

General

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U.S. Department of Energy  
Office of Inspector General  
Office of Inspections

# Inspection Report

## Fire Suppression and Related Services at Los Alamos National Laboratory

DOE/IG-0821

September 2009

32042





## Department of Energy

Washington, DC 20585

September 11, 2009

### MEMORANDUM FOR THE SECRETARY

FROM:

*Gregory H. Friedman*  
Gregory H. Friedman  
Inspector General

SUBJECT:

INFORMATION: Inspection Report on "Fire Suppression and Related Services at Los Alamos National Laboratory"

### BACKGROUND

The Department of Energy's (DOE's) Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic science on behalf of national security. LANL operates in "unique" hazard environments, to include special nuclear materials, explosives, and hazardous chemicals, that create special fire suppression and emergency management challenges. To address these challenges, LANL must have a comprehensive approach to the protection of personnel, facilities, physical assets, and programmatic activities from fire and related dangers. LANL is managed for DOE's National Nuclear Security Administration (NNSA) by Los Alamos National Security, LLC, which assumed responsibility for the management and operation of LANL on June 1, 2006.

In December 1992, DOE directly acquired fire suppression and related services under a 5-year contract with the Incorporated County of Los Alamos (County). The Los Alamos County Fire Department (LAFD) provided fire suppression and related services to LANL and to the County. The contract expired in December 1997, but the Terms and Conditions and the Statement of Work of this contract were continued through a series of Pre-Contract Cost Agreements (PCCAs) between LANL and the County over approximately the next 11 years. During this period, DOE paid 100 percent of the cost of LAFD operations, totaling approximately \$135 million.

Information was provided to the Office of Inspector General (OIG) that problems existed with regard to fire suppression and related services at LANL. As a result, we initiated an inspection to determine if fire suppression and related services at LANL are assured through contractual arrangements with the County. On September 30, 2008, subsequent to the initiation of our inspection, the NNSA entered into a Cooperative Agreement with the County to provide fire department and related services to LANL.

### RESULTS OF INSPECTION

We concluded that fire suppression and related services had not been assured through contractual arrangements with the County. Specifically, we found that:

- Fire fighters had not been properly trained to confidently and effectively fight fires in the unique operational environments they may encounter at LANL facilities;

- Required pre-incident plans developed by the LAFD lacked the information necessary for fire fighters to effectively respond to incidents at LANL;
- Fire fighters did not have the knowledge of LANL facilities necessary to effectively respond in the event of an emergency, and their access to these facilities was sometimes precluded;
- The LAFD's fire fighting capabilities have not been sufficiently demonstrated through exercises with documented assessments of their performance; and,
- The LAFD did not address a number of the long standing recommendations made in the 1995 and 2004 LANL Baseline Needs Assessments (BNAs), and DOE, including NNSA, failed to contractually require that they do so.

In addition, we determined that a number of these issues and concerns were previously identified by the Defense Nuclear Facilities Safety Board (DNFSB) and the NNSA over the past decade without resolution.

We concluded that the above conditions were caused by significant problems with the administration of the contracting arrangements by DOE, NNSA, LANL, and the County. We did not find evidence that anyone actively managed the fire suppression services contract for a number of years. In addition, the PCCAs were inappropriately used in place of a comprehensive contract over the nearly 11 year period from December 1997 to September 2008.

After years of unsuccessful attempts to negotiate a contract with the County, on September 30, 2008, the NNSA entered into a Cooperative Agreement that replaced the 11 year use of the PCCAs. Since February 2009, the Cooperative Agreement has prompted actual and planned initiatives to address some of the conditions identified in this report. However, the challenges facing NNSA, LANL, and the County are significant, especially given the history of failed attempts to secure the appropriate level of fire suppression services for LANL. We believe that the recent initiatives taken by the NNSA under the Cooperative Agreement are good first steps, but additional actions are needed. NNSA's efforts must continue into the future with planned improvements being realized in order to meet the special fire suppression and emergency management needs of LANL. We made several recommendations to the Administrator of the NNSA to address our findings.

### MANAGEMENT REACTION

In responding to a draft of this report, NNSA agreed with the recommendations and provided information on corrective actions taken or planned. In addition, NNSA stated that they understood and agreed that there have been issues related to fire services between the County of Los Alamos and NNSA. However, NNSA stated that the report, as written, does not appear to take into consideration recent improvements to the conditions identified in this report and focuses too much on the problems of the preceding 11 years. NNSA stated that they believe this has resulted in some mischaracterizations in the report.

We consider management's agreement with the report recommendations to be generally responsive to our report findings. However, we take exception to NNSA's assertion that the report, as written, does not appear to take into consideration recent improvements to the conditions identified. Our report specifically identifies areas where NNSA made or has planned improvements in the areas of training, pre-incident planning, drills and exercises, firefighter knowledge of facilities, disposition and tracking of BNA recommendations, and performance based incentives.

We also take exception to NNSA's assertion that the report focuses too much on the problems of the preceding 11 years, resulting in some mischaracterizations in the report. As stated in the report, since February 2009, the Cooperative Agreement has prompted actual and planned initiatives to address some of the conditions identified in this report. However, the challenges facing NNSA, LANL, and the County are significant, especially given the history of failed attempts to secure the appropriate level of fire suppression services for LANL. We believe that the recent initiatives taken by the NNSA under the Cooperative Agreement are good first steps, but additional actions are needed.

Contrary to NNSA's statement that these issues have resulted in some mischaracterizations in the report, the report accurately characterizes the weaknesses in fire suppression services that have existed at this Laboratory for many years. Continued corrective actions are required in order to ensure that the risks to LANL's facilities, personnel, and operations are eliminated. Management's comments are provided in their entirety in Appendix B of the report.

Attachment

cc: Deputy Secretary  
Administrator, National Nuclear Security Administration  
Chief of Staff  
Manager, Los Alamos Site Office  
Director, Office of Internal Review (CF-1.2)

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# FIRE SUPPRESSION AND RELATED SERVICES AT LOS ALAMOS NATIONAL LABORATORY

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## Overview

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### INTRODUCTION AND OBJECTIVE

The Department of Energy's (DOE's) Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic science on behalf of national security. LANL operates in "unique" hazard environments, to include special nuclear materials, explosives, and hazardous chemicals, that create special fire suppression and emergency management challenges. To address these challenges, LANL must have a comprehensive approach to the protection of personnel, facilities, physical assets, and programmatic activities from fire and related dangers. LANL is managed for DOE's National Nuclear Security Administration (NNSA) by Los Alamos National Security, LLC, which assumed responsibility for the management and operation of LANL on June 1, 2006.

In December 1992, DOE directly acquired fire suppression and related services under a 5-year contract with the Incorporated County of Los Alamos (County). The Los Alamos County Fire Department (LAFD) provided fire suppression and related services to LANL and to the County. The contract expired in December 1997, but the Terms and Conditions and the Statement of Work of this contract were continued through a series of Pre-Contract Cost Agreements (PCCAs) between LANL and the County over approximately the next 11 years. During this period, DOE paid 100 percent of the cost of LAFD operations, totaling approximately \$135 million.

Information was provided to the Office of Inspector General (OIG) that problems existed with regard to fire suppression and related services at LANL. As a result, we initiated an inspection to determine if fire suppression and related services at LANL are assured through contractual arrangements with the County. On September 30, 2008, subsequent to the initiation of our inspection, the NNSA entered into a Cooperative Agreement with the County to provide fire department and related services to LANL.

### OBSERVATIONS AND CONCLUSIONS

We concluded that fire suppression and related services had not been assured through contractual arrangements with the County. Specifically, we found that:

- Fire fighters had not been properly trained to confidently and effectively fight fires in the unique operational environments they may encounter at LANL facilities;

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- Required pre-incident plans developed by the LAFD lacked the information necessary for fire fighters to effectively respond to incidents at LANL;
  - Fire fighters did not have the knowledge of LANL facilities necessary to effectively respond in the event of an emergency, and their access to these facilities was sometimes precluded;
  - The LAFD's fire fighting capabilities had not been sufficiently demonstrated through exercises with documented assessments of their performance; and,
  - The LAFD did not address a number of the long standing recommendations made in the 1995 and 2004 LANL Baseline Needs Assessments (BNAs)<sup>1</sup>, and DOE, including NNSA, failed to contractually require that they do so.

In addition, we determined that a number of these issues and concerns were previously identified by the Defense Nuclear Facilities Safety Board (DNFSB) and the NNSA over the past decade without resolution.

We concluded that the above conditions were caused by significant problems with the administration of the contracting arrangements by DOE, NNSA, LANL, and the County. We did not find evidence that anyone actively managed the fire suppression services contract for a number of years. In addition, the PCCAs were inappropriately used in place of a comprehensive contract over the nearly 11 year period from December 1997 to September 2008.

After years of unsuccessful attempts to negotiate a contract with the County, on September 30, 2008, the NNSA entered into a Cooperative Agreement that replaced the 11 year use of the PCCAs. Since February 2009, the Cooperative Agreement has prompted actual and planned initiatives to address some of the conditions identified in this report. However, the challenges facing NNSA, LANL, and the County are significant, especially given the history of failed attempts to secure the appropriate level of fire suppression services for LANL. We believe that the recent initiatives taken by the NNSA under the Cooperative Agreement are good first steps, but additional actions are needed. NNSA's

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<sup>1</sup> A Baseline Needs Assessment is an assessment of the fire protection emergency response organization that establishes the site fire fighting capabilities.

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efforts must continue into the future with planned improvements being realized in order to meet the special fire suppression and emergency management needs of LANL.

We note that an October 1995 OIG Audit Report, "Audit of Fire and Emergency Medical Services Cost Sharing Between the Department of Energy and Los Alamos County," determined DOE was paying about 99 percent of the cost of the LAFD while using about 47 percent of the services. This 1995 Audit recommended alternative methods for sharing costs or separating responsibility for these services. In addition, on June 23, 2009, the OIG issued an Audit Report on "Fire Protection Deficiencies at Los Alamos National Laboratory." This audit disclosed that many of the fire protection "pre-existing conditions" identified during the June 1, 2006, LANL contract transition to Los Alamos National Security, LLC, had not been resolved.

## Details of Findings

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### **FIRE FIGHTER TRAINING**

We found that fire fighters had not been properly trained to confidently and effectively fight fires in the unique operational environments they may encounter at LANL facilities.

### **Training Weaknesses**

Under DOE's December 1992 contract with the County, the LAFD was required to develop a training program to maintain a minimum level of fire suppression service. Under this program, training for fire fighters was required to meet National Fire Protection Association (NFPA) 1001, "Standard for Fire Fighter Professional Qualifications." In addition, the contract required pre-incident training that provided a comprehensive working knowledge of building protection, including technical indoctrination in nuclear criticality, radiation protection, explosives, large electrical installations, and LANL experimental facilities. The contract stated that DOE was to provide training, as required, that involved specific types of hazardous material that were unique to LANL operations. The 1992 contract terms were carried forward under the PCCAs until September 30, 2008. (Training under the Cooperative Agreement is discussed later in this report.)

Contrary to these requirements, fire fighters had not received the necessary and required training for fighting fires at LANL. Specifically, we determined that LAFD fire fighters had not been trained in:

- Nuclear criticality safety;
- Glove box and special nuclear material fire fighting;
- Explosives fire fighting;
- Chemical and biological agent fire fighting; and,
- Fighting fires involving gases.

The LAFD Annual Training Plan for 2008 only included 16 total hours of LANL site specific training on an "as needed" basis, without identifying detailed training requirements. During interviews of LAFD fire fighters, the majority told us that they did not feel prepared and trained to fight all types of fire incidents at LANL.

### **Site Specific Training**

In an effort to address these training shortfalls, LANL personnel at Technical Area (TA)-16 and TA-55 recently developed site specific training and guidance for emergency responders. Site

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officials recognized that, to adequately respond to incidents at these highly sensitive facilities, the fire fighters needed additional information that was not provided in LAFD fire fighter training or pre-incident plans.

The new site specific training and guidance included details regarding facility fire scenarios, staging of LAFD equipment and personnel, and fire fighting techniques. For example, at TA-16, specific information was provided to the LAFD on fire incidents involving buildings with explosives. At TA-55, specific information was provided to the LAFD on extinguishing fires in glove boxes involving nuclear material.

The efforts at TA-16 and TA-55 to develop site specific training and guidance for emergency responders represent a proactive effort on the part of LANL to improve fire suppression services. However, other LANL facilities have special operational environments that need to be similarly addressed.

## **PRE-INCIDENT PLANS**

We found that required pre-incident plans (also referred to as pre-fire plans) developed by the LAFD lacked the information necessary for fire fighters to effectively respond to incidents at LANL.

### **Plan Elements**

Under the December 1992 contract with the County, the LAFD was required to implement a Pre-Fire Planning Program "to develop and maintain [pre-incident] plans for incidents which the Fire Department responds to." The contract required pre-incident plans to be developed by the County, with information obtained primarily by on-site surveys, and reviewed at least annually or as conditions warranted.

According to NFPA Standard 1620, "Recommended Practice for Pre-Incident Planning," the pre-incident plan should be the foundation for decision-making during an emergency situation and should provide important data that will assist the incident commander in developing appropriate strategies and tactics for managing the incident. The principles identified in NFPA standards were incorporated into DOE Order 420.1B, "Facility Safety," and the DOE "Model" Fire Protection Program, which demonstrates acceptable methods and examples to assist each DOE site in meeting the fire protection program's objectives.

Pre-incident plans are required for every facility at LANL. We reviewed the pre-incident plans for two critical facilities at LANL, the plutonium facility at TA-55 and the Chemistry Metallurgy

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Research (CMR) facility. We found that these pre-incident plans lacked critical information necessary for fire fighters to effectively respond to fire incidents in these facilities and did not include information recommended by NFPA Standard 1620 and DOE's "Model" Fire Protection Program document. Specifically, the plans did not contain:

- Scenarios: Information used to anticipate likely scenarios;
- Extinguishment: Any unusual materials or methods required for extinguishing fires;
- Exposures: A list of any buildings and/or other features that might possibly be affected in an emergency situation;
- Equipment response: The equipment that would normally respond to alarms in each facility, as well as any special equipment that might be needed, including backup equipment for second alarm responses;
- Plan of attack: Positioning of each fire engine and any special information necessary for attacking fires in the building; and,
- Entry: A list of all entrances to the building.

### **Radioactive Materials**

We also determined that, although the pre-incident plans for TA-55 and the CMR facility acknowledged the presence of radioactive materials inside the buildings, neither plan identified: (1) radioactive materials as a fire hazard; (2) the exact locations of the radioactive materials; or (3) guidelines for extinguishing specific radioactive materials. For example, plutonium, especially finely divided material, is a radioactive fire hazard, and magnesium oxide sand is the most effective material for extinguishing plutonium fires. However, the pre-incident plan for the plutonium facility failed to identify radioactive materials as a "Fire" hazard, only showing radioactive material as an "Acute Health" and a "Chronic Health" hazard. In addition, the plan did not identify the locations of plutonium or that magnesium oxide sand is the most effective method to extinguish a fire involving plutonium.

### **Criticality Safety**

In addition, we determined that the pre-incident plans for the plutonium and CMR facilities did not incorporate criticality safety controls for fire fighting in areas within or adjacent to "moderator-controlled areas." DOE Order 420.1B establishes requirements for

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a criticality safety program applicable to DOE nuclear facilities and activities that involve, or potentially involve, nuclear materials in quantities beyond certain specifications. The Order specifies that guidelines for fire fighting must be established for areas within or adjacent to moderator-controlled areas, which are areas where appropriate precautions must be taken when using water as a fire fighting agent. DOE Standard 1158-2002, "Self-Assessment Standard for DOE Contractor Criticality Safety Programs," requires that pre-incident plans incorporate criticality safety controls.

**Authority Having  
Jurisdiction**

Further, for nearly the past 11 years, we did not find any evidence that DOE, including NNSA, provided the LAFD with guidance on the level of planning appropriate for: (1) the hazard environments at LANL; and (2) the property being "pre-planned." NFPA 1620 states that the "authority having jurisdiction" has the responsibility to determine the level of planning appropriate for the jurisdiction and the property being pre-planned. DOE Order 420.1B identifies the "Head of Field Element" as the "authority having jurisdiction," in this case the Los Alamos Site Office (Site Office).

In order to compensate for the lack of guidance from the "authority having jurisdiction," we found that site personnel at the TA-55 plutonium facility recently took the initiative to address deficiencies and weaknesses in the LAFD pre-fire plan through the development of a TA-55 Facility Emergency Response Guide. This Guide was intended to provide LAFD personnel with information not found in the LAFD pre-fire plan. Consistent with NFPA 1620, the Guide, which became effective on January 29, 2009, provided specific information on various types of emergencies that were unique to specific areas of the plutonium facility, as well as information on materials or methods required for extinguishing fires at the facility. While the Guide for TA-55 is useful, it does not address the larger issue that the pre-incident plans developed by the LAFD lack the information necessary for fire fighters to effectively respond to incidents at LANL.

**KNOWLEDGE OF  
FACILITIES AND  
ACCESS**

We found that fire fighters did not have the knowledge of LANL facilities necessary to effectively respond in the event of an emergency, and their access to these facilities was sometimes precluded.

During our inspection, several LAFD fire fighters expressed concern that their lack of knowledge of LANL facilities could impact their ability to effectively respond to an incident. Specifically, fire fighters said that:

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- It can be several years between site visits or tours of LANL's highly sensitive facilities;
  - Facility modifications or changes are not identified to the LAFD in a timely manner;
  - Changes in facility hazards are not provided to the LAFD in a timely manner; and,
  - Fire fighters are frequently rotated from station to station, which negatively affects their ability to develop sufficient knowledge of the facilities they need to respond to in their assigned districts.

Fire fighters also informed us of:

- Incidents in which badge readers denied LAFD personnel access to facilities or did not work;
- Incidents where keys that should have allowed LAFD personnel access to facilities did not work;
- Coordination problems with the scheduling of access to LANL facilities during updates to pre-incident fire plans;
- Instances where they were denied access to areas inside some facilities because of a lack of a "need-to-know;" and,
- Instances where computers onboard emergency vehicles were not operational, so pre-incident plans could not be viewed.

We contacted LANL officials to discuss the issues listed above. LANL officials agreed that there have been some problems with badge readers and that some keys have not worked because locks have been changed without notifying the LANL key custodian. LANL officials also told us that electronic notifications are provided quarterly (or sooner if required) from LANL to the LAFD concerning physical modifications or changes to facilities as well as changes in facility hazards.

An LAFD official confirmed that they do receive communications from LANL on these types of modifications and changes. We were told that this information is provided to the fire fighters through computer updates on a weekly basis (or sooner if

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required). However, the LAFD official acknowledged that this process has not been totally effective in ensuring that fire fighters are fully aware of such modifications and changes. The LAFD official told us that the fire department is taking steps to improve the process by verbally informing fire fighters of updates that affect their knowledge of facilities.

Finally, we confirmed the condition involving computers onboard emergency vehicles by witnessing unsuccessful attempts by LAFD personnel to operate the onboard computer located on a primary response fire engine for LANL.

## **EXERCISES AND PERFORMANCE EVALUATIONS**

### **Exercises**

We found that the LAFD's fire fighting capabilities had not been sufficiently demonstrated through exercises with documented assessments of their performance.

According to DOE Order 151.1C, "Comprehensive Emergency Management System," emergency planning must include identification of hazards and threats; hazard mitigation; development and preparation of emergency plans and procedures; identification of personnel and resources needed for an effective response; and practicing response through training, drills, and exercises. We were told by LANL officials that LANL schedules, plans, coordinates, conducts, and evaluates exercises on a continuous basis at its nuclear and high and medium hazard facilities in accordance with direction in DOE Order 151.1C. Drills and exercises are conducted as designated by LANL's Emergency Operations Division. Development of exercises is based upon the facility/site hazards and types of scenarios identified in LANL's Emergency Planning Hazard Assessment, which is used in preparation of LANL emergency plans and procedures.

LANL officials told us that during the initial exercise planning phase, if it is determined that the exercise scenario warrants participation by the LAFD, LANL requests that a LAFD representative participates on the exercise design team. The LAFD representative would provide technical knowledge regarding LAFD operations and input for scenario development; develop guidelines and/or limitations regarding LAFD participation in the exercise; and, develop objectives specific for their organization. LANL officials said that the expectation for an effective exercise is that the LAFD would participate with a "real time response<sup>2</sup>,"

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<sup>2</sup> "Real time response" is other than a staged or simulated response. The term is used to describe a typical response as if the event were an actual emergency.

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including a full complement of fire department personnel and equipment.

However, we were told that when LANL contacts the LAFD to request its participation in the LANL exercise planning phase and the actual exercise, the common response from the LAFD is that it is unable to participate due to a lack of available manpower and resources. LANL officials also told us that on those occasions when the LAFD agreed to participate in an exercise, it would only send a Battalion Chief and his driver in one LAFD vehicle, an SUV. This limited response by LAFD to exercises results in the Battalion Chief simulating LAFD participation in the scenario rather than a “real time response.” Thus, LAFD fire fighters have not sufficiently participated in exercises to validate their response capabilities.

A LAFD official told us that they participate in the LANL exercises “as available.” Further, we were told that the LAFD feels that the exercises are geared more towards testing LANL’s capabilities and responses, not the fire department’s, and they do not feel they always need to be there. We were told that the exercises tie them up, sometimes for up to four hours, where they are considered “out of service” and they would be unable to respond to other calls at LANL and the City of Los Alamos, which is their first priority. The LAFD official said that when they participate in a LANL exercise, they are unable to respond “real time” using resources already on duty because it depletes their manpower and resources, and “if the Lab wants us to be there, they will need to pay us overtime.”

### **Assessments and Documentation**

According to DOE Order 151.1C, LANL’s readiness assurance must include assessments and documentation to ensure that stated emergency capabilities are sufficient to implement emergency plans. However, a LANL official told us that when “outside entities<sup>3</sup>,” including the LAFD, participate in LANL exercises and drills, the “outside entities” develop their own objectives for inclusion in exercise planning, and those objectives are not evaluated by LANL. The official said that offsite response organizations, such as the LAFD, evaluate their own performance in an exercise against their own objectives. The official further said that other subcontractors to LANL have a more robust program tied to DOE requirements to evaluate and assess

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<sup>3</sup> “Outside entities” is a term used by LANL to identify outside governmental authorities such as the Los Alamos Police Department, U.S. Forest Service, U.S. Park Service, the Federal Bureau of Investigation, the State of New Mexico, and the LAFD.

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performance during participation in LANL exercises, but the LAFD has never been held to the same level of accountability due to the lack of a formal contract for many years. As a result, LANL was not able to evaluate the performance and capabilities of the LAFD to timely and effectively respond to site emergencies.

The December 1992 contract between DOE and the County stated in Part III, Statement of Work, Section XIV, Self Assessment Program, that the Contractor (the County) shall develop and implement a self-assessment program to provide means to assess the performance of the fire department. The Contractor shall perform and document performance evaluations and shall document and perform corrective actions.

However, a LAFD official told us that they had never conducted and documented performance evaluations in any kind of self-assessment that established and identified lessons learned or corrective actions. This official also said that they did not evaluate LAFD performance in LANL exercises and that no one (i.e., NNSA, DOE, or LANL) had ever informed them that they had to conduct an evaluation of their exercise performance. Another official said that, if they identify any issues of concern at a LANL exercise, their internal process is to handle it at that time in the field, in the form of a brief discussion. This official also said that if an issue of concern warranted any further discussion or review “we may put it into an [LAFD] annual training plan.”

We believe that (1) the LAFD’s failure to fully participate in planned LANL exercises and (2) LANL’s, the LAFD’s, and the Site Office’s failure to ensure that appropriate evaluations were conducted of the LAFD’s performance prevents LANL and NNSA from having the necessary assurances that the LAFD could provide an appropriate level of response to an incident at LANL’s unique facilities.

## **BASELINE NEEDS ASSESSMENT**

We found that the LAFD did not address a number of the long standing recommendations made in the 1995 and 2004 LANL BNAs, and DOE, including NNSA, failed to contractually require that they do so. This resulted in continuing weaknesses in the capability of the LAFD to respond to a fire or other emergency event at LANL since several of the outstanding recommendations addressed training, staffing, and pre-incident plans.

DOE Order 420.1B states that a fire protection program requires a BNA of the fire protection emergency response organization that establishes the site fire fighting capabilities. The BNA is expected

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to reflect applicable NFPA codes and standards and be updated at least every three years or whenever a significant new hazard is introduced that is not covered in the current BNA.

LANL's 1995 BNA found a series of conditions and trends that indicated a significantly increased risk of fire at LANL. The BNA concluded that this situation was "a severe threat to the institution, its mission and its surroundings." The 1995 BNA contained 32 recommendations, many of which addressed weaknesses in LAFD performance. These recommendations ranged from having fire department services provided by a single, highly professional entity to having better pre-fire plans that are site-specific and address the conditions found at LANL. The next BNA, conducted in 2004, contained 17 recommendations, including 6 from the 1995 BNA that had not been addressed. We note that this approximately 9-year lapse of time between BNAs was not consistent with the 3-year update requirement of DOE Order 420.1B.

#### **DNFSB AND NNSA FINDINGS**

We determined that a number of these issues and concerns were previously identified by the DNFSB and the NNSA over the past decade without resolution. For example:

- In August 1999, the DNFSB found that neither LANL nor the LAFD presented data addressing important program features such as pre-fire plans; LAFD staffing, training, and equipment; and the use of a BNA;
- In June 2002, the NNSA concluded that the consequence of several years of delay in negotiating a contract between LANL and the LAFD was that minimum expectations regarding the capability of the LAFD to respond to emergencies in a timely and effective manner were not clearly defined, documented, and agreed upon; and, therefore, they may not be met;
- In April 2005, the DNFSB found that there was no corrective action plan in place to address the recommendations of the 2004 BNA, which had been intended to address staffing, training, and equipment needs for the LAFD; and,
- In December 2008, the DNFSB indicated that there were weaknesses in the capability of the LAFD to respond to a fire or other emergency event in the unique hazard environment associated with defense nuclear facilities at LANL, citing minimal progress in closing the recommendations from the

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2004 BNA, which corresponded to weaknesses in staffing, training, and planning observed during recent exercises.

The DNFSB also concluded that observations regarding recent site exercises suggested significant weaknesses in the ability of the LAFD to provide an appropriate level of emergency response to LANL's defense nuclear facilities and indicated a lack of comprehensive training and hazard awareness, insufficient staffing, and a lack of individual facility response planning. The DNFSB stated that these observations required near-term actions to improve emergency responders' training, pre-planning, and familiarity with the defense nuclear facilities at LANL. The DNFSB also noted the need to refine exercise objectives of emergency responders, including the LAFD, in order to assess the effectiveness of training and planning more rigorously.

## **CONTRACT ADMINISTRATION**

We concluded that the preceding conditions were caused by significant problems with the administration of the contracting arrangements between DOE, NNSA, LANL, and the County.

### **Administration**

We did not find evidence that anyone actively administered or managed the fire suppression services contract for a number of years. As early as March 1994, DOE proposed transferring the administration of the fire suppression contract with the County to LANL. At that time, LANL raised several questions regarding the proposed transfer, including what was the definition of "administration" and what were the roles, responsibilities, duties, authorities, and requirements of the contract administrator. We did not find evidence that these questions were addressed.

When the 1992 contract ended in December 1997, it was continued through the use of PCCAs that incorporated by reference the Terms and Conditions and the Statement of Work of the 1992 contract. LANL and the County were the signatories on the PCCAs, creating the appearance that LANL would administer the agreements. However, based on our interviews of DOE and LANL personnel, there apparently remained considerable confusion over the roles, responsibilities, and authorities under the PCCAs. Current LANL officials were under the impression that DOE directed LANL to enter into the PCCAs with the County.

Given that the Terms and Conditions and the Statement of Work of DOE's 1992 contract with the County carried forward in the PCCAs, it is unclear to us how DOE could assign LANL responsibility for administering a Federal contract, which is an

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inherently governmental function. We were told by one NNSA contracting official that the transfer of a DOE prime contract to LANL was “illegal.” We were told by another NNSA contracting official that there was no known mechanism for effecting this transfer. We did not identify any evidence showing how this transfer took place or under what authority.

A contracting official for Los Alamos National Security, LLC, told us that they viewed their role as a “transfer agent” in relation to the fire suppression and emergency services being provided by the County. As a transfer agent, they ensured the County was funded to provide the fire suppression and emergency services, but they did not issue direction to the County, nor did they evaluate the level of service to ensure that the services provided met the requirements of the PCCA. We were told that in instances where there were issues with the services being provided by the County or with the PCCAs, LANL viewed these issues as being the responsibility of NNSA and referred them to the Site Office.

In contrast, no official that we spoke to accepted responsibility for management of the PCCAs between December 1997 and September 2008. A Site Office official told us that, to the best of his recollection, the responsibility for providing day-to-day direction to the fire department and administration of the contracting arrangement belonged to LANL. This official said that if LANL encountered any difficulties in performing those functions, the Site Office would intervene, as necessary.

### **Use of the PCCA**

We also determined that the PCCAs were inappropriately used in place of a comprehensive contract over the nearly 11 year period from December 1997 to September 2008. As the name states, Pre-Contract Cost Agreements are supposed to be used when there is a need to allow a subcontractor to begin work before a subcontract can be issued. As such, PCCAs are not intended to be used for such an extended period of time. In fact, LANL’s own internal policy states that the period covered by a PCCA shall not exceed 45 working days. Extensions beyond 45 days can be authorized, but the use of this authority for nearly 11 years clearly goes beyond the intent of the agreements.

We note that when Los Alamos National Security, LLC, took over management of LANL in 2006, it identified the use of the PCCAs as a “preexisting condition” that needed to be addressed. However, NNSA directed Los Alamos National Security, LLC, to continue using the PCCAs until a new agreement was reached with the County. Therefore, the misuse of this instrument continued

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until September 2008. As a result, problems with the administration of this agreement persisted for more than a decade without resolution, and weaknesses in the areas of fire fighter training, knowledge of facilities, pre-incident plans, and exercises went unabated.

## **USE OF COOPERATIVE AGREEMENT**

After years of unsuccessful attempts to negotiate a contract with the County, on September 30, 2008, the NNSA entered into a Cooperative Agreement that replaced the nearly 11 year use of the PCCAs. Since February 2009, the Cooperative Agreement has prompted actual and planned initiatives to address some of the conditions identified in this report.

### **Reaching an Agreement**

In December 1997, DOE directed the University of California, which was the LANL management and operating contractor at the time, to negotiate a new contract with the County. Between 1997 and April 2005, the University engaged in negotiations that only resulted in the development of a draft Request for Proposal (RFP). The Site Office did not accept the draft RFP and directed LANL to stop any future work. In June 2005, Site Office officials took over responsibility for negotiating a new contract with the County. However, the Site Office officials found that the County was not willing to sign a contract because the County took exception to the “flow-down” terms and conditions of Federal and DOE Acquisition Regulations. Subsequently, NNSA officials at the Albuquerque Service Center took over responsibility for negotiating a new contract with the County, but these officials were met with similar objections by negotiators for the County.

In an effort to accommodate the County, NNSA decided to pursue a Cooperative Agreement in lieu of a comprehensive contract. In deciding to use a Cooperative Agreement to acquire fire suppression services for LANL, NNSA said it reasoned that the primary purpose was to carry out a public purpose of support for the County and NNSA.

Since the principal purpose of this agreement was to acquire services for the direct benefit of the Government, a contract between NNSA and the County would have been the more optimal instrument to use under DOE policy. DOE’s “Guide to Financial Assistance” states that Cooperative Agreements are used when the principal purpose of a transaction is the transfer anything of value to accomplish a public purpose of support, but it also states that project benefits or uses should only be indirect or incidental in nature. The Guide states that a contract should be used when the principal purpose of the instrument is to acquire (by purchase,

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lease, or barter) property or services for the direct benefit or use of the Government.

**Improvements to  
Conditions Identified**

However, since February 2009, the Cooperative Agreement has prompted actual and planned initiatives to address some of the conditions identified in this report.

Specifically, the Cooperative Agreement requires the County, NNSA, and LANL to collaboratively develop exercises, drills, and site specific training commensurate with the various hazards at LANL, with particular emphasis on nuclear and industrial hazards. The Cooperative Agreement also requires that the County participate in these exercises, drills, and site specific training. In addition, NNSA is to ensure that the exercises, drills, and site specific training are provided to the County without additional cost to the Cooperative Agreement.

The NNSA designated LANL as the Technical Monitor for the administration of the Cooperative Agreement in a memorandum dated December 10, 2008. LANL was required to provide specialized and site-specific training for all LAFD uniformed responders and command personnel of the LAFD. Initially LANL had questions about the sufficiency of the Cooperative Agreement. In a letter dated January 12, 2009, to the NNSA Site Office Manager, LANL responded to the December 10, 2008, memorandum, stating that while the Cooperative Agreement represented a major improvement in the formal relationship between the County and DOE, some wording in the Cooperative Agreement provided for potential gaps in LAFD services. One area specifically addressed was training, stating that “there is currently no capability, funding, or planning in place to conduct this training.” However, we were told by a LANL official that this concern has been resolved and that a number of actual and planned initiatives are under way. These include:

- A 2009 LAFD Training Plan has been developed and was approved in March 2009.
- 117 LAFD fire fighters have been provided with Emergency Responder Radiological Training (ERRT) between February and April 2009.
- 119 LAFD fire fighters have been provided Pyrophoric Material Glove Box Firefighting Training between April and the end of June 2009.

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- Additional LAFD fire fighter training is planned for calendar year 2009 to include the use of Contaminated Personnel Protection Equipment and Unique Hazardous Materials Emergency Response, including high explosives, beryllium, biological agents, and tritium.
  - Establishment of a 3-party (LANL, LAFD, and the Site Office) Fire Fighter Training Advisory Board which met for the first time on April 9, 2009.
  - LANL Facility Tours have been scheduled for 2009 and 2010. Tours of TA-55 and TA-50 were in progress as of February 2009. Additional Tours for TA-3, TA-54, and TA-16 are scheduled for 2009 and 2010.
  - A new BNA was approved by NNSA on May 19, 2009, and NNSA has directed LANL to ensure that the 2009 BNA recommendations are formally disposed of and tracked to closure.

In addition, the 2009 LAFD Training Plan makes limited reference to pre-incidents plans and indicates that Tour/Training information will “translate” to LAFD pre-incident plans. Also, the 2009 LAFD Training Plan makes limited reference to LANL drills and exercises, stating that “LAFD may participate in some of the various facility drills and exercises as requested by LANL” according to a schedule identified in the plan. However, it is not clear how these references will address the pre-incident planning and exercise issues identified in this report.

**GOVERNMENT  
PERFORMANCE AND  
RESULTS ACT**

We determined that the Los Alamos National Security, LLC, Performance Evaluation Plan does not address LANL fire suppression services, nor does it or the Cooperative Agreement contain associated performance measures, consistent with the intent of the Government Performance and Results Act (GPRA) of 1993. Since 1997, approximately \$135 million of taxpayer dollars have been spent for fire suppression and related services at LANL without any accountability for achieving program results.

Performance measurement is mandated by GPRA in order to hold Federal agencies accountable for achieving program results, as well as, to promote a focus on service quality and customer satisfaction. The Cooperative Agreement does not clearly create or establish a set of performance measures for the LAFD. The Cooperative Agreement includes a requirement for the County to provide a yearly

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Progress Report assessing the status of work and a comparison of actual accomplishments with the established goals and objectives, but it does not address how the information will be used to achieve program results or promote service quality. The Cooperative Agreement does include broad objectives, such as providing an enhanced level of fire department services, and requirements in areas such as minimum staffing, response times, and training, which are a good starting point for establishing performance measures.

We believe that NNSA needs to develop specific performance measures with associated incentives for the LAFD so that: (1) progress toward meeting the goals and objectives of the Cooperative Agreement can be demonstrated; (2) opportunities for improvement can be identified; and (3) past problems with the provision of fire suppression and related services are corrected. We note that the NNSA is in the process of establishing a Performance Based Incentive for FY 2010 to continue the effort to provide for enhanced fire department service training in 2010. Specifically, a draft document titled "LANL Enhanced Training of Fire Department Personnel" states that LANL shall collaboratively define, establish, and provide training for the delivery of enhanced fire department services at LANL in FY 2010.

## **SUMMARY**

For nearly the past 11 years, fire suppression services have not been assured at LANL, placing LANL in a position of unacceptable risk to its facilities, personnel, and operations. In addition to critical breakdowns in the contractual relationships between DOE, NNSA, LANL, and the County, fire fighters did not have the tools they needed to effectively respond to an incident at LANL. In addition, DOE/NNSA did not have an effective means of evaluating fire department performance during exercise and drills, and did not have the means to assure that appropriate corrective actions were identified and implemented.

The conditions described in this report not only have the potential to severely disrupt the activities of a critical national asset, they also have the potential to severely disrupt LANL's critical national security missions. The challenges facing NNSA, LANL, and the County are significant, especially given the history of failed attempts to secure the appropriate level of fire suppression services for the unique hazard environments at LANL. We believe that the recent initiatives taken by the NNSA under the Cooperative Agreement are good first steps. However, additional actions are needed and NNSA's efforts must continue into the future with planned improvements being realized.

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## **RECOMMENDATIONS**

We recommend that the Administrator of NNSA take immediate action to ensure that:

1. NNSA and LANL continue to develop site specific training and guidance for emergency responders under a LANL-wide initiative to improve the ability of the LAFD to respond to incidents involving the unique hazard environments of LANL.
2. Fire fighters continue to receive specialized training necessary for the specific types of hazards and hazardous materials at LANL, and that fire fighters are made aware of physical modifications or changes to facilities as well as changes in facility hazards in a timely manner.
3. Pre-incident plans contain sufficient detail to provide an effective response to incidents at LANL facilities, and that pre-incident plans incorporate criticality safety controls consistent with DOE Standard 1158-2002.
4. Fire fighters are provided with routine tours of LANL facilities in order to gain the familiarity necessary to effectively respond in the event of an emergency.
5. Issues with fire fighters' access to facilities, to include issues relating to badge readers and keys, are appropriately addressed.
6. Computers onboard emergency response vehicles are effective as the means of accessing and utilizing pre-incident plans.
7. The LAFD fully participates in required exercises and drills conducted at LANL where a real time response is expected, and, consistent with DOE Order 151.1C, NNSA and LANL have the capability to assess the fire department's emergency response capabilities and address weaknesses while ensuring corrective actions.
8. All recommendations from Baseline Needs Assessments are disposed of and tracked to closure.
9. Appropriate performance measures are developed and implemented in order to hold the LAFD and LANL accountable for achieving program results as well as to promote a focus on service quality and customer satisfaction.

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10. The entity responsible for administering the Cooperative Agreement has the necessary capabilities, resources, and authorities for effective administration.

**MANAGEMENT  
COMMENTS**

In comments on a draft of this report, NNSA agreed with the recommendations and provided information on corrective actions taken or planned. In addition, NNSA stated that they understood and agreed that there have been issues related to fire services between the County of Los Alamos and NNSA. However, NNSA stated that the report, as written, does not appear to take into consideration recent improvements to the conditions identified in this report and focuses too much on the problems of the preceding 11 years. NNSA stated that they believe this has resulted in some mischaracterizations in the report.

**INSPECTOR  
COMMENTS**

We consider management's agreement with the report recommendations to be generally responsive to our report findings. However, we take exception to NNSA's assertion that the report, as written, does not appear to take into consideration recent improvements to the conditions identified. Our report specifically identifies areas where NNSA made or has planned improvements in the areas of training, pre-incident planning, drills and exercises, firefighter knowledge of facilities, disposition and tracking of BNA recommendations, and performance based incentives.

We also take exception to NNSA's assertion that the report focuses too much on the problems of the preceding 11 years, resulting in some mischaracterizations in the report. As stated in the report, since February 2009, the Cooperative Agreement has prompted actual and planned initiatives to address some of the conditions identified in this report. However, the challenges facing NNSA, LANL, and the County are significant, especially given the history of failed attempts to secure the appropriate level of fire suppression services for LANL. We believe that the recent initiatives taken by the NNSA under the Cooperative Agreement are good first steps, but additional actions are needed.

Contrary to NNSA's statement that these issues have resulted in some mischaracterizations in the report, the report accurately characterizes the weaknesses in fire suppression services that have existed at this Laboratory for many years. Continued corrective actions are required in order to ensure that the risks to LANL's facilities, personnel, and operations are eliminated.

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## Appendix A

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### **SCOPE AND METHODOLOGY**

We conducted the majority of our inspection fieldwork between August 2008 and February 2009. We reviewed applicable policies and procedures for facility safety, nuclear criticality safety, and a comprehensive emergency management program. These reviews also included applicable NFPA standards.

In addition to reviewing applicable criteria, we also conducted extensive interviews with individuals within the affected entities, including DOE, NNSA, the LAFD, and Los Alamos National Security, LLC.

Pursuant to the "Government Performance and Results Act of 1993," we reviewed the LANL 2009 Performance Evaluation Plan. We determined that this plan did not contain performance measures and expectations for fire suppression services; however, providing fire suppression services is not a requirement under the LANS contract. In addition, we found no specific performance measures and expectations, consistent with the intent of GPRA that have been developed by the NNSA for the services provided by the County under the Cooperative Agreement. We have addressed the lack of performance measures and expectations in the body of this report.

This inspection was conducted in accordance with the "Quality Standards for Inspections" issued by the President's Council on Integrity and Efficiency.

# Appendix B

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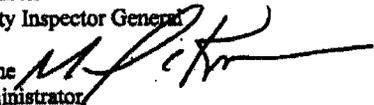


Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585



AUG 21 2009

MEMORANDUM FOR Herbert Richardson  
Principal Deputy Inspector General

FROM: Michael C. Kane   
Associate Administrator  
for Management and Administration

SUBJECT: Comments to the IG Draft Report, LANL Fire Suppression,  
Proj. No. S08IS013; IDRMS No. 2008-02869

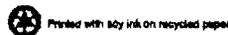
The National Nuclear Security Administration (NNSA) appreciates the opportunity to review the Inspector General's (IG) report, *Fire Suppression and Related Services at Los Alamos National Laboratory*. I understand that the IG initiated this inspection to determine if fire suppression and related services at the Los Alamos National Laboratory (LANL) are assured through contractual arrangements with the County.

NNSA understands and agrees that there have been issues related to fire services between the County of Los Alamos and NNSA. However, the statement the IG made that LANL provides unacceptable risk to its facilities, personnel, and the County of Los Alamos is misleading and an unfortunate statement.

In the past year, the exhaustive, comprehensive, and collaborative efforts of LANL, the Los Alamos Fire Department (LAFD), and the Los Alamos Site Office (LASO) have lead to more open communication, a better trained firefighting force, and the improved confidence of firefighting personnel to provide for an effective and safe response for fire, medical, or hazardous material emergencies at LANL. The report disregards these recent gains and focuses too much on the problems of the preceding nine years. LANL, LASO, and LAFD are moving past these issues and the report as written does not appear to take into consideration the progress that we have taken and, therefore, we believe that there are some mischaracterizations in the report. Attached are comments from the Site Office for your consideration.

NNSA agrees with the recommendations and corrective actions that have been taken or will be taken.

1. **Continued development of site specific training:** Corrective actions for this recommendation have been previously identified via the LASO approved LAFD Training Plan and the FY 2010 Performance Based Incentive designed by the Site Office. A training process is already well underway and future efforts are



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already captured in LASO planning efforts for FY 2010. NNSA believes the intent of the recommendation has been met and considers this closed.

2. **Firefighter specialized training, updates to hazards:** Corrective actions for this recommendation have been previously identified via the LASO approved LAFD Training Plan, current training activities, and the FY 2010 Performance Based Incentive designed by the Site Office. A training process is already well underway and future efforts are already captured in LASO planning efforts for FY 2010. NNSA believes the intent of the recommendation has been met and considers this closed.
3. **Pre-Incident Planning Improvements:** Corrective actions for this recommendation have been previously identified via the LASO approved FY 2009 Baseline Needs Assessment recommendation (Rec 14), for which corrective actions are already underway. Concerns have already been identified and corrective actions are pending. Actions will be completed by the end of FY 2010.
4. **Firefighter Tours:** Corrective actions for this recommendation have been previously identified via the LASO approved LAFD Training Plan, current facility tour activities, and the FY 2010 Performance Based Incentive designed by the Site Office. A tour program is already well underway and future efforts are already captured in LASO planning efforts for FY 2010. NNSA believes the intent of the recommendation has been met and considers this closed.
5. **Improvement to Firefighter Access to Facilities:** Corrective actions for this recommendation have been previously identified via the LASO approved FY 2009 Baseline Needs Assessment recommendation (Rec 6), for which corrective actions are already underway. Concerns have already been identified and corrective actions are pending. Actions will be completed by the end of FY 2010.
6. **Vehicle Computer Utilization:** LASO will evaluate this concern as part of the FY 2009 LASO Fire Department Assessment. Actions will be completed by the end of FY 2010.
7. **LAFD Exercise Participation, LASO Assessment:** The Cooperative Agreement, signed by NNSA and Los Alamos County on September 30, 2008, requires LAFD exercise participation and an annual assessment of LAFD activities by the Site Office Program Manager. As noted earlier in this document, these actions are underway. The office of NNSA Emergency Management Implementation, NA-43, supported LASO in the annual assessment of the LAFD during July 2009. NA-43 will continue to provide support for these and other emergency-management related activities as requested by the Site Office Emergency Management Program Manager. These activities are documented via the Cooperative Agreement and are being completed in FY 2009. NNSA believes the intent of the recommendation has been met and considers this closed.
8. **BNA Recommendation, Disposition and Closure:** LASO directed this action to be accomplished when it approved the FY 2009 BNA on May 19, 2009. NNSA considers this recommendation closed.

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9. **Performance Measures Developed:** As noted earlier, LASO has designed a FY 2010 Performance Based Incentive to improve training, tours, and hazard identification by LANL to the LAFD. NA-43 participates in the corporate process for formulating performance measures and objectives to improve emergency management performance as well as monitors and evaluates performance of the Emergency Management Programs against performance measures and targets in their PEP. Additionally, the Cooperative Agreement allows LASO to terminate the agreement with the County, as desired. As such, performance measures are already in place. NNSA considers this recommendation closed.
10. **Cooperative Agreement Effective Administration:** The NNSA Service Center and LASO have the capabilities, resources, and authorities for effective Cooperative Agreement administration. There are no further actions for NNSA to take on this recommendation and considers it closed.

Should you have any questions related to this response, please contact JoAnne Parker, Acting Director, Policy and Internal Controls Management, 202-586-1913.

#### Attachment

cc: Revitalization Manager, Los Alamos Site Office  
Senior Procurement Executive  
Director, Service Center

### **LASO's Comments to the Draft IG Inspection Report: Fire Suppression and Related Services at Los Alamos National Laboratory**

A review of the above document continues to identify discrepancies regarding the status of the services provided by the Los Alamos Fire Department (LAFD) to the Los Alamos National Laboratory (LANL). The current overarching problem with the report is that it does not integrate within the report the many numerous beneficial activities that have been completed by LAFD, LANL, and the Los Alamos Site Office (LASO) since the signing of the Cooperative Agreement (CA) on September 30, 2008. Although the report cites problems with this program over the past decade, it is LASO's belief that the progress in firefighter training, facility and hazard knowledge and exercise performance made in the last nine months is reflective of the commitment of the three parties to correct these long-standing issues. The report incorrectly cites the following deficiencies (in boldface) whereas the current state of the program is not addressed.

**Inadequate Training to LAFD on Unique LANL and Site Specific Hazards:** The IG Report incorrectly notes that LAFD firefighters had not been trained in criticality safety, glovebox and special nuclear material firefighting, explosives firefighting, chemical and biological agent firefighting. Despite LASO and LANL providing details on the training performed and planned for Los Alamos County firefighters, through the Site Office approved 2009 LAFD Training Plan, the report does not identify, in this section, the training activities regarding the:

- **Emergency Responder Radiological Training (ERRT).**
- **Pyrophoric Material Glovebox Firefighting Training.**
- **Upcoming activities related to training plan commitments for additional training courses, including in calendar year 2009:**
  - Unique hazardous materials emergency response, including high explosives, beryllium, biological agents, and tritium.
  - Contaminated personal protection equipment donning and doffing
  - Annual ERRT Training.
- **Establishment of a three-party (LANL, LAFD, and LASO) Firefighter Training Advisory Board.**
- **Establishment of a performance based incentive for FY 2010 to continue the effort to provide for enhanced fire department service training next year.**

Although these activities are noted in the "Improvements to Conditions Identified" section in the rear of the report, many of these actions clearly contradict statements in the more alarming "Training Weaknesses" section. Additionally, the report continues to cite interviews with Los Alamos County firefighters that were performed before the rollout of these specific actions, and thus do not reflect what LASO believes is a better trained and more confident firefighting force.

Finally, the report incorrectly mentions this training as specific to TA-16 and TA-55, whereas such training is applicable to other explosive and nuclear facilities across the laboratory. This is a misinterpretation of the training approach and applicability of response techniques. The report does not reflect the amount of effort and success of the

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three parties to provide this newly developed training to LAFD and the commitment of LASO to continuing the effort.

**Pre-Incident Plans Lacking Required Information:** The CA provided the vehicle to address this self-identified (see 2009 BNA, Recommendation 14) deficiency through the requirement for the collaborative establishment of a LAFD Training Plan. The LASO-approved 2009 LAFD Training Plan notes that the facility tours and training provided to firefighters in 2009 will translate to a LAFD pre-incident plan capturing:

- Incident response elements or scene factors particular to LANL facilities or operations
- Ventilation system and filter plenum tactical fire fighting considerations
- Control of firewater runoff.

Through tours and training provided in 2009, pre-incident plans for these facilities will be revised, as necessary. As tours continue to be completed (the LAFD Training Plan calls for upcoming tours at CMR [started June 19], WETF, and the NNSB building), these pre-incident plans will be updated to capture this important information.

**Lack of facility knowledge and access:** The CA provided the vehicle to address this previously identified deficiency through the requirement for the collaborative establishment of a LAFD Training Plan. The LASO-approved 2009 LAFD Training Plan notes that the facility tours are to be coordinated with LAFD and scheduled throughout 2009 and 2010. LANL and LAFD have coordinated to accomplish the following tours, to date, for the following LANL hazardous material facilities:

- TA-55, RLUOB [110 firefighters]
- TA-55, PF-4 and surrounding buildings [90 firefighters]
- TA-50, RLWTF [12 officers]
- TA-3, SIGMA and BTF [65 firefighters]

These are extensive tours, typically 2-4 hours in duration depending on the size of the facility. LAFD personnel learn about facility operations, hazardous materials, access points, ventilation controls, fire suppression capabilities, and expected facility support. The three parties made the early determination to attempt to tour ALL firefighters on these tours due to shift rotations and the potential for multi-alarm response for a significant event. Due to LAFD coverage concerns, such tours typically consist of small teams of firefighters and thus, many tours need to be provided.

Additionally, the Cooperative Agreement requires LAFD participation for LANL hazardous material facility exercises. LAFD, since FY2008, has been providing support for these exercises (15-20 each year) which require their response to hazardous material release events (typically due to fires or explosions) and have been raising their awareness of potential facility events, hazards, access requirements, fire suppression needs and capabilities, and LANL emergency response support. The report incorrectly cites that LAFD commonly does not participate in such exercises. The report of a minimal participation may have been accurate for previous years, but with the CA stipulations, LAFD participation has been much improved in 2009.

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**Outside Entities Do Not Assess LAFD:** As mentioned, a previous conference call with DOE IG, per the CA, LASO has a new requirement to accomplish an annual assessment of LAFD activities. This first assessment is in progress. LASO, through support provided by the Office of Emergency Management Implementation (NA-43), contracted with a retired Fire Chief with 35 years of experience, to assess LAFD performance during the July 23<sup>rd</sup> Full Scale Exercise. This exercise scenario involved an explosion with several casualties at the Beryllium Test Facility. LASO will issue this LAFD evaluation report prior to the end of this Fiscal Year.

**LAFD lack of action on previous BNA recommendations:** The draft IG report does not address that the CA provided the impetus for a more rigorous and updated 2009 BNA, which was approved by LASO on May 19, 2009. It fails to mention that LASO required that the 2009 BNA included a review of the status of the previous BNA (2004) recommendations, as these were not formally tracked by LANL or LASO. The 2009 BNA concluded that, of the 15 recommendations cited in the 2004 BNA (two of these were identified as out of scope of the 2009 BNA review), 12 had been fully or partially implemented. This 2009 BNA conclusion is in direct opposition to the concern of not addressing previously recommendations cited in the draft IG report. LASO has already directed LANL to ensure the 2009 BNA recommendations are formally disposed of and tracked to closure via the Laboratory's Issue Management Tracking System and resolved via an implementation plan. The success of LANL to complete these necessary corrective actions will be addressed through performance based incentive measures in FY 2010.

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