Description of document:	Four (4) National Nuclear Security Administration (NNSA) After Action Reports (AAR) for Nuclear Emergency Search Team (NEST) Exercises 1997-1999
Requested date:	22-November-2020
Release date:	20-July-2022
Posted date:	01-August-2022
Source of document:	FOIA request NNSA/Office of the General Counsel P.O. Box 5400 Albuquerque, NM 87185 Fax: (505) 284-7512 NNSA FOIA Request Form Email: FOIOfficer@nnsa.doe.gov

National Nuclear Security Administration

Department of Energy
National Nuclear Security Administration
Office of the General Counsel
P.O. Box 5400
Albuquerque, NM 87185-5400

July 20, 2022

SENT VIA EMAIL

This letter is the National Nuclear Security Administration's (NNSA) final response to your November 22, 2020, Freedom of Information Act (FOIA) request for a copy of the following:

> "A copy of the After-Action Report (AAR) for each of the following NEST exercises: Lost Beacon (July 1999), Vigilant Lion (September 1999), Patriot Pledge (January 1997) and Patriot Finance (June 1997). It is my understanding that the first two reports have probably been previously released. If the latter two reports are classified, I ask that they be reviewed for declassification in whole or part."

Additionally, on November 22, 2020, you also requested a copy of the following:

> "A copy of the After-Action Report from NEST Exercise Package Satyr, conducted August 4-7, 1998. I understand this report is unclassified. Please release all segregable releasable portions."

Both of these requests have been aggregated into one, under NNSA Control Number FOIA 21-00037-KD, which was received in this office on November 23, 2020.

Upon receipt, we contacted the NNSA Office of Counterterrorism and Counterproliferation (NA-80) and the Nevada Field Office (NA-NV) about your request. NA-80 and NA-NV (along with their M&O contractor, Mission Support and Test Services, LLC) conducted a search for responsive records and located three (3) documents, as outlined below.

Responsive Records

The following documents are fully releasable and provided to you in their entirety:

1. Lost Beacon AAR (37 pages)
2. Vigilant Lion AAR (16 pages)
3. Package Satyr AAR (25 pages)

You may contact me, NNSA's FOIA Public Liaison, Office of the General Counsel, at 1-866-747-5994, or by mail to Department of Energy, National Nuclear Security Administration, Office of the General Counsel, PO Box 5400, Albuquerque, NM 87185, for 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 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; telephone at (202) 741-5770; toll free at 1-877-684-6448; or facsimile at (202) 741-5769.

There are no fees chargeable to you. If you have questions concerning the processing of your request, please contact Ms. Kristen Duran by e-mail at Kristen.Duran@nnsa.doe.gov, or write to the address above. Please reference Control Number FOIA 21-00037-KD.

Sincerely,

Christina H. Hamblen

Digitally signed by Christina H. Hamblen
Date: 2022.07.20 06:31:07 -06'00'

Christina H. Hamblen
FOIA Officer

Enclosures

bcc:

Mark Scheuer, NA-80
Lillian Minor, NA-NV

File No.: FOIA 21-00037-KD

~~OFFICIAL USE ONLY~~

Department of Energy
Exercise
Lost Beacon-99
July 20-21, 1999
After-Action Report

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U.S. DEPARTMENT OF ENERGY
EXERCISE LOST BEACON-99
July 20-21, 1999
After-Action Report

INTRODUCTION

LOST BEACON-99 was a Department of Energy (DOE) sponsored exercise conducted from 20-21 July 1999, in Portland, Oregon. The exercise included the deployment of a Nuclear Emergency Search Team (NEST) to Portland, Oregon in response to a request by the FBI to locate missing/stolen radiological materials. The exercise tested DOE's ability to respond effectively to terrorist incidents involving Radiological/Nuclear materials. It also served to validate U.S. crisis response capabilities and improve coordination among responding federal, state and local agencies.

Of particular note is that during this exercise NEST demonstrated its capability to operate continuously on a 24-hour basis and conduct a wide-area search of 7.9 million square feet during that period. Lost Beacon - 99 also provided the first opportunity for NEST to conduct operations during a real-world event, in this case a major sporting event in a stadium being searched for radiological material. The search teams succeeded in conducting their operations without compromising the extensive search that was under way at the Portland Civic Stadium.

Several federal, state, and local agencies supported this DOE sponsored exercise and helped create a realistic scenario that allowed DOE to meet its exercise objectives. Other agencies supporting the exercise included the Federal Bureau of Investigation (FBI) Field Office in Portland, Oregon, Portland Police Bureau, and Portland Bureau of Fire, Rescue and Emergency Services. Collectively, exercise participation totaled about 100 personnel.

This report documents lessons learned from DOE participation in the execution of LOST BEACON-99. Particular attention is given to key issues raised in the course of technical operations performed by DOE emergency response elements. This report provides the Office of Emergency Response, Defense Programs (DP-23) with information to assess the operational capabilities and readiness of its emergency response elements in a radiological nuclear materials terrorist incident. The DOE counterterrorism exercise program evaluates DOE's tailored counterterrorism emergency response assets taking into account the relevant mission essential tasks of each asset. The observations and recommendations listed in the Findings section of the report provide a record of operational issues, strengths, and weaknesses observed during exercise play. This report also addresses DOE exercise planning and management issues. Detailed exercise observations are maintained on file for reference in the National Security Programs Directorate of the Oak Ridge Institute for Science and Education.

This After-Action Report is organized as follows:

BACKGROUND -- outlines the scope and broad objectives of the exercise and then focuses on specific DOE exercise objectives. It also describes DOE exercise participation and the exercise control structure and process.

EXERCISE FLOW -- presents the exercise scenario involving a radiological/nuclear material terrorist situation and briefly traces the response of U.S. authorities.

SUMMARY EVALUATION -- presents a considered judgment regarding the success of the exercise and an assessment of the overall performance of DOE's response elements.

FINDINGS -- provides the substance of the overall evaluation of DOE operational element performance. It summarizes key issues that emerged during exercise play. The issues are organized sequentially by operational phase - Alert, Deployment, Employment and Redeployment. Additional findings with regard to the planning and execution of the exercise are also provided.

DETAILED EXERCISE EVENTS -- provides a detailed account of exercise events as they unfolded. Photographic documentation of exercise activities, along with narrative comments, is presented.

TABS -- provides amplifying background information, along with details on DOE asset capabilities, exercise observers and official visitors:

TAB A: DOE Operational Structure
TAB B: DOE Emergency Response Capabilities
TAB C: Official Visitors and Observer List
TAB D: Additional Photos of Exercise Activities

BACKGROUND

Exercise LOST BEACON-99 confronted the FBI Field Office in Portland, Oregon, and Portland Police Bureau with a situation in which a dissident group/individual had acquired radiological/nuclear materials with the intention of creating an incident somewhere in the city of Portland. This prompted the FBI Field Office to contact FBI Headquarters in Washington, D.C., for assistance in searching for and identifying the materials. The interagency Counter-Terrorism and Security Group (CSG) then recommended the U.S. government response.

DOE's mission was to provide radiological/nuclear technical support for the federal crisis response.

DOE Specific Exercise Objectives

Department of Energy exercise objectives were to evaluate NEST's ability to perform the following activities:

- Conduct a large-area/multiple-facility full scale search for radiological/nuclear material,
- Conduct continuous 24-hour search operations,
- Train local responders to perform novice search operations,
- Execute team-level Command, Control and Communications (C3) operations for search teams, both novice and professional; and,
- Coordinate search operations with participating regional and local agencies.

The DOE emergency response elements that deployed to and participated in LOST BEACON-99 included 31 personnel. These DOE response elements included the Search Response Team (SRT) and Search Augmentation Team (SAT). A simulation cell operating as part of the Exercise Control Group (ECG) played the role of the DOE Senior Energy Official (ESO), Nuclear Incident Team (NIT) and Nuclear Radiological Advisory Team (NRAT).

The DOE exercise control structure consisted of the ECG and Field Controllers. DOE Controllers at all locations observed the performance of the SRT and SAT and recorded their observations. The performance of the SRT and SAT in meeting the preceding exercise objectives is the basis for this evaluation.

Exercise Participation

DOE NEST assets provided search capabilities, training, and coordination for locally supported search operations. Search Team assets and local law enforcement worked closely to accomplish search operations covering multiple sites within a wide urban area.

The following DOE organizations participated as players in LOST BEACON-99:

- Nuclear Emergency Search Team (NEST) composed of the:
- Search Response Team
- Search Augmentation Team
- Emergency Response Home Team (ERHT)

The Exercise Control Group (ECG) managed the execution of the exercise, served as exercise evaluators, and simulated the play of the ESO, NIT, NRAT, and other Federal Agencies.

Regional and local participants included:

- FBI Field Office in Portland, Oregon
- Portland Police Bureau
- Bureau of Fire, Rescue and Emergency Services of the Portland Office of Emergency Management
- Various Federal and State agency personnel from Oregon (providing novice searchers)

The Joint Operations Center (JOC) and Tactical Operations Center (TOC) were established and co-located at a warehouse located in downtown Portland at 49th and Clay Streets. Search operations, as well as control and direction of all response operations, were conducted from the TOC and JOC. The JOC was composed of combined command element from the Portland Police Bureau, Portland FBI Field Office and a DOE liaison elements. The TOC controlled DOE search operations. The FBI Portland Field Office Special Agent in Charge (SAC) was the Lead Federal Agency (LFA) representative in the JOC.

EXERCISE FLOW

The Exercise LOST BEACON-99 scenario confronted the United States Government with a request by law enforcement organizations from Portland, Oregon to assist in locating radiological nuclear materials. The exercise was conducted in Portland on 20-21 July 1999. The exercise objective was evaluate a full-scale DOE Search Team's ability to carry out continuous twenty-four hour domestic search operations for radiological/nuclear materials, while coordinating Command, Control and Communications (C3) operations with participating regional and local agencies.

The scenario required DOE NEST to deploy simultaneously a 31 member Search Team, composed of a seven member Search Response Team (SRT) and a 24 member Search Augmentation Team (SAT). The SAT was tasked to search for radiological materials believed to be located at one of several possible sites in the Portland area. Search operations included participation by local responders from the Portland Police Bureau (PPB), Portland Federal Bureau of Investigation (FBI) Field Office, and other federal and local agency personnel from the state of Oregon trained as novice searchers.

The scenario indicated the placement of some radiological material by a person representing a dissident group at potentially one or more sites somewhere in the Portland, Oregon area. In response to this information the FBI requested assistance from DOE in locating the material. DOE provided the SAT, which simulated an alert and deployment, from Las Vegas, Nevada to Portland, Oregon via a Ross Aviation DC-9 aircraft. Upon arrival in Portland, the SAT was escorted to a Joint Operations Center (JOC), arriving at 0900 PDT, 20 July 1999. Upon arrival, the SAT team leaders received a briefing from a combined FBI and PPB law enforcement team manning the JO C. Concurrently, the SAT technical mission leaders directed equipment setup procedures and preparations to begin training for the first group of 24 local responders. The local law enforcement community provided 24 novice searchers for training. Novice search training concluded at 1300 PDT, 20 July 1999. Search Teams were deployed to locations identified and prioritized by the JO C as areas possibly containing the radiological materials. The Lloyd Center Mall and the Portland Civic Stadium were given highest priority.

The Lloyd Center Mall search was completed at 1600 PDT, 20 July 1999. Internal searching of the Portland Civic Stadium was completed at 1615 PDT, 20 July 1999. When the Portland Civic Stadium gates opened for general admission to the public for an upcoming sporting event, Search Teams fabricated a temporary portal monitoring system to detect possible material entering the Stadium. Public spectators passed by the temporary portal system while the system setup and operators remained inconspicuous. Search Teams found nothing at the Lloyd Center and the Civic Stadium and moved to the Memorial Coliseum and the Rose Garden Coliseum to continue the search. Additionally, Mobile Search Teams began a search of the area around the Multnomah County Courthouse.

A mobile search of a five square block area around the Multnomah County Courthouse concluded at 2130 PDT, 21 July 1999. Searching at the Memorial Coliseum and the Rose Garden Coliseum ended at 2215 PDT, 20 July. At 2300 PDT, 20 July, turnover briefings for the oncoming SAT and JO C local law enforcement teams were conducted. Additionally, training was conducted for a second group of 24 local responders being trained as novice searchers and new Search Teams were ready to start operations by 0001 PDT, 21 July.

The search of the Multnomah County Courthouse, Oregon Exposition Center and Oregon Convention Center began at 0010 PDT, 21 July. Search Teams located source material in a basement locker at the Multnomah County Courthouse at 0030 PDT, 21 July. The Search Team initially identified the material using the Ranger detector, and reported the material as industrial Americium 142. Detailed spectral analysis of the source material by the SAT correctly identified it as Iridium 192. Spectral data was sent to the home team for further analysis. The Multnomah County Courthouse, Oregon Exposition Center and Oregon Convention Center searches were completed and the exercise ended at 0310 PDT, 21 July.

SUMMARY EVALUATION

All Exercise Lost Beacon 99 objectives were successfully accomplished. The SRT and SAT Search Teams responded to the FBI request to locate missing/stolen radiological materials. DOE operational coordination with the FBI Field Office in Portland, the Portland Police Bureau, and the Bureau of Fire, Rescue and Emergency Services, Portland Office of Emergency Management was well managed. The DOE search teams successfully conducted full-scale search operations at multiple-venues in a large urban area. The DOE search teams met a key exercise objective by successfully conducting continuous search operations for a period of 24 hours. The DOE search team successfully trained more than 48 local responders as novice searchers within this 24-hour period. DOE search team element leaders successfully executed command, control and communications (C3) over the novice searchers. They coordinated all the phases of search operations to include; transportation to search site, access, novice search methodology, instrument indications, and forwarding of search results to the DOE TOC. Coordination between the DOE Search Team leaders at the TOC, who provided updated search execution information to regional and local agency participants manning the JOC was well managed and a key factor contributing to mission success.

Perhaps most importantly, this exercise placed the SAT in the real-world situation of performing their search operations during a major sporting event. The SAT succeeded in conducting their operations without compromising the extensive search that was under way at the Portland Civic Stadium.

FINDINGS

What follows are the operational issues, strengths, and weaknesses observed during exercise play~together with relevant recommendations. The observations presented are organized sequentially by operational phase - Alert, Deployment, Employment and Redeployment. Additional findings with regard to the planning and execution of the exercise itself are also provided.

Alert Issues:

None. The Exercise LOST BEACON-99 scenario commenced with the arrival of the SRT/SAT in Portland, Oregon and alert operations were simulated.

Deployment Issues:

None. The SRT/SAT search team deployed from Las Vegas, Nevada to Portland, Oregon via a DOE-leased Ross Aviation DC-9 aircraft. Search Team equipment was line-hauled to Portland and pre-staged prior to the start of the exercise. Alert and deployment of the SRT/SAT had been tested during a preceding exercise.

Employment Issues:

Observation: The DOE Search Team leader conducted the initial meeting with the FBI Field Office in Portland and the Portland Police Bureau upon arrival at the Joint Operations Center. This meeting was productive and coordination with local authorities was exceptional. Several operational considerations, however, were overlooked in the initial discussions. These included the possible availability of local communications, electrical power, and development of a cover story for the search operations. These oversights had a minor impact on the training of local responders.

Recommendation: SRT/SAT should develop a checklist to facilitate their initial meetings with local law enforcement authorities. Such a checklist will help ensure that all relevant operational considerations are not overlooked in the initial meeting. checklist will also allow SRT/SAT to pass logistical and operational questions to the local authorities prior to their actual arrival on site. SRT/SAT is almost self-sufficient and consequently could operate even if local logistical resources were not made available.

Observation: The DOE search team trained local responders as novice searchers. The technical training went well, however, several issues were noted. During the initial coordination with local authorities the availability of electricity was not addressed and SRT/SAT set-up and used their own generators for electricity. The generators were set next to the entrance of the JOC facility and as a result the acoustics in the nearby training area for local responders was poor and affected training. Additionally, neither the operational situation nor the cover story was briefed to the first group of novice searchers. Both the FBI and DOE assumed the other agency had briefed this information.

Recommendation: SRT/SAT should develop a checklist to facilitate the training of local responders and ensure every operational and logistical issue is addressed. If a situation develops such as the one in Portland, every attempt should be made to move the training area to ensure quality training and a clear understanding of all information presented. This will enhance both the efficiency of training and the execution of the mission. A checklist will also ensure that every searcher is thoroughly briefed on all background, situational and operational information and given a cover story to explain what they are doing if questioned. This was addressed and corrected for the second group of searchers.

Observation: The execution of search operations was well coordinated and went smoothly. The set-up and search of various venues went quicker than expected. The search teams reacted well; the set-up and use of a portal monitor at the Civic Stadium was very successful.

Recommendation: None. Continue the close coordination of search operations with local authorities.

Observation: After two hours of use, the Modular Advance Search System (MASS) units were inoperable. The problem was associated with the link to a communications repeater site.

Recommendation: None. A Search Team technical leader based on stated search priorities identified the deficiency; immediate correction of the problem was not a top priority.

Observation: Although search operations were very successful and none of the searchers were questioned, several issues were noted. Several searchers stood out as slightly unusual within the environments they were searching. Novice searchers wearing jeans or shorts and hiking boots were noted carrying formal briefcases and using radios. In another case, a searcher conducting search operations at the Civic Stadium was wearing a DOE badge worn on the front of shirt. This was a notable Operational Security (OPSEC) issue.

Recommendation: SRT/SAT needs to evaluate their list of available equipment and ensure an adequate stock of containers to allow a clandestine search. This problem was corrected during the conduct of the exercise. Operational security is everyone's responsibility. All DOE employees must be aware of displaying DOE credentials in public, especially when conducting technical operations supporting emergency responses.

Observation: The SRT/SAT was unable to transmit spectral data to the home team electronically using the Imaging and Communications Environment (ICE) system. Even though they were unable to transmit data electronically, they were able to print out data and send it by facsimile for analysis.

Recommendation: When a system such as ICE fails during an incident the SRT/SAT needs to investigate every contingency for passing information to the home team. They were successful in doing this. In the case of the failed ICE system, DOE needs to determine if this is a hardware or software deficiency and then take the appropriate corrective action.

Observation: The FBI noted a need for common communications and novice searchers were using open police radios to report the location of a "device". This is a serious OPSEC issue when searching for a potential terrorist WMD device. Open police frequencies are often scanned and monitored.

Recommendation: Novice searchers must be instructed not to use open frequencies to transmit information. Options include the exclusive use of encrypted communications or the use of brevity codes.

Observation: Exercise controllers simulating the NRAT experienced sporadic pager coverage within the Portland, Oregon area.

Recommendation: The Office of Emergency should examine the reliability of national pagers for nationwide use.

Re-deployment Issues

None: Re-deployment operations were not a part of Exercise LOST BEACON-99. The exercise ended and re-deployment was administrative.

Exercise Execution Issues:

Observation: The FBI Field Office in Portland and the Portland Police Bureau provided excellent support to DOE's exercise Lost Beacon 99. DOE exercise objectives were successfully achieved in large part due to the significant commitment and engagement of local planners, as well as the federal and local controllers and participants. Specifically, the Portland Police Bureau spared no effort to created a realistic response scenario in challenging situations and geographic sites (both public and private).

Recommendation: The level of local agency engagement is an important ingredient to test DOE's domestic response capabilities. DOE should continue to coordinate and conduct future exercises with local authorities willing to support and participate in realistic exercises.

Observation: The Lost Beacon-99 exercise scenario commenced with the arrival of the SRT/SAT in Portland, Oregon. Deployment was not an exercise objective because this exercise was designed to test the phases of operation that were cut short in the last SRT/SAT search exercise. Consequently, the situational awareness the SRT/SAT would have developed during deployment was lacking. The DOE Search Team leader could not readily identify the point of contact for coordination with local law enforcement and did not receive an arrival briefing at the airport that otherwise would have been a part of the routine deployment activity. The SRT/SAT received their first exercise injects and situational awareness briefing upon arrival at the Joint Operations Center in Portland.

Recommendation: When an exercise does not include all phases of an emergency response, the planning and scripting of the scenario needs to provide the information that would have developed during the missing phases. This information should be given to the players at the earliest opportunity. Exercise planners must develop situational injects such as law-enforcement briefings and SITREPS for dissemination. The SRT/SAT should have received such information on their administrative departure from Las Vegas. Armed with such information the SRT/SAT would have been better prepared for their initial briefing by local authorities.

DETAILED EXERCISE EVENTS

Exercise scenario provided by Portland Police Bureau and Portland FBI

The events in Exercise LOST BEACON- 99 unfolded in the following scenario:

John Early arrives at Legacy Emanuel Hospital and is diagnosed with the following symptoms: nausea, vomiting, general weakness, swelling and some blistering on his hands that resemble sun poisoning. Mr. Early's explanation of his diagnosis is not consistent with the symptoms he displays. Medical examination and blood work reveal that John Early is suffering from radiation poisoning. The emergency room physician notes that Mr. Early is very evasive about the circumstances accounting for his apparent exposure to radioactive material. Mr. Early appears to be very anxious to leave the emergency room.

The hospital notifies Portland 911 (BOEC). A district officer is dispatched to talk with Mr. Early. A routine check reveals that Mr. Early is associated a group called Portland Arms Liberation Front (PALF). This group has been very outspoken in its criticism of the new gun control legislation mandated by the federal government and enacted by the Oregon State Legislature. The district officer contacts his sergeant who in turn calls the Criminal Intelligence Division (CID).

CID is aware that this group has indicated to others that they are interested in acquiring radioactive materials for reasons unknown. CID officers conduct an interview with Mr. Early and obtain the following information. Mr. Early admits to traveling extensively over the past few months on the West Coast (US and Canada). He feels that PALF should take a stronger "positive action" against the recent anti-gun legislation enacted. He and some of the more strident members of PALF have recently moved away from the other members because they would not take "serious action." Mr. Early gives the names of the other breakaway members to CID officers but will not give their addresses. Mr. Early expresses an inordinate contempt for a particular Multnomah County district judge. Mr. Early works as a stagehand at various large venues in town.

CID officers begin an investigation and contact other members of PALF. Members of PALF are quick to distance themselves from Early and the other breakaway members. These PALF members became worried when Early and his associates began telling of their recent travels to acquire radioactive materials. Early and his friends have told others that they were going to make some people "glow" with radioactivity. One member of PALF recalls that Early spoke of gathering Iridium and Cesium in Vancouver, British Columbia in the past ten days.

Based on the information gathered by CID and the injuries presented by Mr. Early, the Portland Police Bureau contacts the Portland FBI field Office for assistance in locating the radiological materials.

Since the notification by the FBI and activation of the DOE NEST search assets the following information developed:

On July 20, 1999 at 0615, Lloyd Center Mall security observed a person in the restricted area by the underground loading docks. The person fled in a vehicle that has now been associated with a member of the radical faction of PALF.

FBI and CID sources believe that the PALF member may have a residence in the Portland eastside.

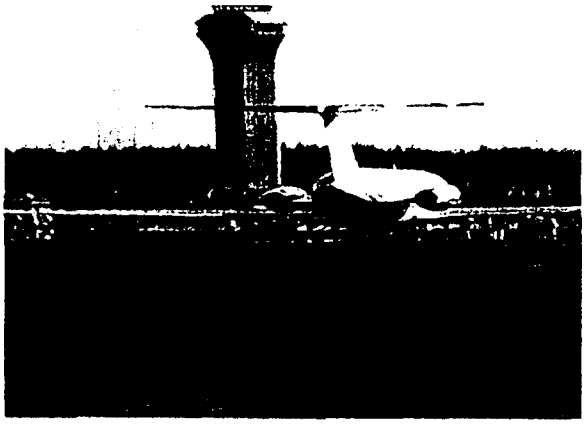
Detectives have confirmed that within the last week Mr. Early worked at the Merc Complexes (Civic stadium, Convention center, and Exposition center). His job provided him with wide access to those locations.

Members of the Rose Garden Coliseum security recall seeing Mr. Early at the back stage door of the Coliseum in the past week. He generally does not work there but has a close friend that works the Rose Garden complex. That person has not reported to work since Mr. Early went to Emanuel Hospital.

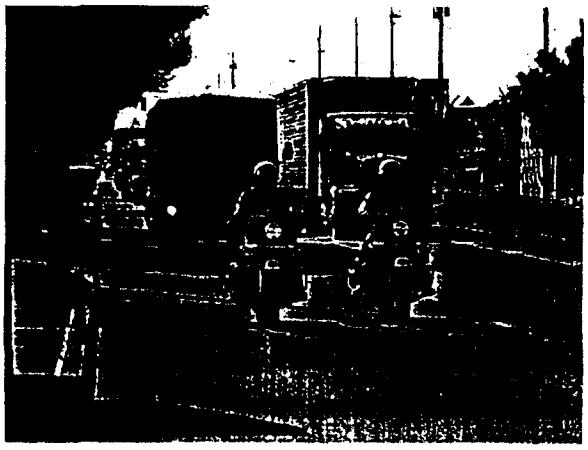
Mr. Early has a pre-trial conference scheduled for July 22, 1999 on a pending court matter at the Multnomah County Courthouse.

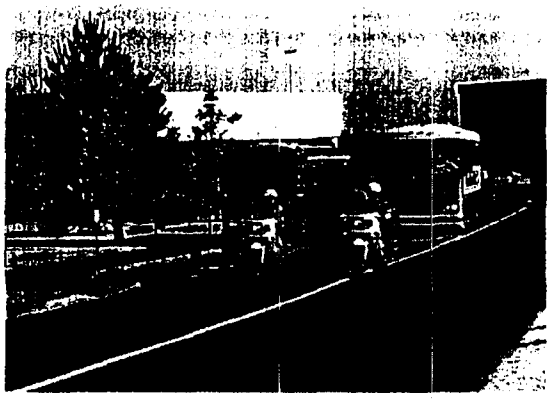
Based upon the information gathered by CID and Mr. Early's injuries, the Portland Police Bureau contacted the Portland FBI office for assistance in locating potential radiological materials. The FBI Field Office relayed the request to FBI Headquarters in Washington D.C. and the request is forwarded to DOE.

A radiological search team was dispatched from Las Vegas, NV and scheduled to arrive at Portland Airport by 0800 PDT on 20 July 1999. The plane was met and escorted to the JOC by the Portland Police.

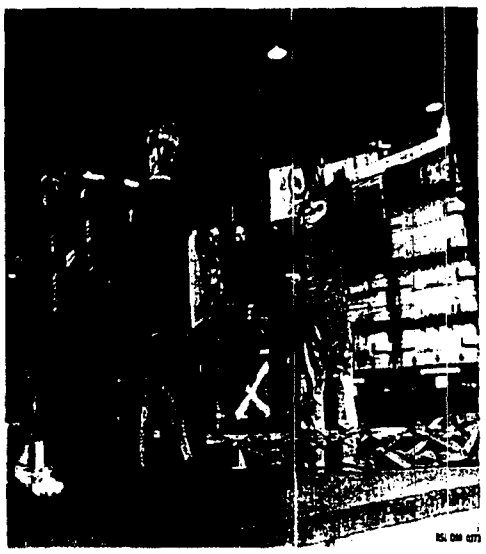


DOE SEARCH TEAM ARRIVING PORTLAND, OREGON



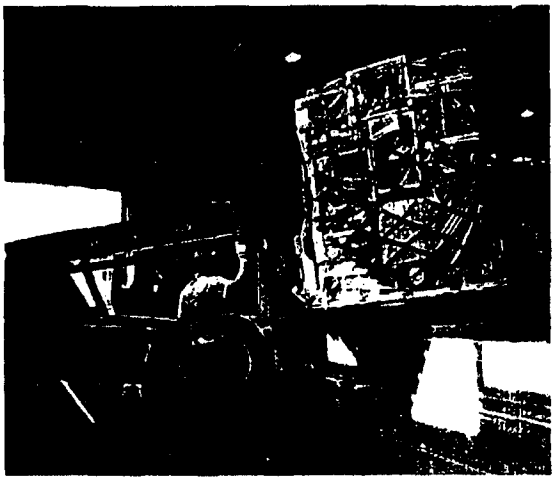


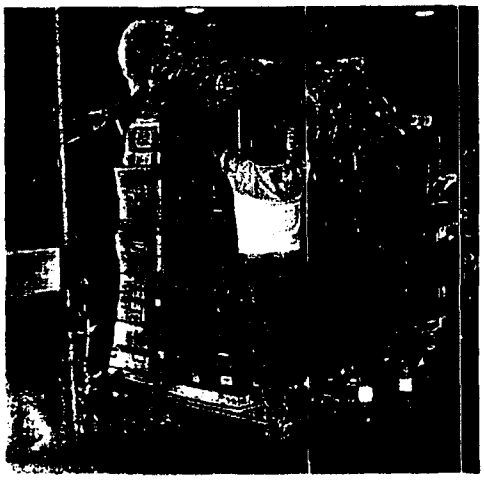
PORTLAND POLICE ESCORT TO THE JOC



SRT/SAT UNLOADING AT JOC

After a 0900 arrival at the JOC, the SRT/SAT unloaded their equipment and began operational set-up procedures.

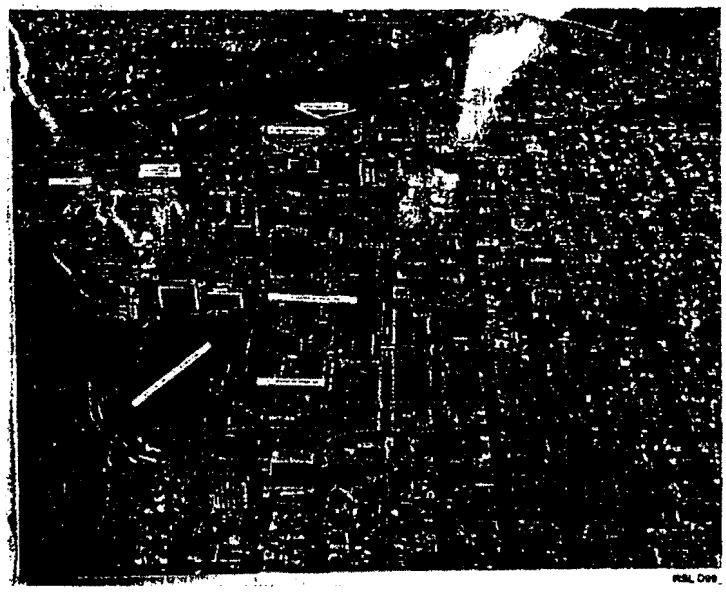


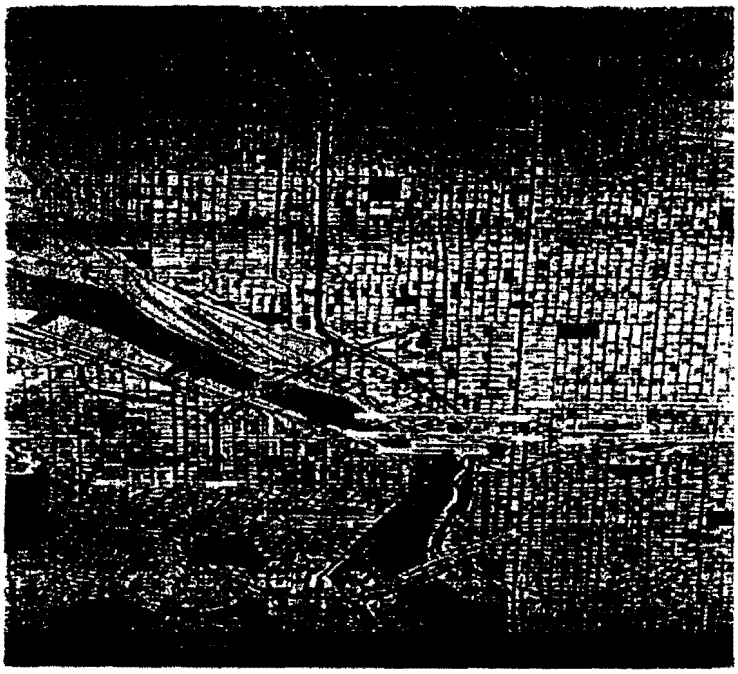


ARRIVAL BRIEFING AT JOC

By 0925, while the SAT set up continued, the FBI SAC provided an arrival briefing to the Search Team Leader. Information on Mr. Early's medical situation and the identified threat from the stolen radiological source was provided.

The FBI SAC identified the locations where Mr. Early was suspected to have visited and identified the need to prioritize search operations. The FBI was identified as the Lead Federal Agency (LFA) and a Unified Command System was established for this operation. Additionally, the FBI indicated that local resources/assets would be made available to support the response and that the search was a top priority. Site survey requirements of the buildings and areas to be searched were reviewed.





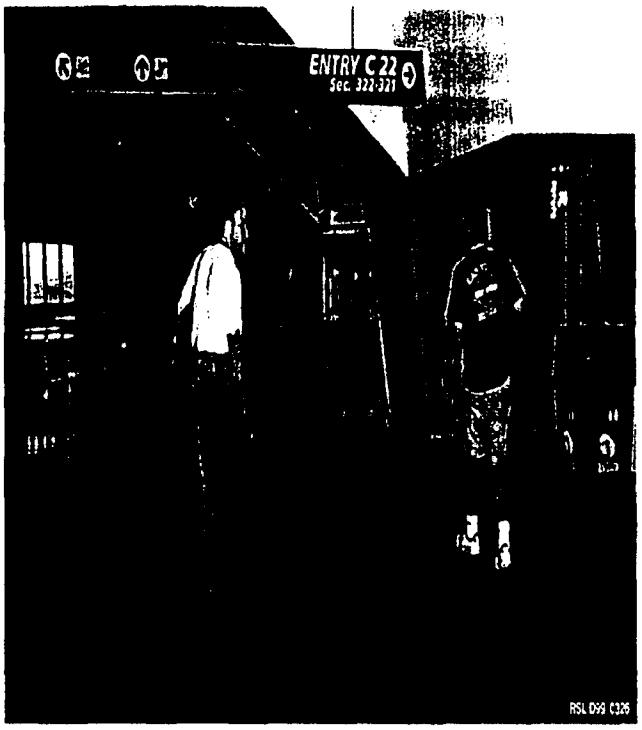
PHOTOS OF SEARCH MAP

By 1040 PDT the Search Team Leader had briefed the SEO/NRAT Leader on the outcome of discussions with the SAC and the JOC unified command concerning search priorities at the Portland Civic Stadium and other required locations. The Search Team leader discussed the desire to deploy the Aerial Measurement Systems (AMS) capability, based on the activity level of the source. (AMS deployment was simulated). The Portland Police Bureau offered a helicopter to assist with mobile air search if required. A cover story to be used should the public or media ask questions was discussed.

SEARCH SITES, LOCATIONS/SQUARE FOOTAGE

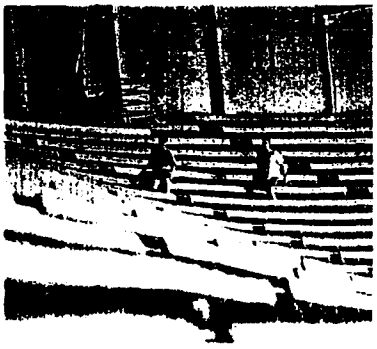
1. Lloyd Center Shopping Mall

a. 3 level mall	1.5 million sq. ft
b. Mall parking area,	1.62 million sq. ft



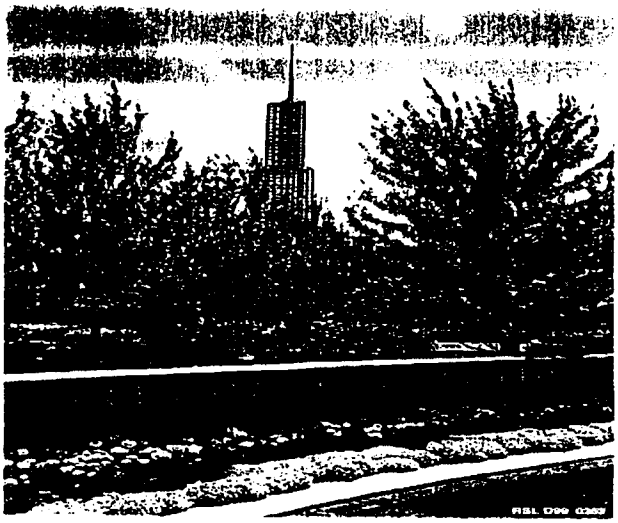
2. Rose Quarter area, includes Rose Garden and Memorial Coliseum

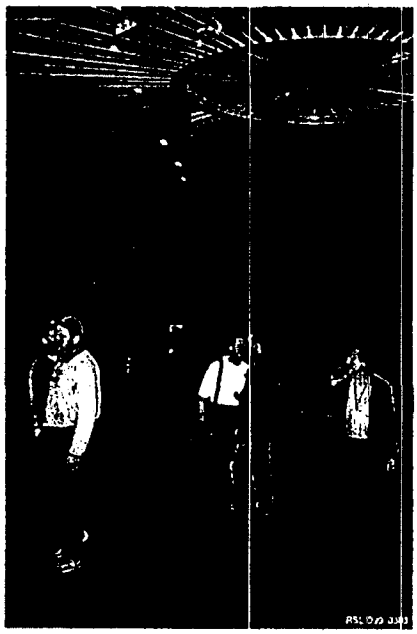
a. Rose Garden Coliseum, 750,000 sq. ft
b. Memorial Coliseum, 250,000 sq. ft
c. Outside parking area, 742,400 sq. ft



3. Civic Stadium (Baseball)

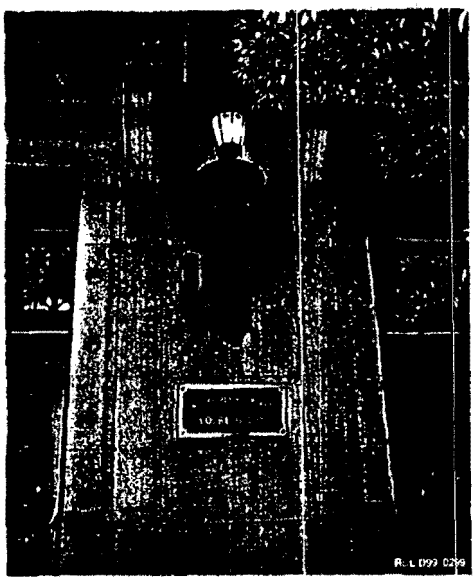
a. Stadium, 250,000 sq. ft
b. Ball field, 300,000 sq. ft





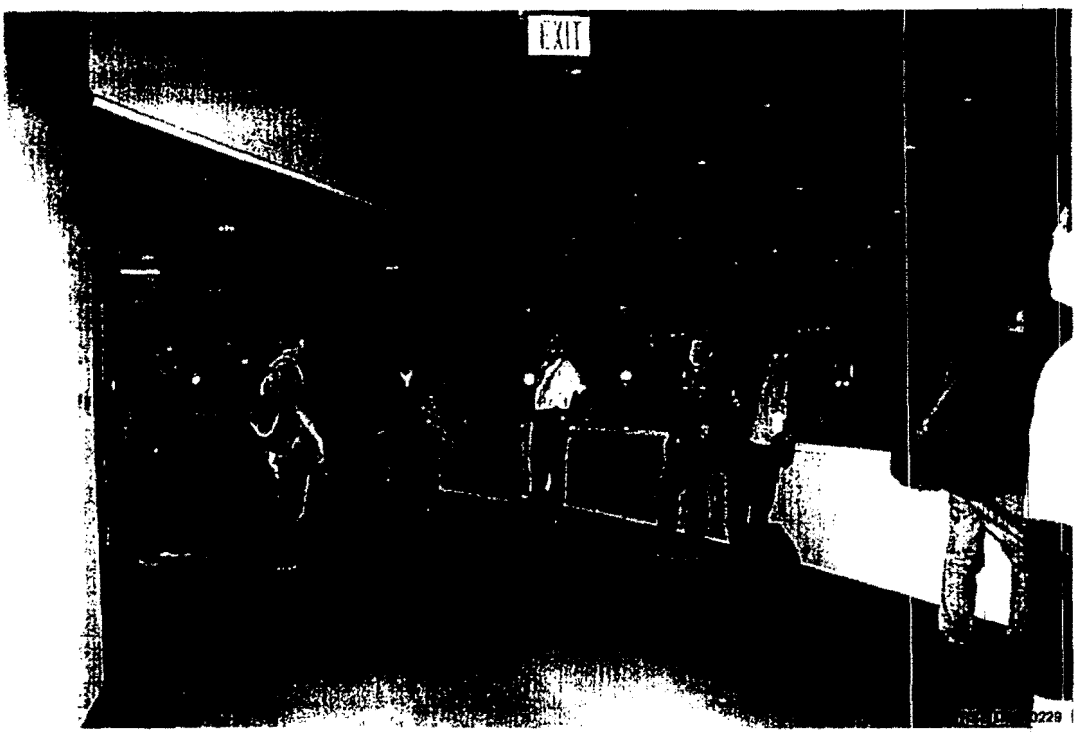
4. Convention Center

a. Building	500,000 sq. ft
b. Parking area,	500,940 sq. ft



5. Multnomah County Courthouse

a. 8 floors, 275,000 sq. ft



6. Exposition Center

a. Building 332,900 sq. ft

b. Parking area 871,200 sq. ft

At 1100 PDT the Portland Police Bureau provided a briefing for the first group of novice search personnel. The team was directed to blend in and not provide an explanation of equipment if questioned. They were told of any search area limitations and exceptions during training.

By 1146 PDT the first Situation Report (SITREP) outlining search team composition and proposed plans of action for search teams deploying to Lloyd Center Mall and the Civic Stadium were provided to the SEO by the Search Team Leader.

The following search plan was used for the Lloyd Center Mall and the Civic Stadium:

Lloyd Center Search Plan

Three (four-person) teams, totaling 12 gamma-ray detection units were to be deployed. Team composition was as follows:

Team E
Team F
Team G

There were two mobile search systems led by Team A. The Team leader would have a Ranger, Sodium Iodide (Nal) spectral identification unit with him.

Anticipated search time was six hours.

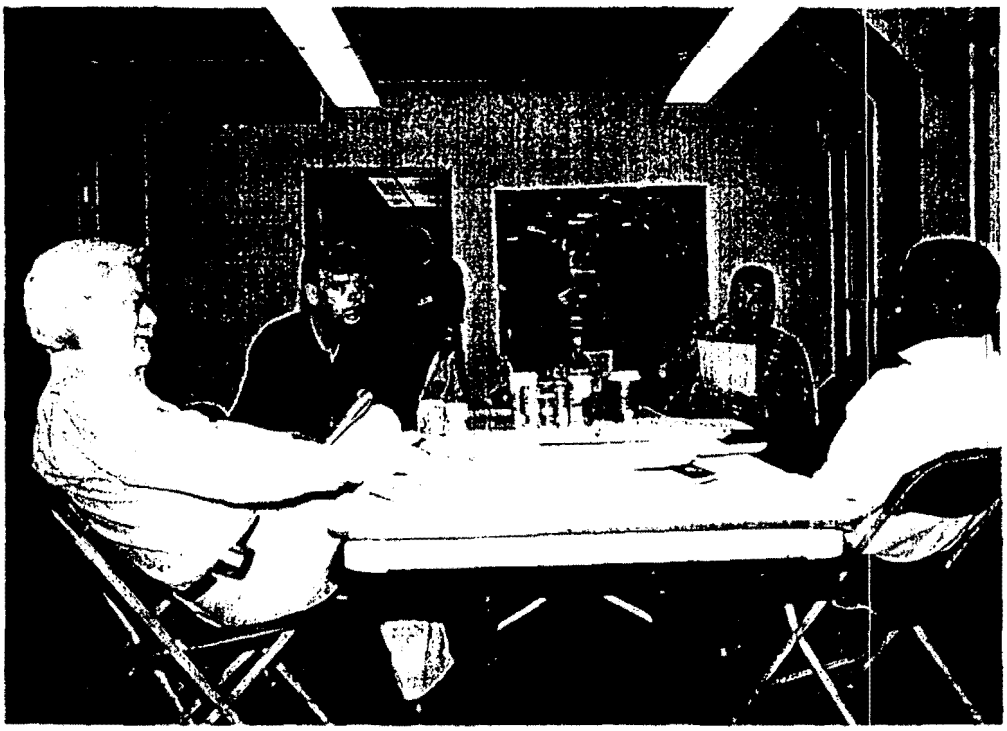
Civic Stadium Search Plan

Two four-man novice search team (Teams B and H) deployed to the Civic Stadium. The search teams searched the Stadium prior to opening for general admission for a sporting event at 1730 PDT. When the gates were opened, one gamma unit in a "portal mode configuration" would be stationed at each gate to monitor people entering. Gate monitors had an encrypted radio to contact their team leader. A Ranger, Sodium Iodide (NaI) spectral identification unit was deployed with the Stadium searchers.

SEARCHER TRAINING

At 1230 PDT, the training of the first group of novice searchers commenced. Searchers were assigned a technical advisor who provided training on issued equipment. Searchers were told they were to use a cover story and to call the team leader if there was a

problem. Access and search restrictions of venues were discussed at 1330 PDT search teams departed for search sites.



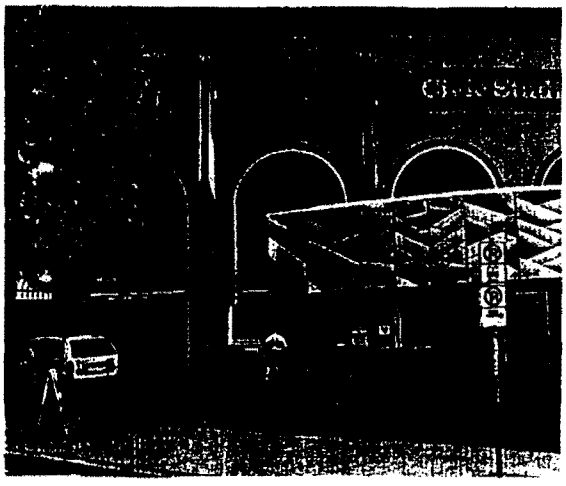
At 1550 PDT, FBI and Portland Police conducted a turnover briefing for the incoming JOC shift. The Search Team Leader provided a briefing on operations, search priorities and upcoming activities related to search for the oncoming shift. During this briefing an agreement was reached that the next search priority was the Rose Garden Complex which included the Memorial Coliseum and Rose Garden Coliseum.

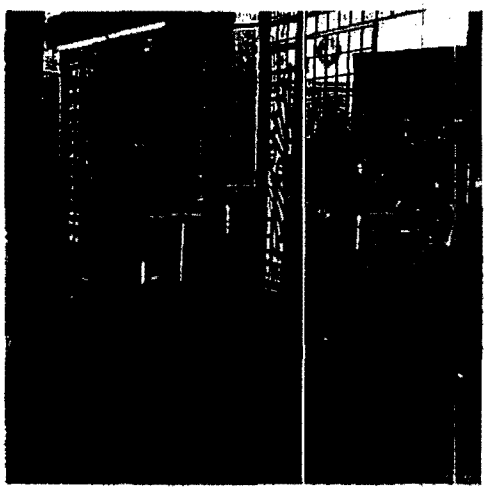
SEARCHING AT THE MALL

By 1600 PDT Lloyd Center Mall search operations were complete. Searchers from Portland Police Bureau used search equipment that was placed in briefcases or gym bags and searched the entire Lloyd Center Mall that was open to the general public.

SEARCH AT THE CIVIC STADIUM

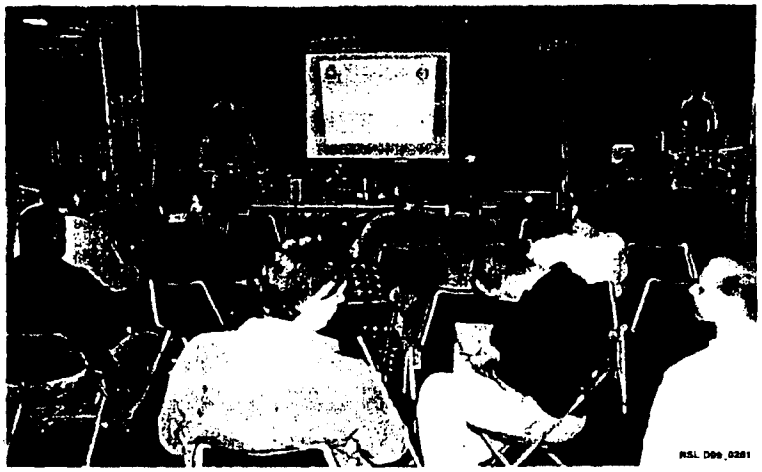
By 1615 PDT the search of the Civic Stadium complex was completed. The Civic Stadium search included the entire complex in and around the baseball field. Portal monitors were set up at eight entrance points for admission of the general public to the Stadium. The monitoring of general admission points concluded at 1900 PDT, when the ball game started.

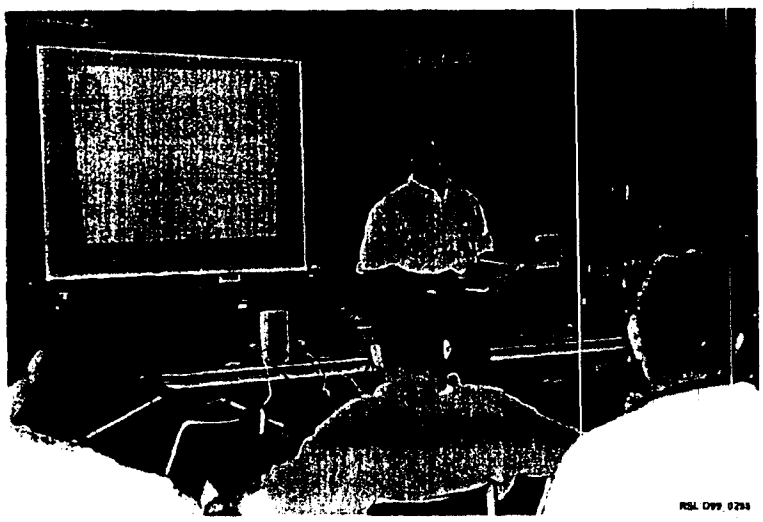




PORTAL MONITORS

Search Teams that had just completed searching Lloyd Center Mall and the Civic Stadium next moved to the Memorial Coliseum and the Rose Garden Coliseum to continue searching.





TURNOVER IN JOC

At 2300 PDT a turnover briefing was conducted in the JOC for SAT and the FBI. Training for the second group of novice searchers commenced.

At 2130 PDT an area around the Multnomah County Courthouse was surveyed by Search Teams.

By 2215 PDT the Memorial Coliseum and the Rose Garden Coliseum search was completed.

COURTHOUSE SEARCH

At 2400 PDT an interior search of the Multnomah County Courthouse began and search teams located source material in the basement of the courthouse. It was discovered at approximately 0300 PDT in a locker in the location of the district Attorneys locker room.

An initial assessment of the source indicated that it was industrial Americium 142. Further spectral analysis correctly identified the material as Iridium 192.

At 0230 PDT attempts to send spectral data for analyses were made.

By 0330 PDT, after the completion of search operations at Multnomah County Courthouse, Oregon Exposition Center and the Oregon Convention Center, the exercise ended.

HOTWASH

At 1200 PDT, a "Hotwash" to review exercise activities was conducted at the warehouse at 49 Clay Street. Each participating agency provided comments on the exercise.

Exercise Timeline

The following exercise timeline summaries the flow of the exercise.

July 20, 1999

0610 - DOE Search Team departs Las Vegas, Nevada for Portland, Oregon via Ross Aviation aircraft.
S
0755 - DOE Search Team arrives Portland and departs for the JOC with police escort.

0900 - DOE Search Team arrives at the warehouse (JOC location).

0925- FBI provides an initial briefing to the DOE Search Team leader covering the current situation and the need to prioritize search operations. Lloyd Center Mall and the Multnomah County Court House are given priority, with the Memorial Coliseum, Civic Stadium (baseball), Exposition Center, Convention Center, and the Rose Garden Coliseum listed as other venues for search.

1030 - The Search Team Leader briefed the SEO/NRAT on search priorities.

1100 - The Portland Police Bureau provided a briefing to the first novice search team.

1146 - SITREP ONE: The SEO received the first Search Team Leader SITREP giving a detailed plan for teams searching the Lloyd Center Mall and the Civic Stadium.

1230 - Training conducted for novice searchers.

1330 - Search teams depart to search the Lloyd Center Mall and Civic Stadium.

1550 - Turnover briefing by FBI and Portland Police conducted at the JOC.

1630 - Search of the Lloyd Center completed, searchers deployed to search the Rose Quarter area.

1900 - Search of the Civic Stadium completed.

2215 - Search of the Rose Quarter Complex completed.

2300 - Turnover briefing and training of the second group of novice searchers conducted.

July 21, 1999S

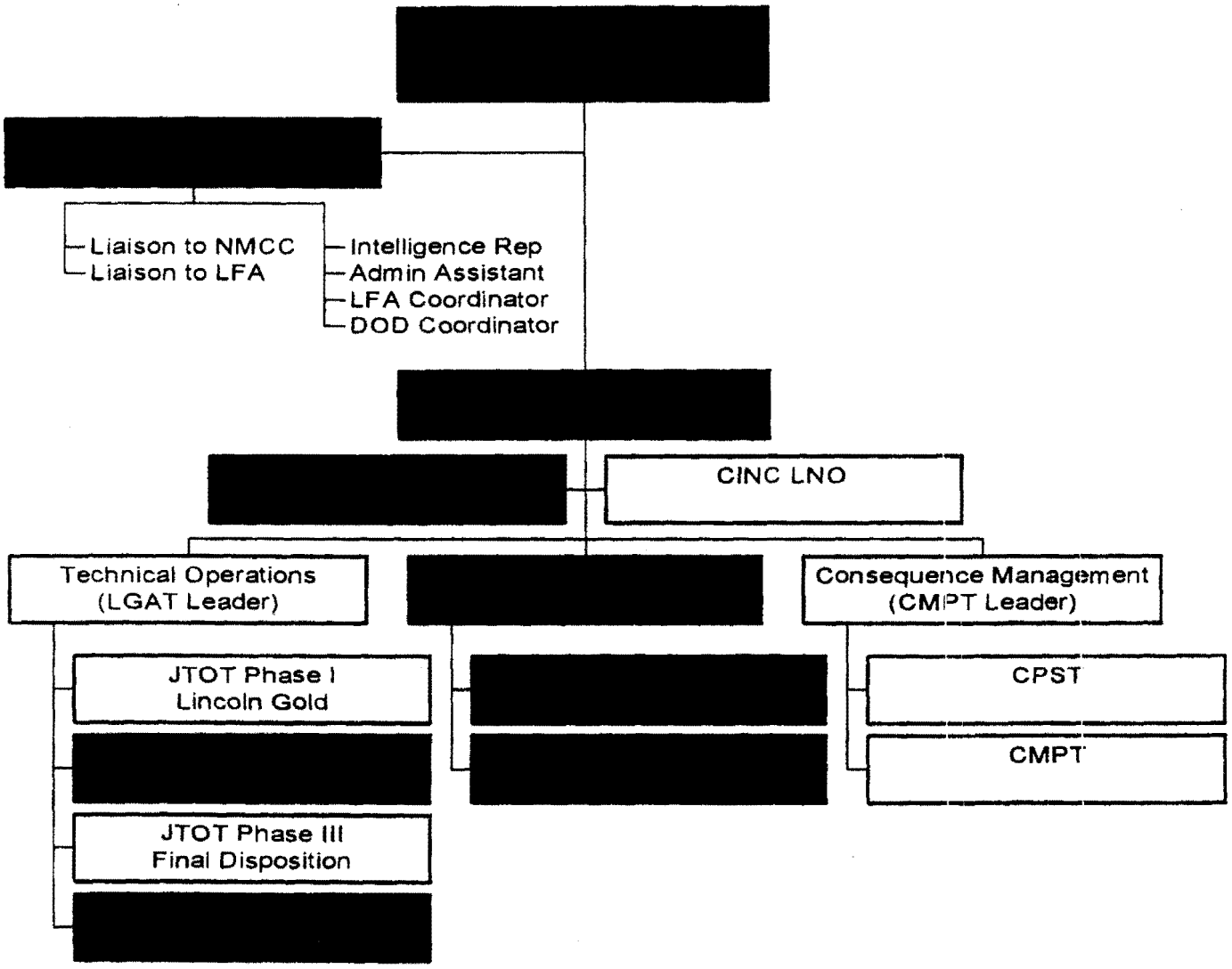
0030 - The search of Multnomah County Courthouse located some source material.

0130 - SITREP TWO provided to the SEO, outlined timeline of first day events.

0330 - The exercise ended with completion of search operations at Multnomah County Courthouse, Oregon Exposition Center and the Oregon Convention Center.

TAB A: DOE OPERATIONAL STRUCTURE

Exercise Operational Structure



BLUE: PARTICIPANT
RED: SIMCELL
YELLOW: NON-PARTICIPANTS

TAB B: DOE EMERGENCY RESPONSE CAPABILITIES

DOE emergency response assets with the capability of responding and dealing with terrorism incidents involving radiological/nuclear Weapons of Mass Destruction include the following operational assets:

Nuclear Incident Team (NIT)

Mission: Provide a supporting staff for DOE Headquarters. Responsible for preparing courses-of-action briefings for senior DOE officials to include Counter-terrorism and Security Group (CSG) member/Secretary of Energy. Coordinates interagency actions for alerted and deploying DOE elements.

Capability: Coordination with interagency counterparts, anticipating and acting on requirements of DOE emergency response elements.

Deployment Trigger: The NIT will assemble in the DOE HQ Emergency Operations Center upon notification by the CSG member following the initial CSG meetings.

Team Size: 8-12 personnel per shift.

Nuclear/Radiological Advisory Team (NRAT)

Mission: Provide expert advice to the responsible U.S. Government Lead Federal Agency during acts of terrorism that may include the use of nuclear or radiological material. The Lead Federal Agency responsibility rests with the Chief of Mission for an overseas response and the FBI Special Agent-in-Charge for a domestic response to terrorism. The Nuclear Radiological Advisory Team Leader is the senior DOE official deployed and is responsible for command and control of all DOE assets in the field.

Capability: Limited search; identification of radiological materials through Gamma Spectroscopy; technical analysis of intelligence and data collected through technical means; communicating with DOE laboratories and deployed DOE assets.

Deployment Trigger: The Nuclear and Radiological Advisory Team will deploy within 4 hours of notification as part of the Domestic Emergency Support Team (DEST) or Foreign Emergency Support Team (FEST). The Lead Federal Agency (DOS or FBI) should request Nuclear Radiological Advisory Team support as a result of an interagency Counter-terrorism and Security Group (CSG) meeting.

Team Size: 5-8 personnel.

TAB B: DOE EMERGENCY RESPONSE CAPABILITIES

Emergency Response Home Team (ERHT)

Mission: Provide expert technical advice to deployed DOE counterterrorism assests responding to potential nuclear or radiological terrorism. Information is normally transmitted and received through the deployed Nuclear Radiological Advisory Team.

Capability: Rapid and continual weapons intelligence, diagnostics, disablement and render safe assistance.

Deployment Trigger: The Emergency Response Home Team will provide support within two (2) hours of notification.

Team Size: 4 scientific personnel.

Search Response Team (SRT)
Search Augmentation Team (SAT)

Mission: Provide a limited search support augmentation to the Nuclear Radiological Advisory Team and Domestic and Foreign Emergency Support Team.

Capability: The Search Response Team provides the capability to rapidly train and equip local responder searchers, as well as a limited unilateral search capability. The Search Augmentation Team provides a pre-trained, professional augmentation of searchers and supports the Nuclear Emergency Search Team (NEST).

Deployment Trigger: The SRT and /or SAT will deploy at the request of the Lead Federal Agency "as follow-on element of the Domestic or Foreign Emergency Support Teams".

Team Size: The Search Response Team: 7 personnel. The Search Augmentation Team: 24 personnel.

TAB C: OFFICIAL VISITORS and OBSERVER LIST

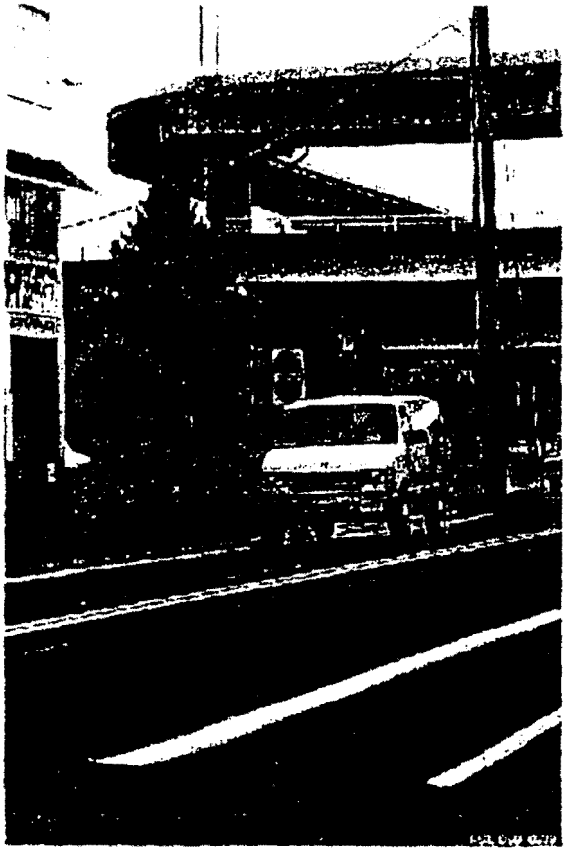
Observers/Visitors

NAME	ORGANIZATION
Ray Paris	Oregon Health Division
David Hall	DOE Nevada
Tim Cooper	DOE Nevada
Mary Lou Blazor	Oregon Office of Energy
Mel Tellingham	Portland Police Bureau
Cynthia Rivera	Bechtal Nevada
Tom Ruy	Northwest Protective
Alan Espasandin	Northwest Protective
Rhonda Hopkins	Bechtal Nevada
Keith Mize	Washington Arial Measurements Office
Jay Cohn	DOE Nevada/Security
Dennis Maher	Wachenhut
Scott Van Verse	Washington Public Health
James Cairns	United Kingdom, Ministry of Defense, Atomic Weapons Establishment

TAB D: ADDITIONAL PHOTOS

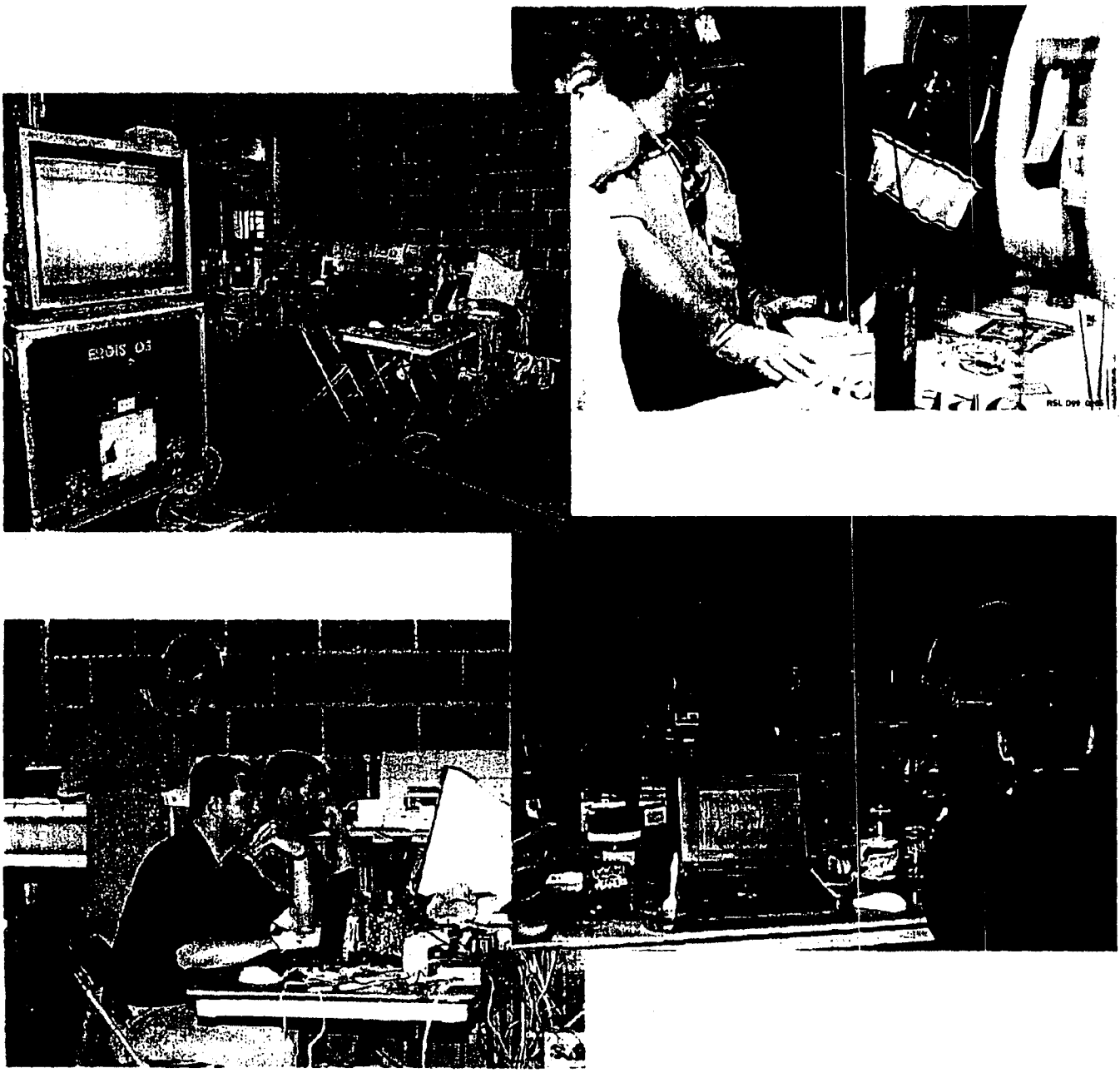
EQUIPMENT SETUP

TAB D: ADDITIONAL PHOTOS



SEARCH VEHICLES

TAB D: ADDITIONAL PHOTOS



SEARCH COORDINATION ACTIVITY

~~OFFICIAL USE ONLY~~

DEPARTMENT OF ENERGY

DOE EXERCISE 9-99
VIGILANT LION-99
AFTER-ACTION REPORT

Oak Ridge Institute for Science and Education

National Security Programs
Directorate

1019 19th Street, N.W., Suite 700
Washington, DC 20036
(202)955-3630

DOE 9-99
Exercise VIGILANT LION
AFTER-ACTION REPORT
December 1, 1999

INTRODUCTION

The Pennsylvania Emergency Management Agency (PEMA) developed and sponsored a Weapon of Mass Destruction (WMD) terrorist incident exercise and requested the Department of Energy (DOE) Radiological Assistance Program (RAP) I participate. As a result, the DOE Office of Emergency Response directed asset participation in VIGILANT LION-99 (VL-99), a Field Training exercise (FTX) conducted September 28-30, 1999 in Fort Indiantown Gap, Pennsylvania (PA). The exercise allowed DOE to test its capability to respond to a radiological/nuclear crisis in support of state and regional federal officials.

Several federal, Pennsylvania Commonwealth and local agencies supported this PEMA sponsored exercise. Among them were the Philadelphia offices of the Federal Bureau of Investigation (FBI) and the Federal Emergency Management Agency (FEMA) Region III, Pennsylvania State Police and Department of Health, as well as Lebanon County fire and emergency medical services. The DOE Office of Emergency Response used this event to model relationships between various government officials and the DOE RAP Regional Response Coordinator (RRC). DOE's counterterrorism exercise program also benefited from the participation of RAP assets in a crisis response scenario. Comments from this event will be shared with other RAP regions to assist development of their operational readiness in response to terrorism incidents.

The report documents lessons learned from DOE participation in the execution of VL-99. Particular attention is given to key issues raised in the course of technical operations performed by DOE emergency response elements. This report provides the Office of Emergency Operations, Security Operations (SO-40) with information to assess the operational capabilities and readiness of its emergency response elements in a radiological/ nuclear material terrorist incident. The DOE counterterrorism exercise program evaluates DOE's tailored counterterrorism emergency response assets taking into account the relevant mission essential tasks of each asset. The observations and recommendations listed in the Findings section of the report provide a record of operational issues, strengths, and weaknesses observed during exercise play. This report also addresses DOE exercise planning and management issues. Detailed exercise observations are maintained on file for reference in the National Security Programs Directorate of the Oak Ridge Institute for Science and Education.

The After-Action Report is organized as follows:

BACKGROUND -- outlines the goals, and broad objectives of the exercise and then focuses on specific DOE exercise objectives. It also describes DOE exercise participation and the exercise control structure and process.

SUMMARY EVALUATION -- presents a considered judgement regarding the success of the exercise and an assessment of the overall performance of DOE's response elements.

FINDINGS -- provides the substance of the evaluation of DOE operational element performance. It summarizes key issues that emerged during exercise play. The issues are organized sequentially by operational phase – Alert, Deployment, Employment and Redeployment. Additional findings with regard to the planning and execution of the exercise are also provided.

EXERCISE FLOW –Provides an account of how exercise events unfolded and traces the response of government agencies.

TAB A --DOE Asset Capabilities

BACKGROUND – VL-99 was a PEMA sponsored, DOE supported emergency response field exercise involving assets from federal, state and local agencies. Participating agencies tested their operational readiness in response to a radiological event that evolved from a consequence management incident to one of crisis response.

DOE Exercise Goals

DOE's goals during this exercise were:

- Define procedures for RAP integration into a DOE emergency response to a WMD terrorism incident.
- Support a Commonwealth of Pennsylvania sponsored radiological exercise by providing interagency expertise, radiological clean up, and search team operations in a domestic terrorist WMD crisis and consequence management scenario.

DOE Specific Exercise Objectives

The DOE objectives of the exercise were to observe and evaluate Emergency Response Assets' abilities to perform the following tasks:

- Define RRC responsibilities during the phases of a DOE emergency response.
- Test DOE data transfer capability.
- Conduct Search Response Team (SRT) search training with PEMA and Department of Defense Rapid Assessment and Initial Detection (RAID) personnel.
- Evaluate SRT search operations.

- Evaluate Federal Radiological Monitoring Assessment Center, Phase I (FRMAC I) operations.

Exercise Participation

DOE emergency response elements that deployed to and participated in VL-99 included 57 personnel. These DOE assets provided interagency coordination, search capabilities, and supported the collection of crime scene evidence by law enforcement agencies. These DOE response elements included:

- Nuclear Radiological Advisory Team (NRAT)
- Radiological Assistance Program Regions 1 and 2 (RAP 1 and 2)
- Federal Radiological Monitoring Assessment Center, Phase I (FRMAC I)
- Search Response Team (SRT)
- Aerial Measurement System (AMS)
- Radiation Emergency Assistance Center/Training Site (REAC/TS)

The Exercise Control Group (ECG) managed the execution of the exercise and served as exercise evaluators. For DOE this group replicated Nuclear Incident Team (NIT) and DOE intelligence operations.

Regional and local participants included:

- FBI Field Office, Philadelphia, PA.
- FEMA Region III Office, Philadelphia, PA.
- Pennsylvania Emergency Management Agency.
- Various state, county and municipal government agencies.

Three buildings at Fort Indiantown Gap, PA served as focal points for exercise participation. The local Incident Command Post was established in the vicinity of Building 16-78. There, Pennsylvania officials maintained control of the incident site and communicated with other officials located at the interagency Joint Operations Center (JOC). The FBI, as Lead Federal Agency (LFA), established the JOC in Building 3-59. Command and control elements from FBI, DOE, FEMA, state and local police, and local emergency response agencies staffed this facility. Consequence and crisis events were managed from this site. DOE operations for SRT, FRMAC I, and AMS were centered in Building 19-119. This location served as the base of DOE technical operations.

SUMMARY EVALUATION

VL-99 was particularly useful in identifying operational issues such as:

- Coordination required between federal and regional emergency response assets.
- Coordination required to incorporate RAP assets into the DOE response to a nuclear/radiological WMD terrorist event.

The exercise proved useful in mapping the way ahead for integrating DOE RRCs into WMD terrorist incident response.

Particularly noteworthy was:

1. The understanding gained by the RRC of his roles and responsibilities as an integral part of DOE's crisis response to a WMD incident.

2. Pennsylvania State and local authorities now have a clearer understanding of DOE's emergency response capabilities and other federal assets that will be deployed in response to a WMD terrorist incident.

The exercise also pointed out some operational concerns that need to be addressed such as:

1. Weather limitations of the AMS search capability.

2. The lack of a coordinated command and control plan for the RRC response to a WMD terrorist incident.

3. The lack of adequate and secure communications equipment and planning for DOE RAP emergency response assets.

FINDINGS

What follows are operational issues, strengths and weaknesses observed during exercise play and relevant recommendations. The observations presented are organized sequentially by operational phase – Alert, Deployment, Employment and Redeployment. Additional findings with regard to exercise planning and execution are also provided.

Alert Issues:

None. All participants were administratively pre-positioned in Pennsylvania for the exercise.

Deployment Issues:

Observation: FRMAC I and SRT administrative use of a DOE DC-9 worked very well. This aircraft provided logistical flexibility and capability unavailable with commercial or military airlift. The ability to embark and depart on short notice, plus the ease of coordination for transportation of hazardous materials such as liquid nitrogen are examples of this enhanced capability.

Recommendation: Continue use of DOE aviation when feasible.

Employment Issues:

Observations: AMS aircraft mission performance was limited due to inclement weather. The rotary wing aircraft (B-412 helicopter) was not employed due to fog and rain. Additionally, fixed wing aircraft were unable to fly the search grid at optimal altitude due to excessive winds. Aircraft had to climb several thousand feet to escape turbulence and as a result could not identify the radioactive source. Controller injects provided the identification of the source.

Recommendations: AMS's ability to provide urgent and emergency aerial assessment of radiological conditions in the vicinity of a radiological accident or incident is severely hampered by the lack of an all weather capability. If feasible, this deficiency should be addressed by equipment upgrade and enhanced training.

Observation: VIGILANT LION created a set of circumstances in which the DOE RRC was the first DOE official on the scene of a WMD incident that quickly changed from a consequence management operation to a crisis response operation. As the Senior Energy Official (SEO) on the scene, the RRC initially assumed SEO duties without the benefit of defined roles and responsibilities from DOE.

Recommendation: Although RRC gained a better understanding of RAP involvement in this type of response, RAP roles and responsibilities need definition. SO-40 should address command and control policies defining RAP roles and responsibilities during a DOE response to a domestic WMD terrorist incident. Accordingly, the RRCs should develop a SOP that outlines how RAP will function in this new role.

Observation: FBI novice searchers in a SRT equipped van failed to sense source presence on target. The van made multiple passes within technical detection range of the target source, without success. Controllers prompted the searchers to pass within 10 feet of the target, again without success. When a controller specifically instructed the FBI searchers to visually monitor their meter, as instructed by the SRT trainer, a positive reading was noted.

Recommendations: Ensure the search operation training syllabus sufficiently addresses equipment operating techniques emphasizing the visual monitoring of data read-out vice solely depending on alarm indication of radiological sources.

Observation: The FRMAC Director and Technical Team Leaders established and maintained effective internal and interagency communications and coordination. Immediately upon arriving at the incident scene, the FRMAC Director and the Technical Team Leaders met with the SEO for an in-briefing, technical exchange, and preliminary planning. Minutes later, the FRMAC Director established face to face contact with FBI and state officials. FRMAC integrated with all appropriate agencies including the Environmental Protection Agency (EPA) and FEMA. The FRMAC director maintained communications with the SEO after transition of SEO responsibilities to the NRAT Team Leader.

Recommendations: None.

Observation: DOE's overall command, control, and communications of RAP emergency response was weakened by the lack of RAP communications equipment and an associated communications plan. RAP relied upon a National Guard unit to provide hand-held radios. The lack of a communications plan resulted in RAP seldom knowing what was going on outside their immediate tasks. Prior to arrival of NRAT, RAP had been on site nearly 24 hours without the capability to communicate with other DOE assets.

Recommendation: RAP's required communications assets are clearly articulated in the Emergency Response Officer (ERO) Handbook. DOE HQ should provide resources and training to ensure RAP employs organic, secure, and reliable communications assets and an associated communications plan when they deploy to emergency response incidents.

Observation: Search training was scheduled for FBI, RAID and RAP personnel. As a result of conflicting exercise mission requirements, RAID and RAP personnel did not complete the exercise objective of search training. SRT was successful in completing this objective by providing search training to FBI novice searchers.

Recommendations: None.

Re-deployment Issues:

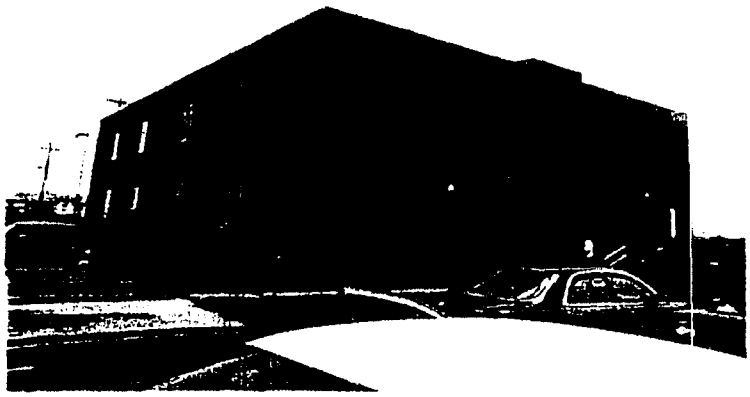
None. All participants administratively returned to home stations.

Exercise Planning and Execution Issues:

Observation: Since the exercise was planned regionally, the RRC from RAP Region I functioned as the DOE exercise lead planner. During exercise execution he also served as a controller, evaluator and player. This resulted in confusion among DOE participants as to his role at any given moment during the exercise.

Recommendation: DOE exercise planners should be limited to members of an ECG and After-Action Review team and should not be exercise players.

EXERCISE FLOW



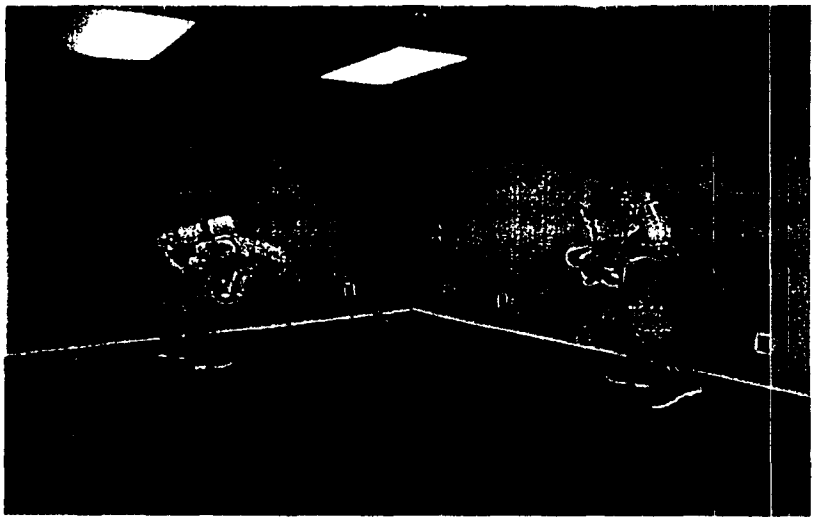
The exercise scenario portrayed a disgruntled county employee who activated a radiological dispersal device in a county government building. The subsequent number of ill county workers caused the county medical system to declare a state of emergency and triggered a state and ultimately a federal response. Simultaneous investigation by county hazardous material personnel reveals the device in the building's ventilation system. DOE's RAP 1, from Brookhaven National Laboratory, Upton, NY was asked by

PEMA to assist in consequence management resolution of this radiological release. The RAP RRC informed Headquarters DOE that his organization would respond to the request. During the RAP 1 deployment phase, the perpetrator faxed warnings to several Pennsylvania agencies notifying them of the existence of similar devices and his intent to activate them. PEMA notified the regional FBI, who initiated a crisis response resolution to this threat, while still engaged in the crime scene investigation at the county government building. As part of a Federal interagency team, DOE SO-40 Emergency Response Assets deployed to Indiantown Gap to assist in resolution of the crisis.

SEPTEMBER 29TH DAY 1

At 8:00 AM staff members of the FIG County Office Building begin arriving at local hospitals complaining of nausea, headaches, and blurred vision. County health officials become concerned over the increasing amount of patients at these hospitals and declare a medical emergency. The Pennsylvania State Emergency Operations Center is notified and briefed on the situation. Within two hours officials are able to pinpoint the origin of these symptoms to the FIG County Office Building. FIG County HAZMAT, along with county health officials is dispatched to the building and the local hospitals.

By 9:15 AM the County Nuclear Medicine Physicians and Radiation Safety Office confirms the suspicions of local hospital officials that the overwhelming numbers of patients they are receiving are suffering from radiation contamination. At this point the county issues an emergency declaration and the State EOC requests assistance from the DOE RAP Region I in Upton, New York



The RRC informs DOE HQ of this request and deploys his team to the incident site. County officials establish an Incident Command Post (ICP) at a safe distance from the FIG County Office Building and by 11:20 AM have evacuated all remaining occupants to a decontamination station. At 11:45 AM the county HAZMAT Team, protected by "Level A" Anti-Contamination Suits, enters the building to search for the

suspected source of radiation and any additional victims. The county HAZMAT Team locates a suspicious device on the roof of the building next to the HVACC intake vent and withdraws. Meanwhile, other state resources are arriving on the scene including the RAID Team from the Pennsylvania National Guard.

At 1:00 PM the DOE RAP Team arrives at the ICP and assumes DOE SEO responsibilities. The SEO is briefed on the situation and by 1:55 PM has requested additional DOE assistance from the ERO. This support consisted of FRMAC I, AMS, and REAC/TS. The ERO also contacts the Nevada Operations Office and briefs them on the current situation.

Later in the afternoon, county officials receive an anonymous 911 call that states "radiological material was used in the county office building and more radiological and explosive devices can be found at a residence somewhere in FIG City." The regional office of the FBI is immediately notified and assumes control for all crises management activities connected with this new threat. The FBI moves to establish a Joint Operations Center (JOC) in the vicinity of the ICP to coordinate local, state, and federal response. The FIG County Building is officially declared a crime scene.

FRMAC I arrives on the scene at 4:00 PM and is briefed by the RAP Team Leader. AMS has also arrived, along with additional resources from REAC/TS, who is already coordinating their efforts with the local hospitals.

RAID teams replace the local HAZMAT Team at 3:55 PM and began sweeps in and around the county building. By 4:40 PM they detect radioactive material coming out of the air vents at 75 mr/hr and at 100 mr/hr with powder on the floor. They also obtain a second reading of 200 mr/ hr as they approach a box on a desk. By 4:45 PM, the RAID Teams withdraw. At this time the exercise is suspended for the day and continues at 8:00 AM of the second day.

SEPTEMBER 30TH – DAY 2

At 8:00 AM the JOC is officially stood up and staffed by members of the FBI, DOE/NRAT, FEMA, PEMA, PA State Department of the Environment, PA State Police, and FIG County Officials. By now, the RAP REC has turned over his SEO responsibilities to the NRAT Team Leader, who arrived overnight. While decon efforts continue at the county office building, incident focus shifts consequence management to a crisis response mission of finding and rendering safe any additional radiological and explosive devices.

At 8:45 AM the SRT conducts novice searcher training of FBI personnel. This training enhances local capability to search for additional radiological devices. Concurrently, FRMAC coordinates radiation monitoring training for teams composed of FRMAC, RAP, and state personnel at the Fig County building. Weather conditions prevent AMS morning search operations.

By 12:10 PM AMS and novice search teams pinpoint a second radiological source in a residential area. As this information is passed from the SEO to the FBI On Scene Commander (OSC), the JOC coordinates a search warrant and makes preparations to undertake render safe operations.

By 1:35 PM the device is pinpointed to a specific residence and the FBI OSC approves entry to the target building. At 2:05 PM bomb technicians disrupt the device and the OSC informs the SEO that a path has been cleared for the RAP Team to enter the building and remove the radiological source with FBI Emergency Response Team support.

The exercise was terminated at 2:35 PM as the RAP Team prepared to enter the building.

TAB A- DOE Force List Capabilities

Nuclear/Radiological Advisory Team (NRAT)

Mission: To provide expert advice to the responsible US Government Lead Federal Agency during acts of terrorism that may include the use of nuclear or radiological material. The Lead Federal Agency responsibility rests with the Chief of Mission for and overseas response and the Federal Bureau Investigation (FBI) Special Agent-in-Charge for a domestic response to terrorism. The NRAT Leader is the senior Department of Energy official deployed and is responsible for command and control of all DOE assets in the field.

Capability: The NRAT conducts limited search, identification of materials through Gamma Spectroscopy, technical analysis of intelligence and data collection through technical means, and communicates with DOE laboratories and deployed assets.

Deployment Trigger: The Lead Federal Agency (DOS or FBI) should request NRAT as a result of an interagency meeting. The NRAT will deploy within 4 hours of notification as part of the Domestic Emergency Support Team (DEST) or Foreign Emergency Support Team (FEST).

Team Size: 5 – 8 personnel.

RADIOLOGICAL ASSISTANCE PROGRAM (RAP)

Mission: RAP provides a flexible around the clock response capability to federal agencies, state, tribal, and local governments and to private business or individuals for incidents involving radiological materials. RAP teams may deploy from any or all of eight regions throughout the United States.

Capability: RAP is capable of providing assistance in all types of radiological incidents. RAP's support ranges from giving technical information or advice over the telephone or sending highly trained people and state-of-the-art equipment to the accident site to help identify and minimize radiological hazards.

Deployment Trigger: Teams maintain a 24-hour response to radiological emergencies and based on a request from any regional government official can normally be on scene within two to six hours.

Team Size: Standard team size is seven personnel, however it can be tailored to meet the needs of any situation.

AERIAL MEASURMENTS SYTEM (AMS)

Mission: AMS provides rapid response to radiological emergencies with helicopters and fixed-wing aircraft equipped to detect and measure radioactive material deposited on the ground and to sample and track airborne radiation.

Capability: Through its fixed or rotary wing assets, AMS can track and sample ground or plume deposition. It can also provide photographic and thermal infrared surveys and has an extensive collection of pre-surveyed sites and facilities. AMS can, within certain modifications, conduct ground surveys as well. AMS assets are stationed at Andrews AFB in Washington, D.C. and Nellis AFB in Las Vegas, Nevada.

Deployment Trigger: Optimum response time is five hours. AMS may deploy upon notification from the DOE ERO.

Team Size: AMS teams vary according to the mission.

FEDERAL RADIOLOGICAL MONITORING ASSESSMENT CENTER (PHASE I) (FRMAC I)

Mission: FRMAC coordinates and manages all Federal radiological monitoring and assessment activities during major radiological emergencies within the United States in support of state, local and Tribal governments through the Lead Federal Agency.

Capability: FRMAC response begins with deployment of a Phase I team of technical and management personnel who depart from Las Vegas with 4 hours of notification, and can reach any location in the United States normally within 6-10 hours. A FRMAC may consist of as few as 60 or as many as 500 people, depending upon the needs of the emergency situation.

Deployment Trigger: Capable of deployment within four hours upon orders from DOE Headquarters.

Team Size: A FRMAC Phase I consists of 2 Federal officials, 13 DOE scientific personnel and additional DOE support personnel as needed.

Consequence Management Official (CMO)

Mission: Assists the Lead Federal Agency official, both domestic and international, in the long-term mitigation of consequences resulting from the functioning of a radiological/nuclear device.

Capability: Provides briefings relevant to Other Government and Non-Government agencies' abilities to provide long-term care and site restoration.

Deployment Trigger: The CMO deploys as a component of the NRAT.

RADIATION EMERGENCY ASSISTANCE CENTER/TRAINING SITE (REAC/TS)

Mission: REAC/TS provides direct of consultative assistance with medical and health problems associated with radiological accidents or incidents. REAC/TS normally deploys as part of FRMAC Phase III, but this support can be tailored to any given situation.

Capability: REAC/TS provides medical and radiological triage support, assistance on decontamination procedures including chelation therapy, diagnostic and prognostic assessments of radiation injuries, and radiation dose estimates.

Deployment Trigger: Upon request of the ERO or SEO, REAC/TS can deploy on 24 hour notice or as part of FRMAC Phase III within 24-36 hours.

Team Size: 1 or 2 physicians and other DOE support personnel as required by incident.

Search Response Team (SRT)
Search Augmentation Team (SAT)

Mission: Search teams provide limited search support to detect and locate a radiological source using a variety of methods ranging from hand-carried to vehicle-mounted search equipment.

Capability: The Search Response Team provides the capability of rapidly instructing local emergency searchers as well as limited unilateral search capability. The Search Augmentation Team provides Nuclear Emergency Search Team augmentation to the Search Response Team.

Deployment Trigger: The SRT and/or SAT deploy at the request of the Lead Federal Agency as a follow-on element of the Domestic or Foreign Emergency Support Teams.

Team Size: The Search Response Team: 7 personnel.
The Search Augmentation Team: 27 Personnel.

DEPARTMENT OF ENERGY

PACKAGE SATYR AFTER-ACTION REPORT

4-6 August 1998

PREPARED FOR DOE BY:

Oak Ridge Institute for Science and Education

~~***OFFICIAL USE ONLY***~~

Contains information which may be exempt from public release under the Freedom of Information Act (5 U. S. C. 552), subsection (b), exemption number 3. Approval by the Department of Energy prior to public release is required.

Reviewed by: William J. McNally Date: 30 November 1998

EXERCISE
PACKAGE SATYR
AFTER-ACTION REPORT
November 9, 1998

INTRODUCTION

PACKAGE SATYR was a U.S. Government interagency exercise conducted from 4 - 6 August 1998, at Pease Air National Guard Base, Newington, New Hampshire. The exercise included a Foreign Emergency Support Team deployment to a simulated overseas location to support the United States Chief of Mission. U.S. assistance was requested by a foreign country to locate missing/stolen nuclear materials. The exercise tested the interagency ability to respond effectively to terrorist incidents involving Weapons of Mass Destruction, and Radiological/Nuclear materials. It also served to validate U.S. crisis response and consequence management capabilities and to improve coordination among the responding federal agencies.

The Department of Energy was one of several participating federal agencies. Others were the Department of State, Department of Justice, and Department of Defense. Collectively, participants totaled about 75 personnel.

This report documents lessons learned from DOE participation in PACKAGE SATYR. Particular attention is given to key issues raised in the course of technical operations performed by DOE emergency response elements. This report provides the DOE Office of Emergency Response, Defense Programs (DP-23) with information to assess readiness and operational capabilities of its emergency response elements in a WMD terrorist incident. Lessons learned highlight strengths as well as shortfalls and facilitate assigning appropriate corrective action.

This report also addresses DOE exercise planning and management issues. The DOE counterterrorism exercise program evaluates and validates DOE's tailored counterterrorism emergency response capabilities. Specific issues identified in this report are tabulated in an automated After-Action Tracking System presented in Tab A.

The After-Action Tracking System provides a record of operational issues, strengths, and weaknesses observed during exercise play. Exercise results provide the basis for assessing the readiness of DOE counterterrorism emergency response elements. Over time, DOE counterterrorism emergency response training is adjusted accordingly to build upon strengths and to remedy weaknesses that were identified during the exercise. Hence, the training program not only enhances DOE's response capability but also improves the overall interagency response to Weapon of Mass Destruction and Radiological/Nuclear terrorism.

This After-Action Report is organized as follows:

The **BACKGROUND** section outlines the scope and broad objectives of the exercise and then focuses on specific DOE exercise objectives. It also describes DOE exercise participation and the exercise control structure and process.

The **FLOW OF THE EXERCISE** section presents the functional exercise scenario involving a Radiological/Nuclear material terrorist situation, and briefly traces U.S. authorities' responses.

The **SUMMARY EVALUATION** section presents a considered judgment regarding the success of the exercise and an assessment of the overall performance of DOE's response elements.

The **MAJOR ISSUES** section provides the substance of the overall evaluation of DOE operational element performance. It summarizes key issues that emerged during exercise play. The issues are organized sequentially by operational phase -- Alert, Deployment, Employment and Redeployment phases. Operational issues precede exercise planning and management issues.

BACKGROUND

PACKAGE SATYR confronted the United States Government with a situation in which a terrorist organization had stolen nuclear materials and then transported them to Paraguay for future use in Buenos Aires, Argentina. This prompted a Host Nation request for U.S. assistance in searching for and

identifying the stolen material. The interagency Counter-Terrorism and Security Group (CSG) then developed the U.S. response.

The interagency exercise objectives were as follows:

- Alert, assemble, and deploy the Foreign Emergency Support Team to a "foreign" country (OCONUS crisis site) via the dedicated Foreign Emergency Support Team aircraft in accordance with established interagency guidelines/and procedures.

- Once deployed, the Foreign Emergency Support Team would exercise political, operational and logistical components of their response operations in support of the United States Ambassador and Host Government Officials.

- Exercise interoperability between Host Government Officials, Embassy Country Team, and the Foreign Emergency Support Team to include communications connectivity, intelligence sharing, and crisis and consequence management coordination.

- Exercise communications fidelity between the Foreign Emergency Support Team and the Consequence Management Response Team.

- Conduct Foreign Emergency Support Team equipment load-out.

DOE's mission during this Federal Response was to provide technical support to the crisis response and consequence management planning and operations. Specific DOE objectives for PACKAGE SAYTR were:

- Support and Conduct Search Operations
    - Deploy the Search Response Team and Search Augmentation Team in support of a Foreign Emergency Support Team
    - Support the Host Government search requirements:
        - Train local responders
        - Conduct professional search operations

- Nuclear Radiological Advisory Team conduct Command Control and Communications (C3) operations with DOE assets and Foreign Emergency Support Team

Participating DOE Emergency Response Elements included 39 personnel in Package Satyr. Response elements were the Nuclear Radiological Advisory Team, Search Response Team, and Search Augmentation Team. The role of the Nuclear Incident Team was played by a simulation cell operating as part of the Joint Exercise Control Group. DOE Emergency Response capabilities are listed at Tab B. The DOE exercise force list is at Tab C.

The DOE Exercise control structure consisted of a Joint Exercise Control Group and a Field Control Cell. DOE Controllers at both locations observed activities and recorded observations which are the basis for this evaluation of DOE Emergency Response Elements' performance.

EXECISE FLOW

The PACKAGE SATYR scenario confronted the United States Government with an assistance request by the Paraguayan government, via the U.S. Chief of Mission, to help search for missing radiological/nuclear material within that country. Intelligence indicated that a Hezbollah terrorist organization, with links to Iran, had stolen slightly enriched uranium and transported it to Paraguay for future use in Buenos Aires, Argentina. Strong intelligence clues indicated the nuclear material was located in the vicinity of Asuncion, Paraguay.

In light of Paraguay's request, the interagency Counter-Terrorism and Security Group recommended deployment of a tailored Foreign Emergency Support Team to include the following agencies and personnel:

Department of State - 9
Other Government Agencies - 10
Department of Energy - 8
Federal Bureau of Investigation - 5
Department of Defense - 5

The Foreign Emergency Support Team was alerted and deployed to the simulated Host Nation on August 4th. The Nuclear Radiological Advisory Team deployed as an integral component.

The interagency Counter-Terrorism and Security Group recommended DOE search teams deploy to assist in the search for the stolen materials. A Search Response Team and Search Augmentation Team were alerted and commenced deployment on August 4th. Real-world aircraft mechanical problems ultimately prevented search team deployment to the simulated Host Nation site.

Upon arrival at the simulated Host Nation, the Foreign Emergency Support Team began coordinating with U.S. Embassy and Host Nation officials to initiate planning for search operations. Foreign Emergency Support Team elements conducted mobile searches, but were unsuccessful. The aircraft mechanical problems prevented DOE search team deployment and hence the search teams were not available to conduct local responder search training.

In the absence of the search teams, Nuclear Radiological Advisory Team personnel stepped in to conduct limited search training for local responders on August 5th. Federal Bureau of Investigation agents and Department of Defense personnel simulated local responders.

Walking search operations began August 5th. Prevailing intelligence identified an area in which the stolen nuclear material might be located. Search operations were concluded on the 5th after successfully locating the material.

A Hotwash was conducted August 6th. The Foreign Emergency Support Team and Nuclear Radiological Advisory Team departed that same day.

SUMMARY EVALUATION

The exercise objective of deploying search teams in support of the Foreign Emergency Support Team was not met because of aircraft problems. By having drawn on its limited capability in the absence of DOE search teams, the Nuclear Radiological Advisory Team validated its own capability to conduct small-area searches. Though not planned for this exercise, this capability proved to be effective and should be considered a contingency option for future operations. Additionally, the exercise tested the Nuclear Radiological Advisory Team's command, control and communications with the Search Response Team and Search Augmentation Team during their attempts to deploy. The Search Team's deployment process was well rehearsed and executed. Except for actual deployment aboard an aircraft, the process was validated as successful. The Search Teams were equipped and ready to deploy within four hours of notification.

The working relationships established between the Host Nation representatives and Nuclear Radiological Advisory Team during search operations was effective, with regular meetings wherein technical information was discussed and decisions regarding search options and operations were reviewed.

Foreign Emergency Support Team briefings to the Host Nation and Chief of Mission, on balance, proved to be effective. I suggest that a pre-brief be conducted by the Nuclear Radiological Advisory Team to the Foreign

Emergency Support Team Leader, prior to briefing the ambassador. This would permit DOE to coordinate on technical information provided to the ambassador by other Foreign Emergency Support Team members, who have differing radiological/nuclear material detection capabilities and perspectives.

MAJOR ISSUES

Alert Issues

No major alert issues were identified during exercise PACKAGE SATYR.

Deployment Issues

The Search Teams achieved their alert, activation, recall and load-out objectives, however, mechanical problems with Department of Defense aircraft prevented the Search Teams from actually deploying to the exercise site. Search Teams, therefore, were unable to train local responders to conduct large-area searches and were prevented from tracking and controlling search operations as planned. This circumstance provided a real-world situation in which the Nuclear Radiological Advisory Team could draw upon its limited inherent capability to conduct local training and direct search operations.

Observation: Current Search Team call-out procedures may compromise operational security. The rotating duty officer uses a beeper and an unsecured cellular telephone, which could result in a compromise of classified mission details.

R. HOPKINS 6 mo.

Recommendation: Review existing procedures and develop a simple "brevity code" mechanism for encrypting or otherwise protecting sensitive information to preclude potential operational security violations. These changes would require some additional personnel training.

Observation: Some message traffic was not logged-in or properly controlled. Messages were not handled or maintained in an organized manner.

R. Phifer 6 mo.

Recommendation: Modify the Search Team deployment checklist to ensure member personnel understand the communications and message

handling requirements during the deployment process. Additionally, develop a message log and control procedures as part of the team SOP.

Observation: Information flow from the Nevada Operations Office to the Remote Sensing Laboratory needs improvement. Faxes passed through the Nevada Operations Office took over an hour and a half after notification to reach the Remote Sensing Laboratory.
Recommendation: Review the process for unclassified fax and secure fax handling.

R. Nigrard 6 mo.

Observation: The Nuclear Radiological Advisory Team facilitated limited search operations in the absence of the Search Response and Augmentation Teams. Had the Nuclear and Radiological Advisory Team possessed additional survey equipment, the search scope could have been enlarged.
Recommendation: Consider the feasibility of providing additional Nuclear Radiological Advisory Team radiological search instruments. This could provide enough equipment for limited search until the arrival of the Search Teams.

Employment Issues

Observation: Briefings provided by the Nuclear and Radiological Advisory Team members were sometimes less effective due to differences in individual member technical opinions which were expressed during the briefings.
Recommendation: Conduct briefing rehearsals within the Nuclear Radiological Advisory Team, as practicable, prior to presenting briefings to the Foreign Emergency Support Team leader, ambassador or host nation personnel.

Observation: Fortunately, a translator familiar with DOE technical terms deployed as a member of the Nuclear Radiological Advisory Team and was used during this exercise. A translator who was not familiar with DOE technical terms would have posed a major problem in effectively responding to an actual event.
Recommendation: A translator familiar with DOE technical terms would improve the capability of any mission in response to an incident abroad.

Consider a formal checklist item requesting that a translator with this skill be made available as soon as DOE deployment is contemplated.

Re-deployment Issues

No major re-deployment issues were identified.

Tab A - Exercise Controller After-Action Comments and Observations

Inter-Agency After Action Tracking System Detail Report

Item No	Origin/Area	Category	Issue	Action	Assigned To	Status	Due/Complete
DOE-98-0205	PACKAGE SATYR SRT/SAT	Improvement	**Unclassified** OPERATIONAL AND TECHNICAL LEADERS COORDINATED INDIVIDUAL ACTIVITIES WHILE KEEPING OTHERS INFORMED.		NOT ASSIGN		
DOE-98-0206	PACKAGE SATYR SRT/SAT	Improvement	**Unclassified** TIME MANAGEMENT FOR THE DEPLOYMENT PROCESS WAS WELL EXECUTED. IT ALLOWED THE TEAMS TO CONDUCT MISSION PLANNING PRIOR TO ACTUAL DEPLOYMENT.		NOT ASSIGN		
DOE-98-0207	PACKAGE SATYR SRT/SAT	Improvement	**Unclassified** AUTOMATED SYSTEMS FOR LOGGING PERSONNEL IN AND OUT OF THE FACILITY ENSURED FULL ACCOUNTABILITY OF PERSONNEL AT ALL TIMES. FACILITY CCTV AND INTERIOR COMMUNICATIONS SYSTEMS ALLOWED FOR REAL-TIME MISSION UP-DATES TO PERSONNEL CONDUCTING MISSION PREPARATIONS IN SEPARATE LOCATIONS.		NOT ASSIGN		
DOE-98-0208	PACKAGE SATYR SRT/SAT	Improvement	**Unclassified** ONCE TASKED, MANAGEMENT CONVENED MEETING TO DETERMINE REQUIREMENTS FOR HOME TEAM AND RECONSTITUTION OF SRT		NOT ASSIGN		

Inter-Agency After Action Tracking System Detail Report

Item No	Origin/Area	Category	Issue	Action	Assigned To	Status	Due/Complete
DOE-98-0209	PACKAGE SATYR SRT/SAT	Improvement	**Unclassified** SAFETY WAS OF PARAMOUNT IMPORTANCE AT RSL AND NVO FOR ALL PHASES OF MISSION PLANNING		NOT ASSIGN		
DOE-98-0210	PACKAGE SATYR SRT/SAT	Weakness	**Unclassified** INCIDENT DATA IS PASSED OVER A CLEAR LINE DURING PERSONNEL RECALL.		NOT ASSIGN		
DOE-98-0211	PACKAGE SATYR SRT/SAT	Weakness	**Unclassified** LOCATION OF THE SECURE FAX AND PROCEDURES FOR GAINING ACCESS AFTER NORMAL WORKING HOURS TO THE SECURE FAX PREVENT THE TIMELY FLOW OF CLASSIFIED DATA FROM THE INCIDENT TO THE DEPLOYING ASSETS.		NOT ASSIGN		
DOE-98-0212	PACKAGE SATYR SRT/SAT	Weakness	**Unclassified** THERE WAS NO CHECKLIST USAGE TO TRACK ACTIONS AND PERSONNEL FOR START OF OPERATIONS AND LATER TURNOVER TO APPROPRIATE POC.		NOT ASSIGN		
DOE-98-0213	PACKAGE SATYR SRT/SAT	Weakness	**Unclassified** THERE WERE NO EFFECTIVE MESSAGE HANDLING SOP OR LOGGING PROCEDURES IN USE.		NOT ASSIGN		

Item No	Origin/Area	Category	Issue	Action	Assigned To	Status	Due/Complete
DOE-98-0215	PACKAGE SATYR SRT/SAT	Weakness	**Unclassified** SEVERAL TIMES THE RSL EMERGENCY RESPONSE MANAGER WAS WITHOUT REQUIRED STAFF SUPPORT.		NOT ASSIGN		
DOE-98-0216	PACKAGE SATYR SRT/SAT		**Unclassified** SRT/SAT MEMBERS POSSESS ONLY BLUE TOURIST PASSPORTS. DOES A REQUIREMENT EXIST FOR ANOTHER TYPE OF PASPORT ie.. OFFICIAL OR DIPLOMATIC.		NOT ASSIGN		
DOE-98-0217	PACKAGE SATYR NRAT EMPL	Weakness	**Unclassified** A DISCREPANCY OF TECHNICAL INFORMATION PROVIDED BY DIFFERENT ELEMENTS OF THE FEST OCCURRED DURING FEST BRIEF TO THE AMBASSADOR.		NOT ASSIGN		
DOE-98-0218	PACKAGE SATYR NRAT	Deficiency	**Unclassified** NIT WAS UNABLE TO CONTACT NRAT BY SECURE MEANS DURING LOADOUT AND PRE-DEPLOYMENT TO PASS DATA.		NOT ASSIGN		
DOE-98-0219	PACKAGE SATYR	Improvement	**Unclassified**		NOT ASSIGN		

Item No	Origin/Area	Category	Issue	Action	Assigned To	Status	Due/Complete
	NRAT EMPL		NRAT DISPLAYED SUPERB CONTINGENCY OPERATIONAL CAPABILITIES BY FACILITATING TRAINING OF SEARCHERS IN THE ABSENCE OF THE SEARCH TEAMS.				

Tab B - DOE Emergency Response Capabilities

DOE Emergency Response capabilities to deal with terrorism incidents involving Weapons of Mass Destruction, Radiological/Nuclear Materials include the following operational assets:

(U) **Nuclear Incident Team (NIT)**

(U) **Mission**: Provide a supporting staff for DOE Headquarters. Responsible for preparing courses-of-action briefings for senior DOE officials to include Coordinating Sub-Group (CSG) member/Secretary of Energy. Coordinates interagency actions for alerted and deploying DOE elements.

(U) **Capability**: Coordination with interagency counterparts, anticipating and acting on requirements of DOE emergency response elements.

(U) **Deployment Trigger**: The NIT will assemble in the DOE HQ Emergency Operations Center upon notification by the CSG member following the initial CSG meetings.

(U) **Team Size**: 8-12 personnel per shift.

(U) **Nuclear/Radiological Advisory Team (Nuclear and Radiological Advisory Team)**

(U) **Mission**: Provide expert advice to the responsible U.S. Government Lead Federal Agency during acts of terrorism that may include the use of nuclear or radiological material. The Lead Federal Agency responsibility rests with the Chief of Mission for an overseas response and the FBI Special Agent-in-Charge for a domestic response to terrorism. The Nuclear and Radiological Advisory Team Leader is the senior DOE official deployed and is responsible for command and control of all DOE assets in the field.

(U) **Capability**: Limited search; identification of radiological materials through Gamma Spectroscopy; technical analysis of intelligence and data collected through technical means; communicating with DOE laboratories and deployed DOE assets.

(U) **Deployment Trigger**: The Nuclear and Radiological Advisory Team will deploy within 4 hours of notification as part of the Domestic Emergency Support Team (DEST) or Foreign Emergency Support Team (FEST). The Lead Federal Agency (DOS or FBI) should request Nuclear and Radiological Advisory Team support as a result of an interagency Counter-Terrorism and Security Group (CSG) meeting.

(U) **Team Size**: 5-8 personnel.

(U) **Emergency Response Home Team (ERHT)**

(U) **Mission**: Provide expert technical advice to deployed DOE counterterrorism assets responding to potential nuclear or radiological terrorism. Information is normally transmitted and received through the deployed Nuclear Radiological Advisory Team.

(U) **Capability**: Rapid and continual weapons intelligence, diagnostics, disablement and render safe assistance.

(U) **Deployment Trigger**: The Emergency Response Home Team will provide support within two (2) hours of notification.

(U) **Team Size**: 4 scientific personnel.

(U) **Search Response Team (SRT)**
(U) **Search Augmentation Team (SAT)**

(U) **Mission**: Provide a limited search support augmentation to the Nuclear Radiological Advisory Team and Domestic and Foreign Emergency Support Team.

(U) **Capability**: The Search Response Team provides the capability to rapidly train and equip local responder searchers, as well as a limited unilateral search capability. The Search Augmentation Team provides a pre-trained, professional augmentation of searchers and supports the Nuclear Emergency Search Team (NEST).

(U) **Deployment Trigger**: The SRT and/or SAT will deploy at the request of the Lead Federal Agency "as a follow-on element of the Domestic or Foreign Emergency Support Teams".

(U) **Team Size**: The Search Response Team: 7 personnel. The Search Augmentation Team: 24 personnel.

Tab C- DOE Force List

NUCLEAR INCIDENT TEAM (NIT)

Eight Controllers simulated the NIT at a Joint Exercise Control Group.

NUCLEAR RADIOLOGICAL ADVISORY TEAM (NRAT)

Eight personnel--two Federal officers and six scientists and technicians--deployed as an element of the Foreign Emergency Support Team.

SEARCH RESPONSE TEAM (SRT)

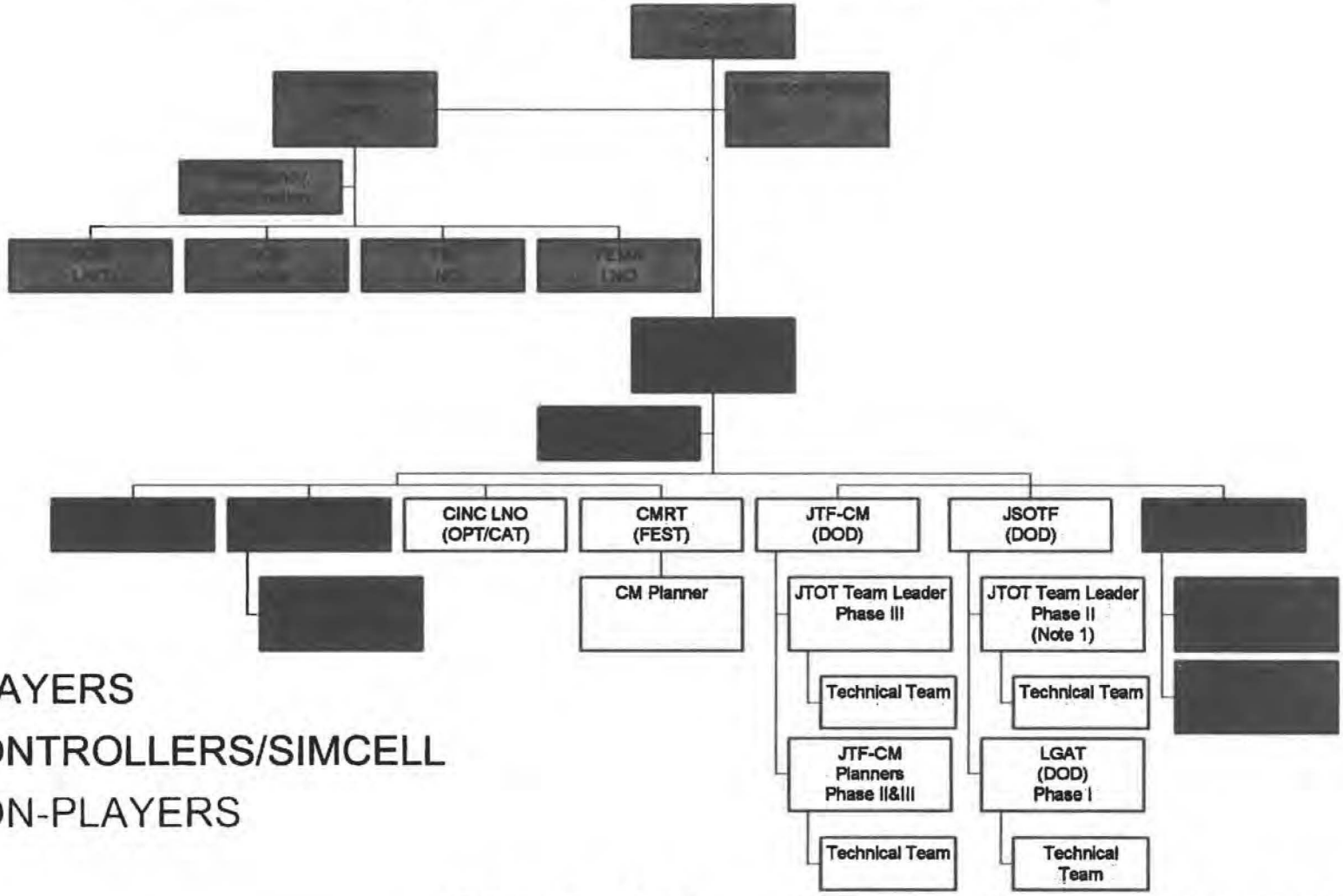
Seven personnel including professional searchers who would train and provide control of novice searchers, or conduct immediate unilateral professional searches of short duration and limited-area coverage.

SEARCH AUGMENTATION TEAM (SAT)

24 personnel including professional searchers who would train and provide control of 48 novice searchers over a 24-hour period and conduct 24-hour search operations.

The total DOE participation in Exercise PACKAGE SATYR included 52 personnel.

DOE Operational Structure



PLAYERS

CONTROLLERS/SIMCELL

NON-PLAYERS

Note 1: JTOT Phase II operations may task organize under JTF-CM

Tab D - Exercise Major Events

Below is a synopsis of the planned and actual sequence of major events. It is followed by a detailed description of daily events as they actually unfolded during the exercise.

Planned Events	Actual Events
August 4	
M-Hour established	As planned
Foreign Emergency Support Team departs/arrives	As planned
Nuclear Radiological Advisory Team departs/arrives	As planned
SRT/SAT departs/arrives	Did not occur
SRT/SAT conducts search	Did not occur
August 5	
SRT/SAT conducted training of local responders	Search training conducted by Nuclear Radiological Advisory Team
SRT/SAT conduct search	Nuclear Radiological Advisory Team trained Host Nation Role Players
August 6	
Hotwash conducted	As planned
Foreign Emergency Support Team re-deployment	As planned
Nuclear Radiological Advisory Team re-deployment	As planned

Detailed Description of Daily Events

August 4

The country of Paraguay requested assistance from the United States Government, through the U.S. Chief of Mission, to search for stolen nuclear fuel suspected to be near Asuncion, Paraguay. Intelligence received to date indicated that a Hezbollah terrorist organization with links to Iran had stolen radiological materials from Brazil, transported and stored them in Paraguay, for future use in Buenos Aires, Argentina. Strong intelligence indicated that the nuclear material was likely Uranium, enriched at 3 to 4 percent.

Paraguay's request resulted in a Counter-Terrorism and Security Group recommendation to deploy a tailored Foreign Emergency Support Team to assist the Chief of Mission and Host Nation in the resolution of the crisis.

The tailored Foreign Emergency Support Team included:

Department of State - 9
Other Government Agencies - 10
Department of Energy - 8
Federal Bureau of Investigation - 5
Department of Defense - 5

The Foreign Emergency Support Team was alerted and deployed to Asuncion, Paraguay, replicated at Pease Air National Guard Base, Newington, New Hampshire on August 4th. An 8-person DOE Nuclear Radiological Advisory Team deployed as part of the Foreign Emergency Support Team.

The August 4th meeting of the Counter-Terrorism and Security Group recommended that DOE deploy search teams to assist with the hunt for the nuclear material. The Search Response Team and Search Augmentation team were thus alerted on August 4th. Aircraft mechanical problems prevented their deployment to the exercise site. They were successfully alerted, recalled, assembled, and completed their deployment load-out and mission briefing prior to the aircraft problems.

After arrival in the simulated Host Nation, the Foreign Emergency Support Team began coordination with Host Country Officials, and conducted internal planning for search operations. The Foreign Emergency Support Team briefed on the evening of the 4th with the U.S. Ambassador and Host Nation officials attending. Information provided included all current intelligence on the missing nuclear material and the fact that Brazilian authorities had not been contacted by the government of Paraguay to verify specifics of the stolen nuclear fuel, to include the cladding or the actual level of enrichment.

The negative results of mobile searches conducted earlier on the 5th by other elements of the Foreign Emergency Support Team were discussed at the meeting. Another subject of discussion was the operational impact of aircraft-related deployment delays of the Search Response Team and Search Augmentation Team. Although the Ambassador favored starting walking search operations that night, Host Nation Officials insisted that surveying would start first thing the following morning due to personnel security risks of operating at night in a high-crime community.

Host Nation Nationals (played by Federal Bureau of Investigation agents and Department of Defense personnel) would receive training first thing the next morning in order to begin immediate search operations.

August 5

The local searchers, role-played by Federal Bureau of Investigation agents and Department of Defense personnel, arrived on-site for training early on August 5th. A briefing was conducted by the Foreign Emergency Support Team. An intelligence update provided at the briefing, based upon an interview with a terrorist group member, indicated the nuclear material was stored within the industrial area of Asuncion (Pease Air National Guard Base, Newington, New Hampshire). An Asian crime syndicate was identified operating in the area with connections to Middle Eastern terrorists. Further interviews obtained additional information on the radiological material, but little information on its location. A status update of the Search Response Team and Search Augmentation Team deployment was also briefed.

Due to continued pressure from Host Nation officials to proceed with an aggressive search effort and the continued delay of the Search Teams, the Nuclear Radiological Advisory Team personnel conducted search training for Host Nation searchers (Federal Bureau of Investigation agents and Department of Defense personnel) on the morning of the 5th. The training was effectively conducted in Spanish by a Nuclear Radiological Advisory Team deployed team member, and appeared to be very thorough. Following training, search operations were begun in the industrial area of Asuncion. The nuclear material was located by searchers later that evening.

August 6

Following an exercise hotwash, all exercise participants and the Foreign Emergency Support Team re-deployed.

NRAT TRAINING FOR SEARCHERS WAS NOT EFFECTIVE DUE TO 50% PERCENT OF THE RESPONDERS WERE ENGLISH SPEAKERS ONLY!