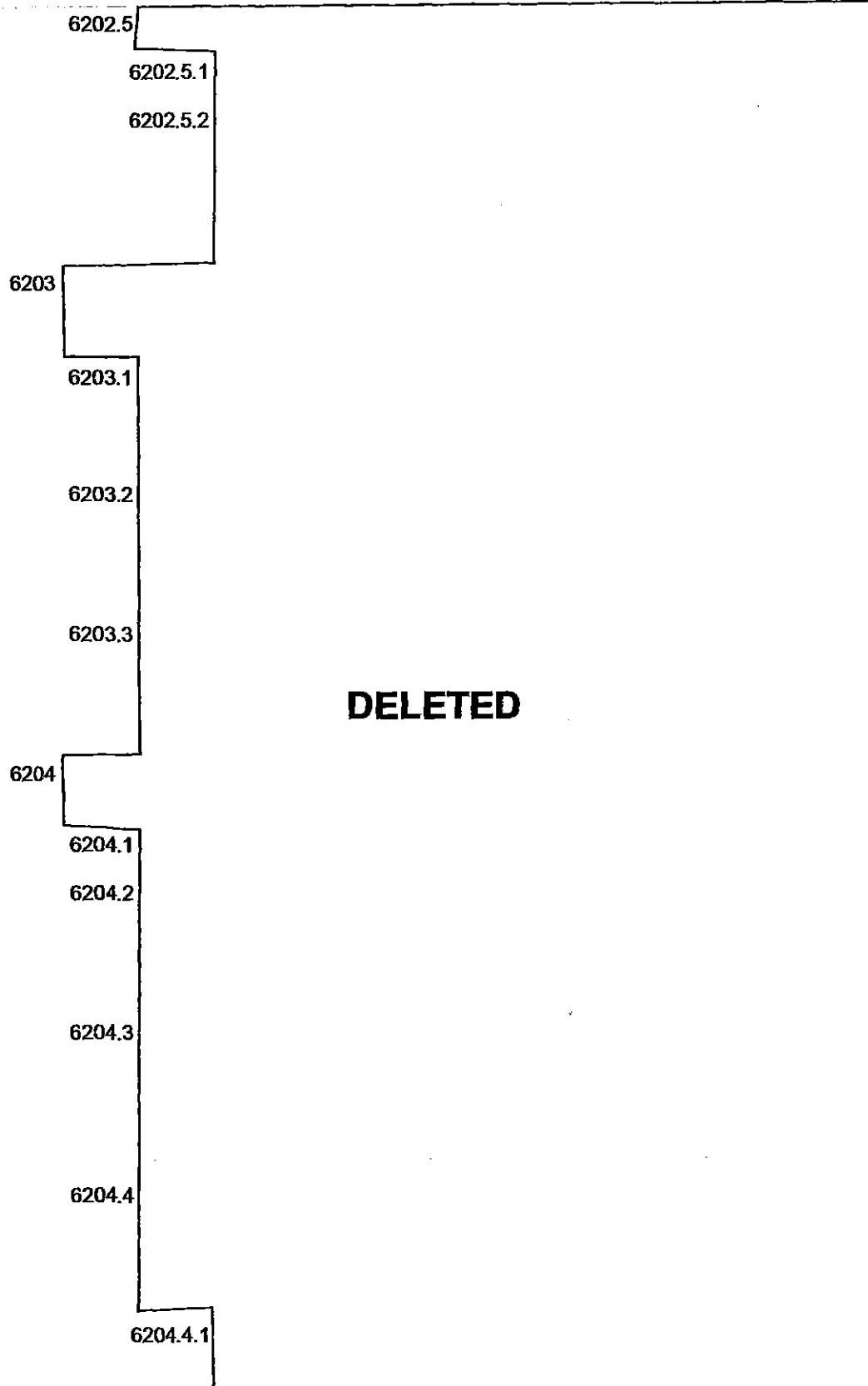
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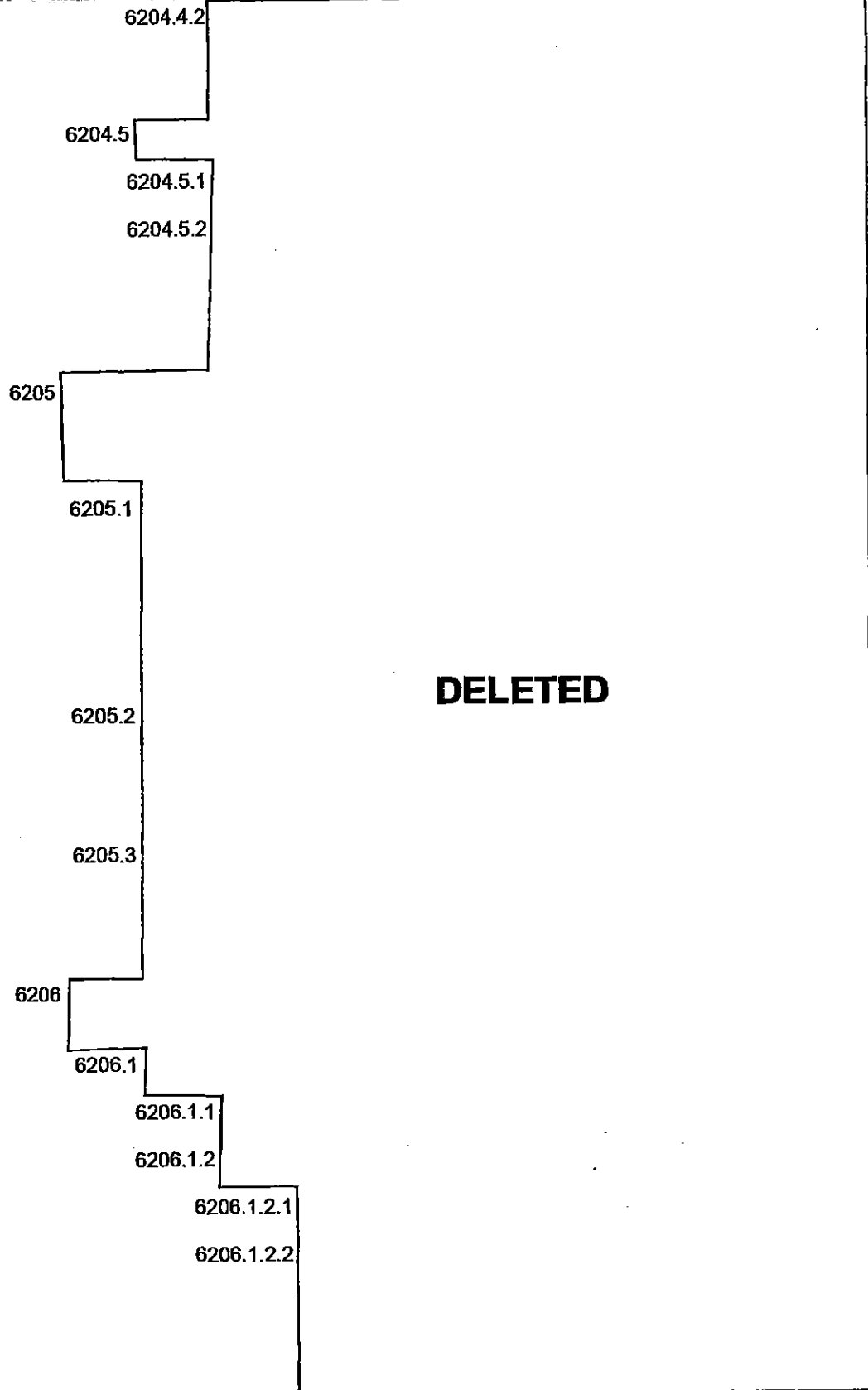
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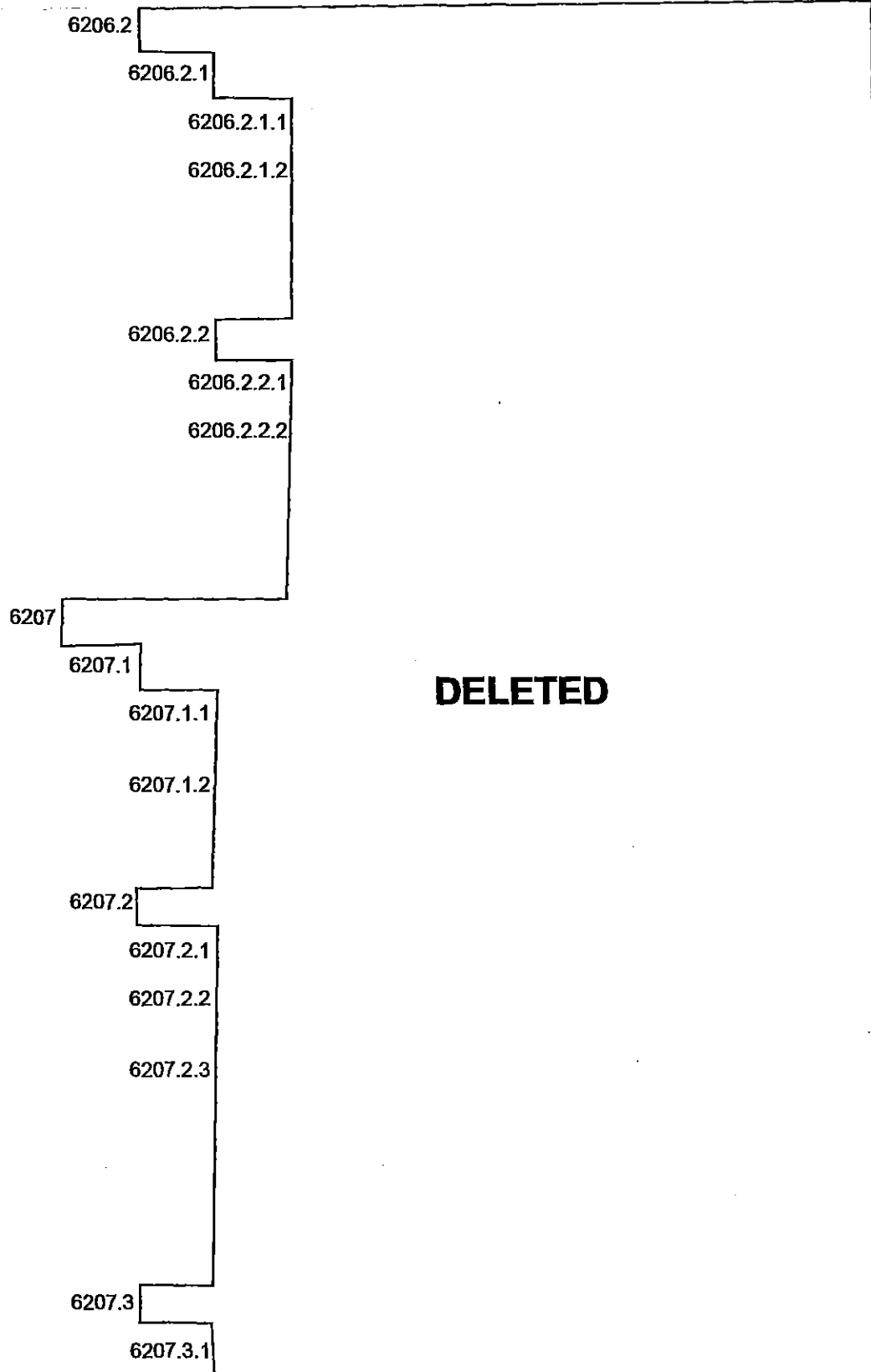


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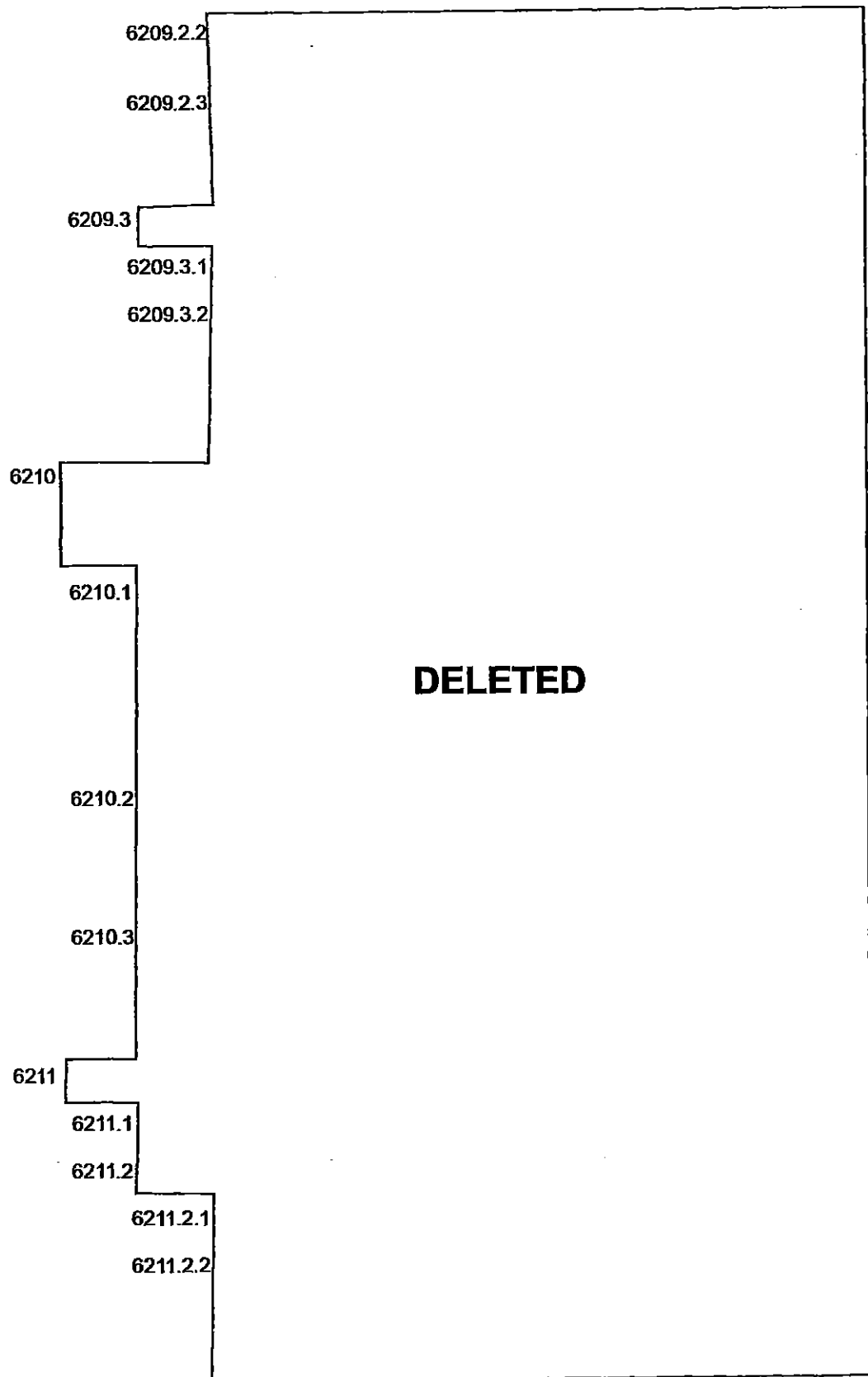
6207.3.2  
6208  
6208.1  
6208.2  
6208.3  
6209  
6209.1  
6209.1.1  
6209.1.2  
6209.1.3  
6209.2  
6209.2.1

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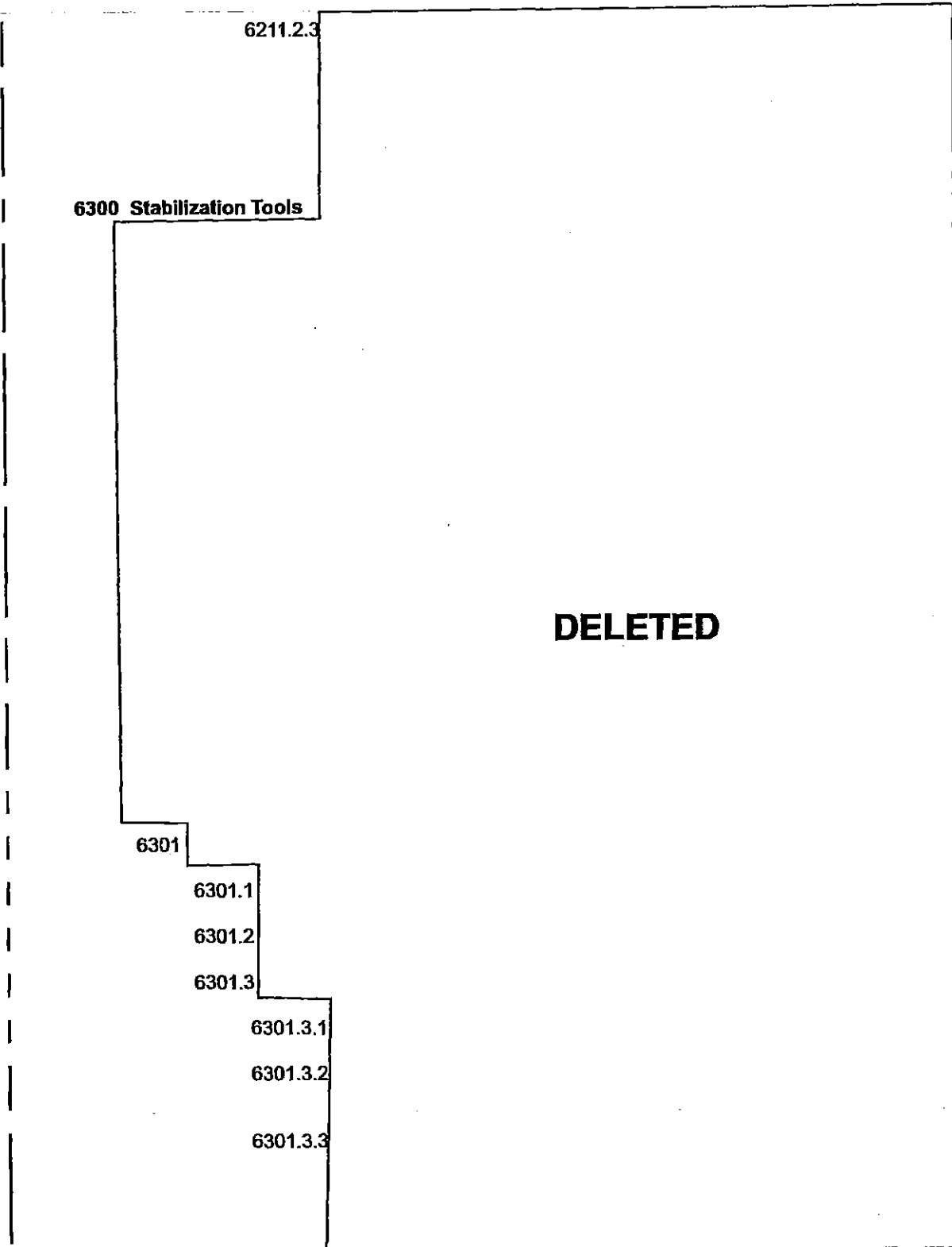


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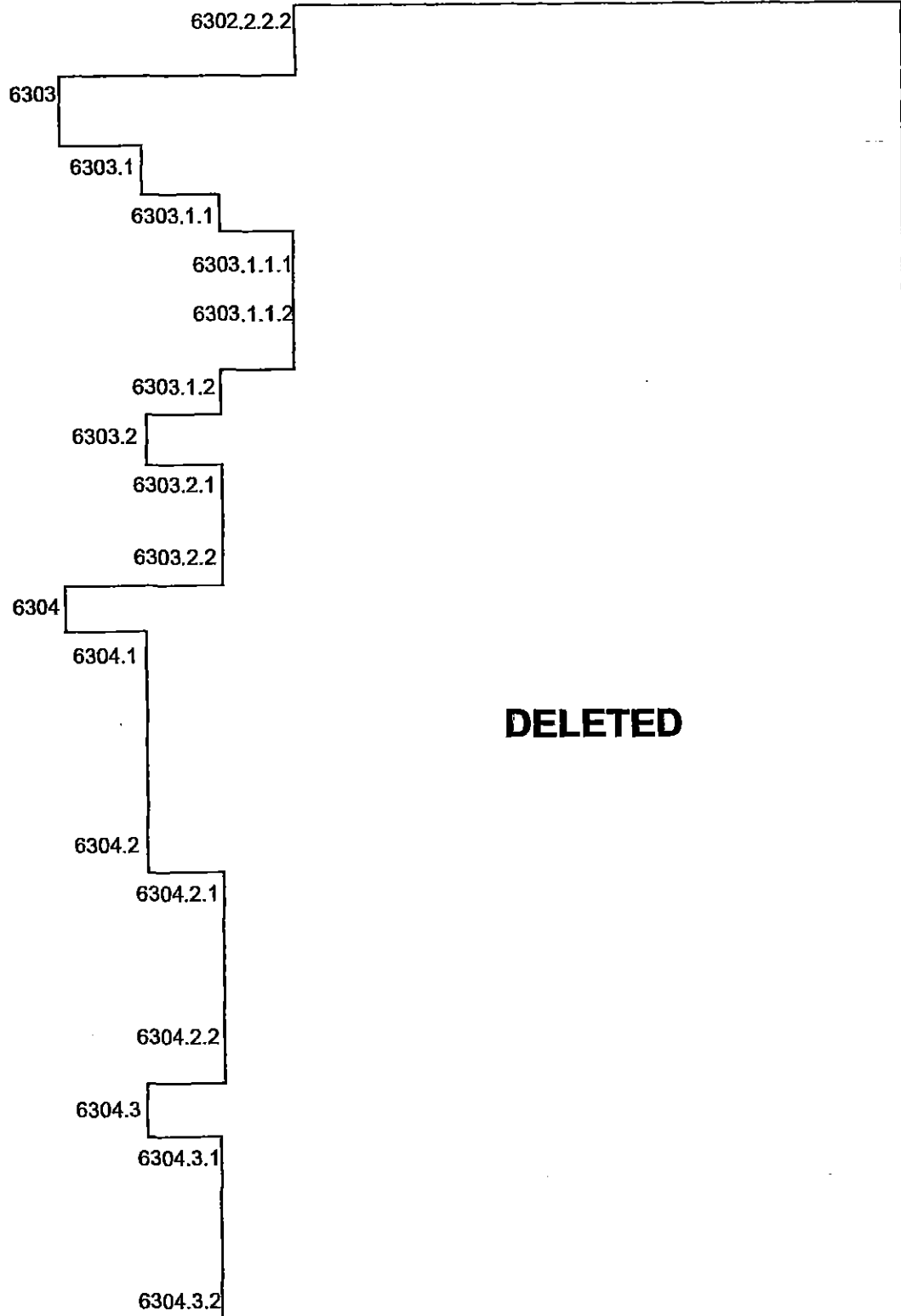
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| 6301.4.1   |  |
| 6301.4.2   |  |
| 6301.4.3   |  |
| 6301.5     |  |
| 6301.5.1   |  |
| 6301.5.2   |  |
| 6301.6     |  |
| 6301.6.1   |  |
| 6301.6.2   |  |
| 6301.7     |  |
| 6301.7.1   |  |
| 6301.7.2   |  |
| 6301.7.2.1 |  |
| 6301.7.2.2 |  |
| 6302       |  |
| 6302.1     |  |
| 6302.1.1   |  |
| 6302.1.2   |  |
| 6302.1.3   |  |
| 6302.2     |  |
| 6302.2.1   |  |
| 6302.2.2   |  |
| 6302.2.2.1 |  |

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6305

6305.1

6305.2

6305.3

6306

6306.1

6306.2

6306.2.1

6306.2.2

6306.2.2.1

6306.2.2.2

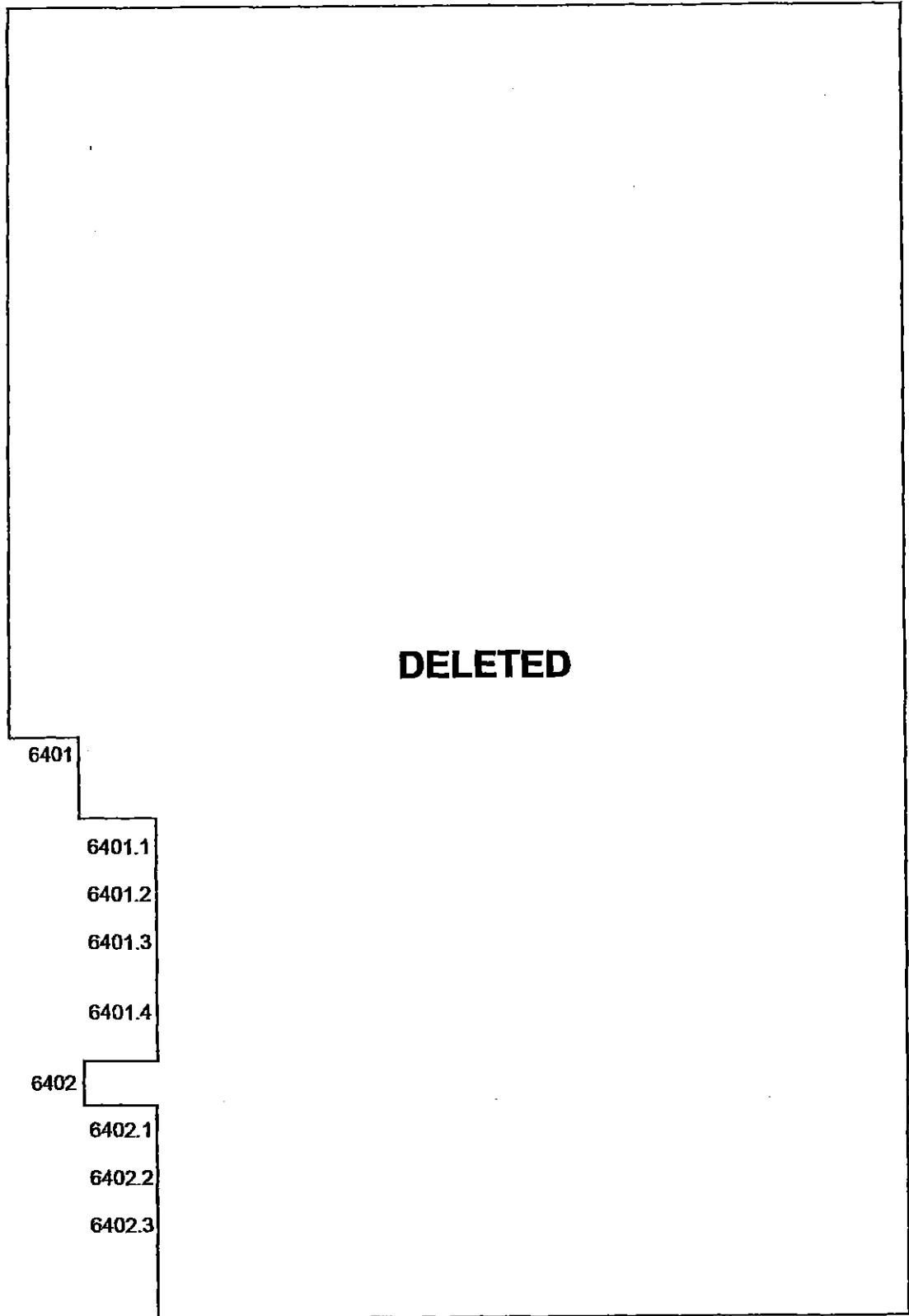
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6400 Enabling Technologies



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6403

6404

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6404.1

6404.2

6405

6405.1

6405.2

6405.3

6406

6406.1

6406.2

6406.3

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6407

6407.1

6407.2

6407.2.1

6407.2.2

6407.2.2.1

6407.2.2.2

6408

6408.1

6408.2

6408.2.1

6408.2.2

6409

6409.1

6409.1.1

6409.1.2

6409.1.2.1

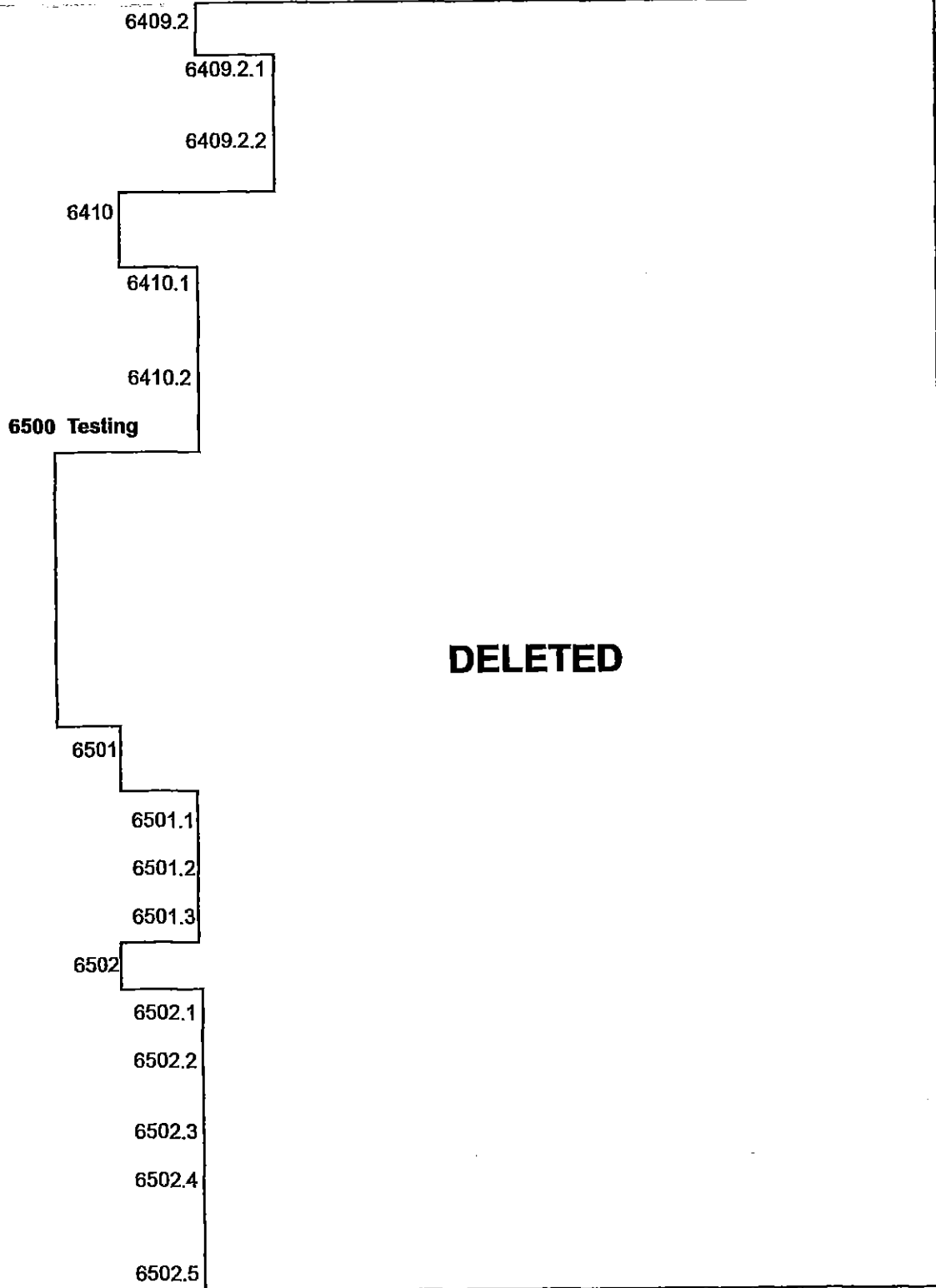
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6503

6503.1

6503.2

6503.2.1

6503.2.2

6504

6504.1

6504.1.1

6504.1.2

6504.1.3

6504.2

6504.2.1

6504.2.2

6504.2.3

6505

6505.1

6505.1.1

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|                 |                |                     |
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| 6505.1.3        |                |                     |
| 6505.2          |                |                     |
| 6505.2.1        |                |                     |
| 6505.2.2        |                |                     |
| 6505.2.3        |                |                     |
| 6506            |                |                     |
| 6600 Operations |                |                     |
| 6601            |                |                     |
| 6602            |                |                     |
| 6602.1          | <b>DELETED</b> | <b>DOE<br/>b(7)</b> |
| 6602.2          |                |                     |
| 6602.3          |                |                     |
| 6603            |                |                     |
| 6603.1          |                |                     |
| 6603.2          |                |                     |
| 6604            |                |                     |
| 6605            |                |                     |
| 6606            |                |                     |

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| 6700 Training

6701

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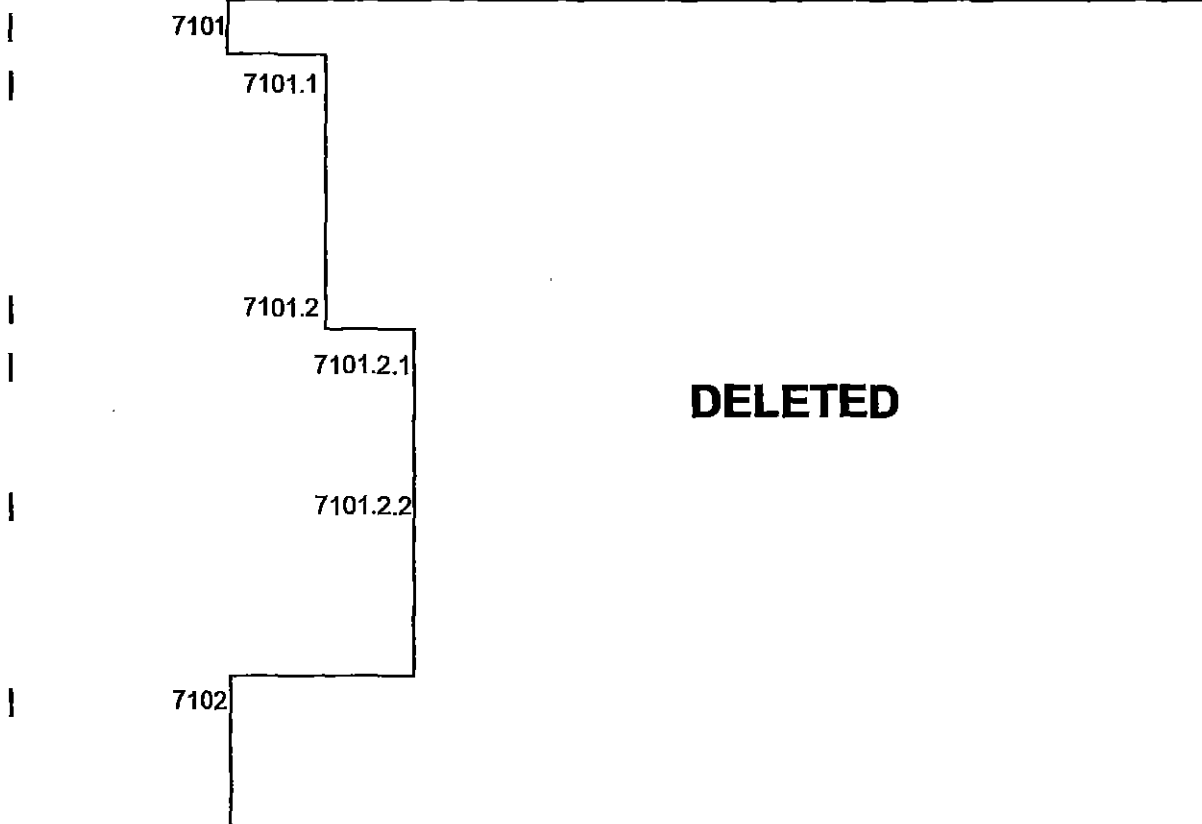
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## | 7000 TECHNOLOGY/RESEARCH AND DEVELOPMENT

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## APPENDIX A

### DEFINITIONS

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(This portion is designated in its entirety as Official Use Only.)

**Accident (U)** - A deviation from the normal operations or activities associated with a hazard, which has the potential to result in an emergency. (U)

**Accident Response Group or ARG (U)** - A deployable capability to manage the technical resolution of accidents or significant incidents involving U.S. nuclear weapons that are in DOE custody at the time of an accident or incident. The ARG will also provide timely, worldwide support to DoD in resolving accidents and significant incidents involving U.S. nuclear weapons in DoD custody. (U)

**Activate (U)** - Notification from appropriate DOE authority to DOE and DOE contractor elements that their emergency response assets, including personnel, are to be assembled and prepared for deployment to the site of an emergency or incident. (U)

**NOTE:** In accordance with DOE O 151.1C the DOE Headquarters (DOE/HQ) Operations Center will be the primary point of contact for all initial notifications to activate and deploy assets. (U)

**Aerial Measuring System or AMS (U)** - A deployable capability that acquires real-time, remotely sensed data necessary to assess the radiological impact of accidents and national security emergencies. AMS detects, measures, and tracks ground and airborne radioactivity over large areas using both fixed- and rotary-wing aircraft. Assets supporting this capability are located at Nellis Air Force Base, Nevada, and Andrews Air Force Base, Maryland. (U)

**Agency (U)** - An "Executive Agency" as defined in 5 United States Code (U.S.C.) 105; any "Military Department" as defined in 5 U.S.C. 102; and any other entity within the executive branch that possesses RD or FRD information or documents. (U)

**Airborne Radioactivity (U)** - Any radioactive material suspended in the atmosphere. (U)

**Alert (U)** - Notification to program personnel that mobilization and/or deployment are being considered. (U)

**NOTE:** In the event of an alert, key personnel will report to their designated work location. Other personnel will remain available for mobilization, activation, and deployment. (U)

**Alpha Emitter (U)** - A material that emits alpha particles. (U)

**Alpha Particle (U)** - Symbol:  $\alpha$ . A positively charged particle of matter consisting of two protons and two neutrons. The alpha particle has a very short range in air and a very low ability to penetrate other materials, but it has a strong ability to ionize materials. Alpha-emitting nuclides inside the body are a considerable internal radiation hazard. (U)

**Americium (U)** - Symbol: Am. A man-made element with an atomic number of 95 (uranium, the highest natural element, has an atomic number of 92). Americium isotopes are important components of spent fuel; their decay products are strong sources of alpha radiation. Americium can also be used in a nuclear explosive device. (U)

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**ARG Training Weapon (U)** - A device designed or constructed by an official Government agency or Government contractor that is to be used as a mock nuclear weapon for ARG exercises or drills/training. The device may incorporate specific weapon components, but it shall not have the capability to produce a nuclear explosion. (U)

**Arming (U)** - The act of readying a nuclear weapon so that a fuzing signal will operate the firing system; includes operation or reversal of safing items. (U)

**Atmospheric Release Advisory Capability or ARAC (U)** - A National Atmospheric Release Advisory Center (NARAC) capability for providing near real-time, computer-based predictive modeling to assess events involving the release of hazardous radiological materials into the atmosphere. ARAC will provide realistic plots or maps of potential radiation dose and exposure assessments and estimates of the path of nuclear contaminants released into the atmosphere. (U)

**Background Radiation (U)** - Radiation arising from radioactive material, other than the one under consideration. Background radiation, due to cosmic rays and natural terrestrial radioactivity, is always present. (U)

**Beta Emitter (U)** - A material that emits beta particles. (U)

**Beta Particle (U)** - Symbol:  $\beta$ . An electron that has been emitted from a nucleus. A beta particle's penetration in materials is short, but longer than that of an alpha particle. It can be highly ionizing. Beta emitters deposited within the body are a serious internal radiation hazard. (U)

**Boost Reservoir (U)** - A container for boost gas (deuterium and/or tritium) under pressure. Also called a "boost bottle." (U)

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**Boosting (U)** - The process of enhancing the fission reactions in a single stage or primary by thermonuclear (TN) neutrons where the energy released in the TN reaction is a small fraction (a few percent) of the total. (U)

**Byproduct Material (U)** - (1) Radioactive material other than SNM yielded in or made radioactive by exposure to the radiation incident and/or to the process of producing or utilizing SNM. (2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. (U)

**Call-out (U)** - An emergency or exercise is declared by DOE/HQ. Upon declaring an emergency, the appropriate DOE Elements will call on each DOE and DOE contractor to supply personnel and assets to respond to the emergency. These requests for personnel and assets are commonly referred to as "call-outs." (U)

**C/FGI-MOD (U)** - A level of protection used for Foreign Government Information that is protected by the foreign government or international organization at a lower level than U.S. confidential. (See definition of Foreign Government Information.) (U)

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**Consequence Management or CM (U)** - Measures to protect public health and safety, restore essential Government services, and provide emergency relief to governments, businesses, and individuals affected by the consequence of an emergency, incident, or terrorist act. (U)

**Consequence Management Home Team or CMHT (U)** - A team of experts assembled to provide technical support for the deployed operations. (U)

**Consequence Management Planning Team or CMPT (U)** - A team capable of providing initial predictions and assessments of potential hazards associated with a release of radioactive material. The team will also plan and coordinate the logistics for any follow-on DOE CM assets. (U)

**Consequence Management Response Team or CMRT (U)** - A DOE team capable of providing monitoring, sampling analysis and data assessments of radiological releases. The CMRT will draw resources from the DOE emergency response assets and will become the DOE coordination element for the FRMAC. (U)

**Contamination (U)** - The deposit and/or absorption of radioactive material, biological or chemical agents, or hazardous materials in an unwanted place. (U)

**Contractor (U)** - Any industrial, educational, commercial, or other entity, grantee, or licensee, including an individual, that has executed an agreement with the Federal Government for the purpose of performing under a contract, license, or other arrangement. (U)

**NOTE:** This includes subcontractors of any tier, consultants, agents, grantees, and cooperative agreement participants. (U)

**Coordinating Agency (U)** - Those Federal agencies that own, have custody of, authorize, regulate, or are otherwise assigned responsibility for the nuclear/radioactive material, facility, or activity involved in a nuclear/radiological incident. Coordinating agencies provide the leadership, expertise, and authorities to implement critical and specific aspects of a nuclear/radiological response. The Department of Homeland Security (DHS) has been designated as the Coordinating Agency for all deliberate attacks involving nuclear/radiological facilities or materials, including RDDs or INDs; however, when exercising domestic incident management responsibilities, the Secretary of Homeland Security is supported by other Coordinating Agencies. (U)

**Corrective Actions (U)** - Those measures taken to terminate or mitigate the consequence of an emergency at or near the source of the emergency. (U)

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**Critical Nuclear Weapon Design Information or CNWDI (U)** - CNWDI is NOT a classification; it is an access limiter used primarily within the DoD to control "need-to-know" access for design information on nuclear weapons. (N) is used to indicate CNWDI information. A CNWDI marking should be used on any document going to the DoD that contains information classified by topics marked with an (N). CNWDI is defined as Top Secret Restricted Data or Secret Restricted Data revealing the theory of operation or design of the components of a thermonuclear-type or Implosion fission-type bomb, warhead, demolition munition, or test device. Specifically excluded is information concerning arming, fuzing or firing systems; limited-life components; or total contained quantities of fissionable, fusionable, or high explosive materials, by type. Among these excluded items are the components that service personnel set, maintain, operate, test, or replace. (U)

**Criticality (U)** - A term describing fissionable material relative to its ability to sustain a chain reaction. Thus, criticality of less than one would correspond to a subcritical mass; exactly one, to a critical mass; and greater than one, to a supercritical mass. (U)

**Deactivation (U)** - The return of DOE assets, including personnel, to their home bases after mission or exercise has been resolved. (U)

**NOTE:** Deactivation will be authorized by the DOE on-scene Senior Energy Official in concurrence with DOE/HQ and/or responding agency or organization, as appropriate. (U)

**Decontamination (U)** - The process of making any person, object, or area safe by absorbing, destroying, neutralizing, or removing contaminated or hazardous materials. (U)

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**Depleted Uranium (U)** - Uranium whose content of the isotope U-235 is less than 0.72 percent, which is the uranium-235 content of naturally occurring uranium. Also referred to as D-38 or tuballoy. (U)

**Deploy (U)** - The act of physically relocating assets, personnel, and equipment to the site of an emergency or incident. (U)

**Deployment (U)** - Movement of DOE assets, including personnel, from their home bases to the emergency or incident site or other area of operations. (U)

**NOTE:** In accordance with DOE O 151.1C, mobilization and deployment of DOE assets, including personnel, to a nuclear-related emergency response site will be made only with the authorization of the Administrator, NNSA. (U)

**Detonation System (U)** - The part of a nuclear weapon that connects the fire set and initiates the explosion of the main high explosive components. It typically consists of detonators, explosive lenses, and other components. It is also referred to as the "lighting system." (U)

**Detonator (U)** - An explosive component capable of initiating detonation of a high explosive. (U)

**Deuterium (U)** - Symbol: D or H-2. An isotope of hydrogen, whose nucleus contains one proton and one neutron, thus having about twice the atomic mass of normal hydrogen (H). (U)

**Disposition (U)** - Final phase of emergency response operations. Ensures capabilities exist to conduct technical operations as needed to execute disassembly, destruction, or long-term staging of damaged weapon(s) and/or devices at NTS. (U)

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**DOE Element(s) (U)** - DOE operations offices and, where applicable, DOE area offices subordinate to an operations office. (U)

**DOE Radiological Emergency Response or RER (U)** - Any response, emergency or nonemergency, by the DOE to an actual or potential nuclear and/or radiological incident. (U)

**Drill (U)** - A supervised, hands-on instruction period intended to test, develop, and/or maintain a specific emergency response capability that is not graded or evaluated by DOE. A drill is a component of training. (U)

**DT Reaction (U)** - Symbol for the fusion of a deuterium (D) nucleus and a tritium (T) nucleus. (U)

**Emergency (U)** - Any natural or man-caused situation that results in, or may result in, substantial injury or harm to the population or substantial damage to or loss of property. (U)

**Emergency Management Team or EMT (U)** - A DOE team formed to manage response actions during emergencies involving DOE facilities or requiring DOE assistance. EMTs are formed at the DOE contractor, DOE element, and DOE/HQ levels. (U)

**Emergency Planning Zone or EPZ (U)** - A geographic area surrounding a specific facility for which special planning and preparedness efforts are carried out to ensure that prompt and effective protective actions can be taken to reduce or minimize the impact to on-site personnel, public health and safety, and the environment in the event of an operational emergency. (U)

**Emergency Preparedness (U)** - The training of personnel, acquisition and maintenance of resources, and exercising of the plans, procedures, personnel, and resources essential for emergency response. (U)

**Emergency Response (U)** - The implementation of planning and preparedness during an emergency, involving the effective decisions, actions, and application of resources that must be accomplished to mitigate consequences and recover from an emergency. (U)

**Emergency Response Officer or ERO (U)** - A designated, trained, and qualified individual who serves as NNSA's Office of Emergency Response representative with authority to *alert, mobilize* and/or *deploy* any of the NNSA's RER assets, including personnel, at any time. (U)

**NOTE:** The ERO can be contacted through the DOE/HQ Operations Center which operates 24 hours per day. (U)

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**Essential Elements of Information or EEI (U)** - The items of information, often intelligence, that are crucial to operational effectiveness. (U)

**Event (U)** - Any real-time occurrence or significant deviation from planned or expected behavior, that could endanger or adversely affect people, property, or the environment. (U)

**Executive Team (U)** - A component of the DOE/HQ Emergency Management Team. This team provides strategic direction to the emergency response and evaluates the impacts of the emergency on the DOE complex. (U)

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**Exercise (U)** - A planned and scheduled comprehensive performance test that evaluates the integrated capability and most aspects of the emergency management program associated with a particular facility, operation, or asset. Exercises do not include NSSEs and SEAR Level 1 and 2 events, which are considered missions. (U)

**Explosive Ordnance (U)** - All munitions containing explosives, nuclear fission or fusion materials, and biological and chemical agents. This ordnance includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket, and small arms ammunition; mines, torpedoes, and depth charges; and all similar or related items or components explosive in nature. (U)

**Explosive Ordnance Disposal or EOD (U)** - The detection, identification, field evaluation, rendering safe, and/or disposal of explosive ordnance that has become hazardous by damage or deterioration when the disposal of such explosive ordnance is beyond the capabilities of personnel assigned to routine disposal. (U)

**Federal Emergency Management Agency or FEMA (U)** - The federal agency responsible for a comprehensive, risk-based emergency management program of mitigation, preparedness, response, and recovery. (U)

**NOTE:** FEMA will provide assistance to state, local, and tribal agencies in their emergency planning. (U)

**Federal Radiological Monitoring and Assessment Center or FRMAC (U)** - A deployable, tailored capability to collect, analyze, evaluate, assess, interpret, and distribute off-site radiological data in support to the Coordinating Agency, involved state(s) and tribal governments. FRMAC will coordinate the Federal resources used in responding to the off-site monitoring and assessment needs at the scene of a radiological emergency or incident. (U)

**Federal Response Plan or FRP (U)** - The plan designed to address the consequences of any disaster or emergency situation, in which there is a need for Federal assistance under the authorities of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121, et seq. (U)

**Firing (U)** - Provision, normally by a firing set, of the proper electrical energy to fire a nuclear assembly's detonator system. (U)

**Firing Set (U)** - The system of components in a nuclear weapon that converts, stores, and releases electrical energy to detonate the weapon when commanded by the fuzing system. (U)

**Firing System (U)** - The weapon subsystem that consists of items such as the firing set plus the safing, arming, fuzing, and trigger systems. Permissive action links (PALs) are integrated with, but are not part of, the firing system. (U)

**Fission Weapon (U)** - A nuclear weapon that generates most of its explosive energy from the fissioning of uranium-235, plutonium-239, or uranium-233. (U)

**Foreign Government Information or FGI (U)** - (1) Information provided to the U.S. Government by a foreign government or governments, an international organization of governments, or any element thereof, with the expectation that the information, the source of the information, or both, are to be held in confidence, or (2) Information produced by the U.S. pursuant to or as a result of a joint arrangement with a foreign government or governments, or an international organization of governments, or any element thereof requiring that the information, the arrangement, or both are to be held in confidence, or (3) Information received and treated as "Foreign Government Information" under the terms of a predecessor Executive order. (See C/FGI-MOD.) (U)

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**Formerly Restricted Data or FRD (U)** - Information classified under the AEA that relates primarily to the military utilization of nuclear weapons and that has been removed from the RD category by a joint determination between the DOE and the Department of Defense. (U)

**Full Participation Exercise (U)** - An exercise for a particular DOE or DOE contractor-operated facility that demonstrates the integrated response capability between the facility's emergency response organization, the DOE elements (both DOE/HQ and in the field) with responsibilities for emergency response, along with those regional Federal, state, tribal, local government agencies, and private support organizations that elect to participate. (U)

**Full-Scale Exercise or FSX (U)** - An exercise for a particular DOE or DOE contractor-operated facility that demonstrates the integrated response capability between the facility's emergency response organization, the appropriate DOE element, and any response groups and agencies that elect to participate. (U)

**Fuzing (U)** - Generating a signal that, in an armed nuclear weapon, will operate the firing system. (U)

**Fuzing System (U)** - The system of components in a nuclear weapon that determines the time and place to detonate the weapon. (U)

**Gamma Ray (U)** - Symbol:  $\gamma$ . High-energy, short-wavelength, electromagnetic radiation emitted from an unstable nucleus. Gamma radiation is very penetrating and is best shielded against by dense materials (e.g., lead). (U)

**Gun-Assembled or GA Nuclear Weapon (U)** - A device in which propellants are used to assemble two or more subcritical masses of fissile material to produce the supercritical mass needed for the nuclear explosion. (U)

**Hazard (U)** - A process, condition, or asset which has the potential to adversely impact the health and safety of personnel, the public, the environment, or national security. (U)

**Hazardous Materials (U)** - Any solid, liquid, or gaseous material that is toxic, flammable, corrosive, an oxidizing agent, explosive, poisonous, etiological, radioactive, nuclear, unduly magnetic, a chemical agent, biological research material, compressed gases, or any other material that, because of its quantity, properties, or packaging, may endanger human life or property. (U)

**High Explosive or HE (U)** - An explosive that can be made to detonate (rather than burn). The detonation speed (i.e., the rate of advance of the reaction zone into the unreacted high explosive) is faster than the velocity of sound in the explosive. (U)

**Hot Spot (U)** - The region in a contaminated area where the level of radioactive contamination is considerably greater than that in nearby neighboring regions. (U)

**Implosion-Assembled or IA Nuclear Weapon (U)** - A device in which high explosives surround a subcritical configuration of fissile material. When detonated, the explosives compress the fissile material sufficiently to make it supercritical. (U)

**Improvised Explosive Device or IED (U)** - A DoD Explosive Ordnance Disposal (EOD) term used to refer to a nonnuclear explosive device. (U)

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**Improvised Nuclear Device or IND (U)** - A device which has, appears to have, or is claimed to have the capability to produce a nuclear explosion. (U)

**NOTE:** The DoD uses the term "Sophisticated Improvised Explosive Device (SIED)" to refer to an IND of comparatively advanced design. (U)

**Incident (U)** - Any deviation from routine operations or activities that has the potential to result in an emergency. An incident may refer to a malevolent act. (U)

**Initiator (U)** - A device used to produce a burst of neutrons. In nuclear weapons, such a device is timed to deliver a neutron burst when the fissile material becomes supercritical, thus initiating the chain reaction. (See Neutron Generator.) (U)

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**Isotope (U)** - Isotopes are atoms of the same element, but with different numbers of neutrons in their nuclei. (U)

**Joint Atomic Information Exchange Group or JAIEG (U)** - An agent for the DOE and the DoD to determine the transmissibility of atomic information (RD and FRD) to foreign governments or regional defense organizations. (U)

**Joint Hazards Evaluation Center or JHEC (U)** - A center staffed by representatives from each of the agencies conducting on-site hazard surveys, radiological safety, and health physics operations. (U)

**Joint Information Center or JIC (U)** - A center where organizations responding to an emergency coordinate the release of accurate and timely information to the public and the media and provide a central source for all Federal information, instructions, and activities. (U)

**Joint Nuclear Accident Coordinating Center or JNACC (U)** - A joint DOE and DoD capability responsible for exchanging and maintaining current information on the location, activities, and capabilities of specialized DOE and DoD radiological assistance teams. The DOE and DoD elements of the JNACC are also responsible for initiating actions to deploy response teams in the event of a nuclear weapons-related accident or significant incident. (U)

**Joint Operations Center or JOC (U)** - A center established by the Coordinating Agency that is under the operational control of the DOE Senior Energy Official in the case of a radiological incident. The center serves as the focal point for the management and direction of all on-site activities and coordination, establishment of state requirements and priorities, and coordination of the overall Federal response. (U)

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**Joint Training Event (U)** - A training event; i.e., a drill that demonstrates the integration of the response capabilities between the DOE or DOE contractor-operated organizations, the appropriate DOE elements, the appropriate DoD elements, and specialized military units that elect to participate. (U)

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**Licensed Material (U)** - Source material, SNM, or byproduct material received, possessed, used, or transferred under a general or specific license issued by the Nuclear Regulatory Commission (NRC) or the DOS. (U)

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**Lithium (U)** - Symbol: Li. A soft, silver-white, metallic element with an atomic number of 3. The isotope Li-6 [in the form of lithium deuteride (LiD)] is used as a nuclear fuel in TN weapons. (U)

**Local Government (U)** - Any county, city, village, town, district, or political subdivision of any state, Indian tribe or authorized tribal organization, Alaska native village, or organization, including rural community, unincorporated town, village, or any other public entity. (U)

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**Material Access Area or MAA (U)** - A type of security area that is authorized to contain a Category I quantity of SNM and which has specifically defined physical barriers, is located within a protected area, and is subject to specific access controls. (U)

**Material Balance Area or MBA (U)** - An area that is both a subsidiary account of materials at a facility and a geographical area with defined boundaries, used to identify the location and quantity of nuclear materials in the facility. (U)

**Material at Risk or MAR (U)** - The amount of material available to be involved in an emergency. The actual material at risk may be a classified quantity (e.g., the quantity of SNM in a building, vault, weapon). (U)

**Maximum Anticipated Quantity or MAQ (U)** - The maximum amount of material allowed in any given building or area. This quantity is administratively determined and controlled and is not classified. (U)

**Mission (U)** - Any deployment or use of the DOE's RER assets or components thereof, except for specifically identified exercises and/or drills/training activities. NSSEs and SEAR Level 1 and 2 events are considered missions. (U)

**Mission Essential Task (U)** - A collective task in which an organization must be proficient to accomplish an appropriate portion of its mission. (U)

**Mission Essential Task List or METL (U)** - A compilation of collective mission essential tasks that must be successfully performed if an organization is to accomplish its mission. (U)

**Mobilize (U)** - The act of assembling deployable personnel and equipment as well as the personnel supporting the deployment at predesignated locations in preparation for a deployment. (U)

**Monitoring (U)** - The use of sampling and radiation detection equipment to determine the presence and activity levels of radiation. (U)

**National Atmospheric Release Advisory Center or NARAC (U)** - A national support and resource center for planning, real-time assessment, emergency response, and detailed studies of incidents involving a wide variety of hazards, including nuclear, radiological, chemical, biological, and natural emissions. Located at the Lawrence Livermore National Laboratory, NARAC provides tools and services that map the probable spread of hazardous material accidentally or intentionally released into the atmosphere. (U)

**National Defense Area or NDA (U)** - An area established on non-Federal lands located within the U.S., its possessions, or its territories for safeguarding classified defense information or protecting DoD equipment and/or materials. Establishment of an NDA temporarily places such non-Federal lands under the effective control of the DoD and results only from the occurrence of an emergency event. (U)

**NOTE:** The senior DoD representative at the scene shall define and mark the boundary of the NDA with a physical barrier and warning signs. The landowner's consent and cooperation shall be obtained, whenever possible; however, military necessity shall dictate the final location, shape, and size of the NDA. (U)

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**National Security Area or NSA (U)** - An area established on non-Federal lands located within the U.S., its possessions, or territories for safeguarding classified and/or Restricted Data information or equipment and material belonging to the DOE or the National Aeronautics and Space Administration (NASA). Establishment of a NSA temporarily places such non-Federal lands under the effective control of DOE or NASA and results only from an emergency event. (U)

**National Special Security Event or NSSE (U)** - Status conferred by the Department of Homeland Security (DHS). A NSSE designation means an event is subject to the protections described in Presidential Decision Directives (PDDs) 39 and 62 that define the Federal agencies' roles in event security. When an event is declared a NSSE, DHS/US Secret Service has primary responsibility for security design, planning, and implementation; FBI has primary responsibility for law enforcement, intelligence, hostage rescue, counterterrorism, and criminal investigation; and DHS Emergency Preparedness and Response/FEMA has primary responsibility for emergency response and recovery planning and coordination. (U)

**Natural Uranium (U)** - Uranium with an isotopic content as found in nature. Natural uranium has an isotopic content of 0.72 percent uranium-235. Except for a very small amount of the isotope uranium-234, the remainder of the material is composed of the isotope uranium-238. (U)

**Neptunium (U)** - Symbol: Np. A manmade element. It has an atomic number of 93 (uranium, the highest natural element, has an atomic number of 92). The isotope Np-237 is recovered from irradiated uranium and is used as a target material to produce plutonium-238, which is a heat source for generating electrical power in space vehicles. The isotope of Np-237 can also be used in a nuclear explosive device and is treated by the DOE as a SNM. (U)

**NEST Exercise (U)** - An operation or activity that engages NEST CR asset(s) for the purpose of locating, diagnosing, and disabling a nonnuclear or nuclear explosive training device or some other target device. A nonnuclear or nuclear explosive training device is designed or constructed by an official government agency for the purpose of training NEST CR asset(s) to locate, diagnose, and disable an improvised nuclear device, a radiological dispersal device, a lost or stolen nuclear weapon, or a quantity of SNM. An exercise may involve none of the target devices described in this definition, but may be conducted for the purpose of improving the ability of the NEST assets to perform their mission. (U)

**NEST Mission (U)** - An operation or activity that engages NEST CR asset(s) for the purpose of locating, diagnosing, and disabling an improvised nuclear device, a radiological dispersal device, or a lost or stolen nuclear weapon or a quantity of SNM. A mission may involve none of the devices or materials described in this definition, but may involve the NEST assets in order to make use of their specialized skills. (U)

**Neutron Generator (U)** - An external initiator (e.g., a pulsed neutron source) located outside the explosive part of a fissile weapon. "Zipper" is the slang term for this weapon component. (U)

**Nickname, DoD (U)** - A combination of two separate unclassified words that is employed only for unclassified administrative, morale, or public information purposes. The Joint Chiefs of Staff authorize the nicknames for use of DoD components. (U)

**Nickname, DOE (U)** - A word approved by DOE as an official, unclassified identifier for something in the weapon program; e.g., nuclear devices or stages, nuclear test events, special projects, weapon materials, or hardware. The terms "Designator" and "Nickname" have sometimes been used interchangeably and both are in use throughout the DOE complex. (U)

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**Nuclear Assessment Program or NAP (U)** - A Department of Homeland Security (DHS) program, managed by the Domestic Nuclear Detection Office (DNDO), that provides rapid assessments of illicit nuclear trafficking events and assesses the credibility of communicated nuclear threats, which are provided to the diplomatic, intelligence, and law enforcement communities. (U)

**Nuclear Emergency Support Team or NEST (U)** - A worldwide deployable, tailored capability of specialized elements to deal with the technical aspects of nuclear or radiological accidents, incidents, or terrorism. It provides technical support to the Coordinating Agency, FBI, and/or DoD for search and identification of nuclear materials, diagnostics and assessment of suspected nuclear devices, containment and technical operations in support of rendering safe procedures, and packaging for transport to final disposition. The NEST includes both crisis response and consequence management assets. (U)

**NEST Crisis Response (CR) Assets (U)** - NEST CR assets include the Nuclear Radiological Advisory Team (NRAT), the Joint Technical Operations Team (JTOT), the Search Response Team (SRT), and the Accident Response Group (ARG). As a general rule CR activities are designed to prevent a nuclear detonation or dispersal of radiological contaminants. Radiological Assistance Program (RAP) assets are considered CR assets when deployed in response to the expectation of a nuclear threat device or after having discovered a nuclear threat device during a routine (Consequence Management) deployment. (U)

**NEST Consequence Management (CM) Assets (U)** - NEST CM assets include the Aerial Measuring System (AMS), Consequence Management Response Teams (CMRT), the Federal Radiological Monitoring and Assessment Center (FRMAC), the National Atmospheric Release Advisory Center (NARAC), and the Radiation Emergency Assistance Center/Training Site (REAC/TS). As a general rule CM activities are designed to characterize and mitigate the consequences of a nuclear detonation or dispersal of radiological contaminants that has already occurred. Radiological Assistance Program (RAP) assets are considered CM assets when routinely deployed. (U)

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**Nuclear Materials (U) -**

1. All materials so designated by the Secretary of Energy. At present, these materials are depleted uranium, enriched uranium, americium-241, americium-243, curium, berkelium, californium-252, plutonium-238-242, lithium-6, uranium-233, normal uranium, neptunium-237, deuterium, tritium, and thorium. (U)
2. Special nuclear material, byproduct material, or source material as defined in 42 U.S.C. 2014 (aa), (e), and (z) [Sections 11(aa), (e), and (z), respectively, of the Atomic Energy Act of 1954], or any other material used in the production, testing, use, or assembly of nuclear weapons or components of nuclear weapons that the Secretary of Energy determines to be nuclear material in accordance with 10 CFR 1017.10(a). (U)

**Nuclear Radiation (U)** - Particulate and electromagnetic radiation emitted from the atomic nuclei in various nuclear processes. The important nuclear radiations for weapons are alpha and beta particles, gamma-rays, and neutrons. (U)

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**Nuclear Radiological Advisory Team or NRAT (U)** - A DOE technical advisory team capable of providing technical advice, as well as limited technical assistance including search, diagnostics, and effects prediction as part of a Domestic Emergency Support Team or a Foreign Emergency Support Team. (U)

**Nuclear Weapon Accident (U)** - An unexpected event involving nuclear weapons or nuclear components that results in any of the following: (1) accidental or unauthorized launching, firing, or use by the U.S. forces or U.S.-supported allied forces of a nuclear capable weapons system; (2) accidental, unauthorized, or unexplained nuclear detonation; (3) nonnuclear detonation or burning of a nuclear weapon or nuclear component; (4) jettisoning of a nuclear weapon or nuclear component; or (5) public hazard, actual or perceived. (U)

**Nuclear Weapon Incident (U)** - An unexpected event involving a nuclear weapon, facility, or component resulting in any of the following, but not constituting a nuclear weapon(s) accident: (1) an increase in the possibility of explosion or radioactive contamination; (2) errors committed in the assembly, testing, loading, or transportation of equipment and/or the malfunctioning of the equipment and material that could lead to an unintentional operation of all or part of the weapon arming and/or firing sequence or that could lead to a substantial change in yield or increased dud probability; or (3) any act of God, unfavorable environment, or condition, resulting in damage to a weapon, facility, or component. (U)

**Nuclear Weapon Significant Incident (U)** - An unexpected event involving nuclear weapons, nuclear weapon components, a nuclear weapon transport, or launch vehicle when a nuclear weapon is mated, loaded, or on board that does not fall in the nuclear weapon accident category but (1) results in evident damage to a nuclear weapon or radiological nuclear weapon component to the extent that major rework, complete replacement, or examination or recertification by the DOE is required; (2) requires immediate action in the interest of safety or nuclear weapons security; (3) may result in adverse public reaction (national or international) or inadvertent release of classified information; or (4) could lead to a nuclear weapon accident and warrants that senior national officials or agencies be informed or take action. (U)

**Off-site (U)** - The area residing outside or beyond the boundary of the installation or facility, including the boundary of a National Defense Area or National Security Area, that has been or may become affected by a nuclear weapon accident or significant incident. (U)

**On-site (U)** - The area within (1) the boundary established by the owner or operator of a fixed nuclear facility; (2) the area established by the Coordinating Agency as a National Defense Area or National Security Area; (3) the area established around a downed and/or ditched U.S. aircraft, missile, or spacecraft; or (4) the boundary established at the time of an emergency by the State or local government with jurisdiction for a transportation accident not occurring at a fixed nuclear facility and not involving nuclear weapons. (U)

**Oralloy (Oy) (U)** - Oak Ridge Alloy. Uranium enriched in the isotope uranium-235. Oy-xx is the notation used to designate the level of enrichment where xx is the weight percent of uranium-235. When no specific enrichment is mentioned, usually means uranium enriched to a nominal 93.5 wt percent uranium-235. (U)

**Permissive Action Link or PAL (U)** - A system included in or attached to a nuclear weapon to preclude arming until the insertion of a prescribed numerical code or combination. Such systems may be mechanical, electromechanical, or electronic. (U)

**PETN (U)** - Chemical name: pentaerythritol-tetranitrate. A high explosive used in detonators and detonating fuses. (U)

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**Physics Package (U)** - The portion of a nuclear device or weapon that takes part in the nuclear detonation. This includes components such as detonators, high explosives, tampers, and fissile material, but excludes the weapon components, such as the firing and safety systems. (U)

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**Pit (U)** - The components of an IA nuclear weapon located within the inner boundary of the high explosive, but not including safing materials or stress cushions. (U)

**Plutonium (U)** - Symbol: Pu. An artificially produced fissile material of which the isotope Pu-239 is useful in nuclear weapons. The unoxidized metal is silvery-white, but surfaces exposed to air rapidly turn yellow. Plutonium is toxic if ingested and is primarily an alpha emitter. (U)

**Protective Action Guide or PAG (U)** - A radiation exposure, contamination level, or range established by appropriate Federal or State agencies at which protective actions should be considered. (U)

**Public Affairs Officer or PAO or Public Information Officer or PIO (U)** - An official at Headquarters or in the field responsible for preparing and coordinating the dissemination of public information in cooperation with other responding Federal, State, or local agencies. (U)

**Radiation Emergency Assistance Center/Training Site or REAC/TS (U)** - A medical consulting and/or deployable, tailored capability to provide a 24-hour response center consisting of consulting and/or deployable equipment and personnel. REAC/TS provides medical advice, specialized training, and the unique capability of on-site assistance in triage, diagnosis, and treatment of all types of radiation-induced injuries. (U)

**Radiation Simulator (U)** - A radio-frequency transmitting device designed or constructed by an official Government agency or Government contractor that is used to simulate a mock nuclear weapon, improvised nuclear device, radiological dispersal device, or a quantity of other types of radioactive materials. The simulator will not incorporate any weapon components, radioactive sources, or high explosives. (U)

**Radiological Assistance Program or RAP (U)** - A deployable, tailored capability to provide radiological assistance to Federal agencies; State, tribal, and local governments; and to private businesses or individuals for incidents involving radioactive materials. RAP is managed, coordinated, and implemented on a regional basis from nine Regional Coordination Offices in the U.S. (U)

**Radiological Assistance Team or RAT (U)** - Experienced technical and operational DOE and DOE contractor professionals who are trained and equipped to conduct off-site radiological emergency monitoring. Radiological Assistance Teams are located at all DOE operations offices, all the national laboratories, most DOE area offices, and associated DOE contractor facilities. (U)

**Radiological Control Area or RCA (U)** - The control area encompassing all known or suspected radiological contamination at an incident site. (U)

**Radiological Dispersal Device or RDD (U)** - A device which has, appears to have, or is claimed to have, the capability to produce radioactive contamination over an area *without* a nuclear explosion. (U)

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**Radiological Emergency (U)** - A radiological incident that poses an actual, potential, or perceived hazard to the public health or safety and/or loss of or damage to property. (U)

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**Reflector (U)** - A layer of material surrounding a reactor core or the fissionable material in a nuclear weapon to scatter back or reflect neutrons that would otherwise escape. The reflected neutrons can then cause more fissions. Common reflector materials in nuclear reactors include graphite and beryllium. (U)

**Release Fraction or RF (U)** - The factor that is applied to the Material at Risk (MAR) to calculate a source term. The release fraction is arbitrarily chosen based on the nature of the material and emergency, and it may depend on the experienced judgment of the plume modeler. The release fraction must be classified if needed to protect a classified MAR. (U)

**Render Safe Procedures (U)** - The portion of the explosive ordnance disposal procedures involving the application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation. (U)

**Restricted Data or RD (U)** - A category of classified information defined by the AEA, as amended, as all data concerning: (1) design, manufacture, or utilization of atomic weapons; (2) the production of SNM; or (3) the use of SNM in the production of energy. (U)

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**SAFF (U)** - Safing, Arming, Fuzing, and Firing (of a nuclear weapon). (U)

**Safing (U)** -

**Nonnuclear (U)** - Measures taken to prevent operation of the firing system until a nuclear detonation is desired. (U)

**Nuclear (U)** - The prevention of nuclear yield if the HE is accidentally detonated in an IA weapon, or the propellant is accidentally ignited in a GA weapon. (U)

**Search Response Team or SRT (U)** - A national level capability that provides assets for complex search operations using both technical and operational expertise. SRT is a full-response asset, which includes the manpower and equipment to conduct aerial, vehicle, or search operations by foot to locate a potential radiological source. A "home team" provides additional support to the field team and any NNSA search response operation. The SRT's mission is to search for possible radiological devices or weapons in urban or rural environments, overtly or clandestinely. When necessary, the team supports the Radiological Assistance Program (RAP) teams during their search response operations. The team is based out of the Remote Sensing Laboratory in Las Vegas, Nevada. (U)

**Senior Energy Official or SEO (U)** - A designated, trained and qualified senior U.S. DOE/NNSA individual who represents the Department and is responsible for the coordination and employment of the emergency response assets at the scene of a radiological event. (U)

**Sigma 14 (U)** - That category of sensitive information (including bypass scenarios) concerning the vulnerability of nuclear weapons to a deliberate unauthorized nuclear detonation. (U)

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**Sigma 15 (U)** - That category of sensitive information concerning the design and function of nuclear weapon use control systems, features, and their components. This includes use control information for passive and active systems. It may include weapon design features not specifically part of a use control system. Not all use control design information is Sigma 15. (U)

**Sigma 20 (U)** - A specific category of nuclear weapon data that pertains to "crude, simple or innovative" improvised nuclear device designs, concepts, and related manufacturing or processing pathways. Not all improvised nuclear devices are Sigma 20. (U)

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**Sophisticated Improvised Explosive Device or SIED (U)** - Any nonnuclear explosive device for which (1) an emergency response exceeding the capabilities of the FBI is required because of the combination of technical complexities and potential hazards and (2) device placement poses a severe threat to the public health and safety that can be significantly reduced by use of DOE assets. The Explosive Ordnance Disposal definition of an SIED includes improvised nuclear devices and radiological dispersal devices; whereas, the DOE definition only includes conventional explosives. (U)

**Source Material (U)** - Uranium, thorium, or any other material that is determined by the DOE under provisions of section 61 of the AEA to be source material; or ores containing one or more of the foregoing materials in such concentration as the DOE may by regulation determine from time to time. (U)

**Source Term or ST (U)** - The amount of material involved in an emergency that is released to the environment. It is the input to the plume model. Specific source terms or other data may be classified (e.g., revealing the actual classified inventory in an SNM storage area or amount of SNM in a U.S. weapon) or UCNI (e.g., the specific location of an SNM vault) in some cases. (U)

**Special Event Assessment Rating or SEAR** - Special events are organized, pre-planned occurrences that cause persons to gather together in sizable numbers. These events typically include sporting events and other contests, festivals, parades, conventions, dedications, memorials, and occasionally high profile Federal meetings and/or visits by Federal, State, or local government officials and/or international dignitaries or Heads of State. (U)

**SEAR Level 1 (U)** - An event is considered to be a SEAR Level 1 when it is an event of significant national and/or international importance that may require extensive Federal interagency security and incident management preparedness. (U)

**SEAR Level 2 (U)** - A SEAR Level 2 event is a significant event with national and/or international importance that may require direct national-level Federal support and situational awareness. (U)

**Special Nuclear Material or SNM (U)** - Plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material pursuant to the provisions of section 51 of the AEA, as amended, which DOE determines to be SNM, or any material artificially enriched by any of the foregoing, not including source material. (U)

**Specified IND, RDD, NELA, or Training Device (U)** - An Improvised Nuclear Device, Radiological Dispersal Device, Nuclear Explosive-Like Assembly, or any other training device identified by nickname or other nomenclature or by date and/or location of the nuclear-related mission, exercise, or drill/training in which it is used or by other information unique to that particular device. (U)

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**Specified Nuclear-Related Mission, Exercise, or Drill/Training (U)** - A nuclear-related mission, exercise, or drill/training identified by nickname or other nomenclature or by date and/or location or by other information unique to that particular mission, exercise, or drill/training. (U)

**Stabilization (U)** - The prevention of the operation of a threat device according to its intended design until the arrival of render safe assets. (U)

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**Tamper (U)** - A dense material surrounding the fissionable material in an atomic weapon. It is designed to hold the supercritical assembly together longer and to reflect neutrons back into the fissioning material, thus increasing the rate and degree of fissioning of the active material. (U)

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**Terrorist Incident (U)** - A violent act, or an act dangerous to human life that violates criminal laws of the U.S. or of any state to intimidate or coerce a government, the civilian population, or any segment thereof in furtherance of political or social objectives. (U)

**Test Assembly (U)** - In a stabilization context, a broad term used to collectively refer to sub-assemblies, assemblies, and test objects which are made up of two or more components. This is to distinguish these higher level items from components. (U)

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**Thermonuclear or TN Weapon (U)** - A nuclear weapon that derives a significant fraction of its energy from fusion (usually the fusion of deuterium and tritium). Also, known as a fusion weapon, H-bomb, or hydrogen bomb. The high temperatures required for fusion are obtained by means of an atomic (fission) explosion. (U)

**Thorium (U)** - Symbol: Th. A naturally occurring radioactive element that has an atomic number of 90. It is found in nature, principally in the mineral monazite. (U)

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**Threat Device (U)** - An IND, RDD, or other terrorist nuclear or radiological device as a complete, functional assembly. (U)

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**Training Aid (U)** - In a stabilization context, refers to a larger assembly housing which may or may not contain test objects or other test sub-assemblies or assemblies. Training aids do not visually reveal their internal components. (U)

**Training Device (U)** - A device designed or constructed by the U.S. Government or its contractors for the purpose of mocking up aspects of a terrorist-emplaced nuclear weapon—a stolen weapon, an improvised nuclear device, or a radiological dispersal device. Such a device is used to test the ability of the nuclear emergency response programs to locate, diagnose, disable, and dispose of SNM or other nuclear materials. (U)

**Transuranic Element or Material (U)** - Designator: TRU. Elements that have atomic numbers higher than that of uranium (atomic number 92). These elements are all manmade. (U)

**Tritium (U)** - Symbol: T or H-3. A radioactive isotope of hydrogen (H) whose nucleus contains one proton and two neutrons. Tritium is used in fusion weapons, boosted-fission weapons, neutron generators, and also is used as a tracer in chemical, biochemical, and biological research. Tritium is a beta emitter. (U)

**Tuballoy (U)** - A term of British origin for uranium metal containing no more than the natural (0.7 %) isotopic content of uranium-235. This term is sometimes used to indicate either natural or depleted uranium. (U)

**Unclassified Controlled Nuclear Information or UCNI (U)** - Unclassified information that is prohibited from unauthorized dissemination under section 148 of the AEA, as amended. Its purpose is to protect certain design and security information concerning atomic energy defense programs from unauthorized public release. (U)

**United States** - As defined in the Homeland Security Act, the term "United States", when used in a geographic sense in this guide, means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, any possession of the United States, and any waters within the jurisdiction of the United States. (U)

**Uranium (U)** - Symbol: U. The heaviest, naturally occurring element (atomic number of 92). Natural uranium is primarily composed of two isotopes: uranium-235 and uranium-238. When uranium has been highly enriched (HEU), it can be used in a nuclear explosive device. The isotope uranium-235 is fissile, as is uranium-233. The unoxidized uranium metal is silvery-white, but surfaces exposed to air rapidly turn a golden-yellow to almost black color. Uranium is radioactive and is primarily an alpha emitter. (U)

**Weapon of Mass Destruction or WMD (U)** - (1) Any destructive device as defined in section 921 of Title 18, "Crimes and Criminal Procedure," that reads "any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than four ounces, missiles having an explosive or incendiary charge of more than one quarter ounce, mine or device similar to the above; (2) poison gas; (3) any weapon involving a disease organism; or (4) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life." (18 U.S.C., section 2332a, Use of Certain Weapons of Mass Destruction.) (U)

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**Zipper (U)** - An obsolete nickname used instead of the term "neutron generator" when the fact of existence of such components was classified. After many years of use, it has become entrenched in the jargon. Its continued use is acceptable so long as the user realizes that it no longer provides any classification protection. (See Neutron Generator.) (U)

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**APPENDIX B**

**ABBREVIATIONS AND ACRONYMS**

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(This portion is designated in its entirety as Unclassified.)

|           |  |
|-----------|--|
| AAFB      | Andrews Air Force Base (Suitland, Maryland)                              |
| AEA       | Atomic Energy Act of 1954, as amended                                    |
| Am        | Americium  |
| AMS       | Aerial Measuring System  |
| ARAC      | Atmospheric Release Advisory Capability                                  |
| ARG       | Accident Response Group  |
| C         | Confidential   |
| C/FGI-MOD | Confidential Foreign Government Information-Modified Handling Authorized |
| CG        | Classification Guide   |
| CINC      | Commander-in-Chief   |
| CM        | Consequence Management   |
| CMHT      | Consequence Management Home Team   |
| CMPT      | Consequence Management Planning Team                                     |
| CNWDI     | Critical Nuclear Weapon Design Information [also, abbreviated as (N)]    |
| CR        | Crisis Response  |
| D         | Deuterium (an isotope of hydrogen)                                       |
| D-38      | Depleted Uranium   |
| DHS       | Department of Homeland Security  |
| DNDO      | Domestic Nuclear Detection Office  |
| DoD       | Department of Defense  |
| DOE       | Department of Energy   |
| DOE/HQ    | Department of Energy Headquarters  |
| DOS       | Department of State  |
| DSWA      | Defense Special Weapons Agency (currently DTRA)                          |
| DTRA      | Defense Threat Reduction Agency  |
| EMT       | Emergency Management Team  |
| E.O.      | Executive Order  |
| EOD       | Explosive Ordnance Disposal  |
| EPZ       | Emergency Planning Zone  |
| ERO       | Emergency Response Officer   |
| EUCOM     | EUropean COMmand   |
| FBI       | Federal Bureau of Investigation  |
| FEMA      | Federal Emergency Management Agency                                      |
| FGI       | Foreign Government Information   |
| FRD       | Formerly Restricted Data   |

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|       |   |
|-------|---|
| FRMAC | Federal Radiological Monitoring and Assessment Center |
| FRP   | Federal Response Plan                                 |
| FSX   | Full-Scale Exercise                                   |
| GA    | Gun-Assembled   |
| HE    | High Explosive  |
| HEU   | Highly Enriched Uranium                               |
| IA    | Implosion-Assembled                                   |
| IND   | Improvised Nuclear Device                             |
| INRAD | Intrinsic RADIation                                   |

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| KAFB | Kirtland Air Force Base (Albuquerque, New Mexico) |
| kg   | Kilogram  |

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|-------|---|
| MAA   | Material Access Area                                    |
| MAQ   | Maximum Anticipated Quantity                            |
| MAR   | Material at Risk  |
| MBA   | Material Balance Area                                   |
| METL  | Mission Essential Task List (JTOT)                      |
| N     | Critical Nuclear Weapon Design Information (See CNWDI.) |
| NAFB  | Nellis Air Force Base (Las Vegas, Nevada)               |
| NAP   | Nuclear Assessment Program                              |
| NARAC | National Atmospheric Release Advisory Center            |
| NAS   | Nuclear Assembly System                                 |
| NASA  | National Aeronautics and Space Administration           |
| NATO  | North Atlantic Treaty Organization                      |
| NDA   | National Defense Area                                   |
| NELA  | Nuclear Explosive-Like Assembly                         |
| NEST  | Nuclear Emergency Support Team                          |
| NNSA  | National Nuclear Security Administration                |
| Np    | Neptunium   |

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|      |   |
|------|---|
| NRAT | Nuclear Radiological Advisory Team          |
| NRC  | Nuclear Regulatory Commission               |
| NSA  | National Security Area                      |
| NSI  | National Security Information               |
| NSSE | National Special Security Event             |
| NTS  | Nevada Test Site                            |
| Oy   | Oralloy (a nuclear weapon fissile material) |

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| T   | Tritium (an isotope of hydrogen)                 |
| TCG | Topical Classification Guide (joint DOE and DoD) |

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|        |   |
|--------|---|
| TG     | Topical Guideline                           |
| Th     | Thorium                                     |
| TN     | ThermoNuclear                               |
| TRU    | TRansUranic Element or Material             |
| TS     | Top Secret                                  |
| TSS    | Transportation Safeguards System            |
| TTP    | Tactic, Technique, or Procedure             |
| U      | Unclassified                                |
| U-233  | An isotope of uranium (SNM)                 |
| U-234  | An isotope of uranium                       |
| U-235  | An isotope of uranium (SNM)                 |
| UCNI   | Unclassified Controlled Nuclear Information |
| UK     | United Kingdom                              |
| U.S.   | United States                               |
| U.S.C. | United States Code                          |
| WMD    | Weapon of Mass Destruction                  |
| WRDSS  | Weapon Recovery Decision Support System     |

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## CLASSIFICATION ISSUE/COMMENT SHEET

**TO:**

(See Introduction for Classified/Unclassified  
address)

**THRU:** \_\_\_\_\_

(Local Classification Officer or HQ Classification Representative)

**FROM:** \_\_\_\_\_ **NAME:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

(Organization)

**CLASSIFICATION ISSUE:** (Describe the problem including the classification guide short title and the affected topics.  
Use additional pages/attachments as necessary.)

**RECOMMENDED SOLUTION:** (To be completed by submitter. Use additional pages/attachments as necessary.)

**ANALYSIS:**

**RECOMMENDATION:**

For Use By HS-62 Only

**ACTION NUMBER:**

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**SECRET RD**

**CG-RER-1**

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