



U.S. Department of Energy  
Office of Inspector General  
Office of Audit Services

# Audit Report

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## The Department's Wildland Fire Planning and Preparation Efforts

DOE/IG-0760

March 2007




**Department of Energy**  
Washington, DC 20585

**March 6, 2007**

MEMORANDUM FOR THE SECRETARY

FROM:

  
Gregory H. Friedman  
Inspector General

SUBJECT:

INFORMATION: Audit Report on "The Department's  
Wildland Fire Planning and Preparation Efforts"

BACKGROUND

The Department of Energy complex includes thousands of acres of what is commonly referred to as wildlands. In these areas, due to the often dry weather conditions, wildland fires are a natural process that play an important role in the health of arid ecosystems. While they may be a natural phenomenon, such fires can cause catastrophic damage to Federal facilities and surrounding communities. In 2000, the Department experienced several large wildland fires which threatened the safety of Department personnel, facilities, and equipment at the Los Alamos National Laboratory, Hanford Site, and Idaho National Laboratory. These fires burned over 212,000 acres of Department land, resulting in fire-related costs totaling almost \$130 million at Los Alamos alone.

In response, the Department initiated a review of the adequacy of its fire safety programs and emergency management capabilities. The *Initial Joint Review of Wildland Fire Safety at DOE Sites* (Initial Joint Review) made a number of recommendations for improvement that were to be implemented in time for the 2001 wildland fire season. The Department also adopted the *2001 Federal Wildland Fire Management Policy and Implementing Actions*, which requires sites to develop a risk-based approach to fire management, identify detailed strategies for fuels management, and conduct other preparedness activities. This audit was initiated to determine whether the Department had taken action to identify possible hazards associated with and mitigate the impacts of wildland fires.

RESULTS OF AUDIT

Three sites included in our review – Los Alamos National Laboratory, Idaho National Laboratory, and the Nevada Test Site – had made a number of improvements in this area. However, essential wildland fire mitigation activities involving the assessment and removal of vegetation and the maintenance of roads had either not been performed or were not completely effective. For example:

- At Los Alamos National Laboratory, vegetation thinning – a critical activity necessary to remove fuel and prevent fires such as those that spread from tree top to tree top during the 2000 Cerro Grande fire – had not been performed for 1,300 acres of canyons;



- Vegetation surrounding the Advanced Mixed Waste Treatment Project – a facility key to the Idaho National Laboratory's transuranic waste processing and disposal program – had not been adequately removed; and,
- Roads necessary for protecting utilities, establishing fire breaks, and providing access for firefighters and equipment at the Nevada Test Site had not been upgraded or maintained as required.

We found that contractor officials did not always adhere to established wildland fire planning and mitigation guidance. In particular, contractors had not used risk-based principles to prioritize mitigation efforts and had either omitted or not adequately considered a number of other items specified in Federal policy, Departmental guidance, and the Initial Joint Review when developing their fire protection plans. In addition, Federal officials had not always actively monitored contractor wildland fire protection programs, coordinated protective efforts, or validated the effectiveness of contractor fire mitigation activities. Without improvements in these areas, the three sites remain at a higher than necessary risk of damage to property and facilities – and possible injury of employees and members of the public – from wildland fires.

Our review disclosed that the Department had substantially strengthened its preparedness activities since the 2000 wildland fire season. In particular, it had acquired additional equipment for firefighters, and a number of sites had implemented enhanced training courses for firefighters and continued to place an emphasis on firefighter and human safety. Even though these and other site-level actions represent a significant improvement, a number of problems remained. Additional actions are necessary to improve preparedness measures and to reduce the risk associated with wildland fire recurrence. Given the reality of the impact of the series of fires in 2000 and the fact that the Western states were struck with a number of fires in 2006, we made several recommendations designed to help the Department improve the effectiveness of its wildland fire program.

#### MANAGEMENT COMMENTS

The National Nuclear Security Administration (NNSA) and the Offices of Nuclear Energy (NE) and Health, Safety and Security (HSS) each commented on the draft report. All agreed, at least in part, with the report's recommendations, and management's planned actions are responsive to the recommendations. In particular, NNSA officials agreed to ensure that a risk-based approach is utilized, mitigation activities are considered, and resource allocation decisions are evaluated. They added that they would coordinate with their own environment, safety and health element to ensure these wildland fire management requirements are implemented. NE, through its Idaho Operations Office, and HSS concurred with the report's recommendations in their entirety. Both NNSA and NE indicated some disagreement with the representations made regarding their individual sites. To address management concerns, we held discussions with program officials and modified our report where appropriate. Management's comments and our responses are summarized in the report.

Attachment

cc: Deputy Secretary  
Administrator, National Nuclear Security Administration  
Under Secretary of Energy  
Chief of Staff

# REPORT ON WILDLAND FIRE PLANNING AND PREPARATION EFFORTS

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## **SITE-LEVEL WILDLAND FIRE PLANNING AND PREPARATION**

### **Mitigation and Maintenance Activities**

All three of the field sites we reviewed had not fully completed mitigation activities designed to reduce the impact from wildland fire. Specifically, while the Department of Energy (Department) had taken a number of actions to reduce the threats posed by wildland fires, fuel management activities such as the removal and maintenance of vegetation and roads necessary for firefighting were not always adequate.

#### Los Alamos National Laboratory

Despite specific experience with the serious consequences associated with wildland fires, Los Alamos National Laboratory (Los Alamos) had not completed all necessary preparedness and fire mitigation activities. A number of mitigation activities had been planned, but not completed. Most notably, although identified in the site's 2005 fire management plan as critical to preventing devastating fires such as those that spread from tree top to tree top during the Cerro Grande fire, vegetation thinning that would provide fire breaks for 1,300 acres of the site's canyons had not been completed. The removal of vegetation to reinforce an important fire break between the site and the Bandelier National Monument – the ignition point for the Cerro Grande fire – had also not been completed as planned.

According to National Nuclear Security Administration (NNSA) officials, more than 10,000 acres of heavily forested land have been treated and other important firebreaks, such as facility defensible space, had been created. As noted in site plans, however, removal of vegetation in general, and particularly for the canyons we identified, could have helped reduce the spread of fires and decrease the danger to firefighters. The site's efforts, even though substantial, covered only about one-third of the acreage requiring mitigation in Fiscal Year (FY) 2005.

#### Nevada Test Site

Similarly, while the Nevada Test Site (Nevada) identified mitigation activities necessary to protect power lines and site roads from wildland fire, not all of these activities were actually completed. For example, although identified as a high risk fire danger, Nevada did not perform vegetation

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removal necessary to reduce the risk of fire damage to certain power and communication lines prior to the 2002 wildland fire season. During 2002, a fire occurred in the areas previously identified as high risk, resulting in the loss of about 1.7 miles of power and communication lines that had to be rebuilt at a cost of \$585,000 according to site officials. After the 2002 fire, again after another fire in 2005, and even though specifically cited as deficiencies in Nevada's vegetation assessments, the site still did not complete needed vegetation removal or upgrade certain roads.

According to Nevada's planning documents and a contractor fire department official, Nevada also does not plan to complete all planned mitigation activities in 2006. Adequate maintenance of vegetation adjacent to utilities and repair or upgrade of roads – as demonstrated by the damage sustained during the 2002 and 2005 fires as well as conclusions drawn in annual vegetation assessments – is critical because it reduces fuel sources, provides access for responders, and establishes fire breaks and defensible space (cleared area surrounding an improved property) in which responders may operate.

Although not all identified activities were completed, Nevada officials described some positive actions taken after their major fires. For example, site heavy equipment operators are now trained and are capable of improving remote roads during a wildland fire event. The Fire Department has also enhanced its response capabilities with all terrain vehicles that include fire suppression systems.

#### Idaho National Laboratory

The Idaho National Laboratory (Idaho) also had not ensured that vegetation removal activities were performed for roadsides and areas surrounding a major facility. As confirmed by local officials, many of the 26 wildland fires that occurred at Idaho from 2001 to 2005 could have been prevented by a regular roadside mowing program at the start of the wildland fire season. According to site-level fire plans and site officials, had roadside mowing occurred on a regular basis, the likelihood of major fires would have been reduced. While Idaho officials acknowledged that roadside mowing should have been performed on a regular basis by the State of Idaho, at the time of our audit, we noted that only limited action had been taken to interact

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with State officials to increase mowing frequency. Vegetation surrounding the Advanced Mixed Waste Treatment Project – a facility key to Idaho's transuranic waste processing and disposal program – also had not been adequately removed. Despite repeated findings of non-compliance by the Idaho Operations Office, defensible space around this \$618 million facility had not been adequately maintained.

Site officials told us that one possible action – offering to reimburse the State all or in part for mowing activities – had not been taken. Subsequent to our discussions, Idaho was able to negotiate such an arrangement, although mowing was conducted much later in the fire season than would be desirable. In order to be fully effective, State roadside mowing activities should be conducted at the same time as other mowing activities.

## **Monitoring and Planning Activities**

These problems occurred, at least in part, because contractor officials did not adhere to established wildland fire planning and mitigation guidance. In particular, contractors had not used risk-based principles to prioritize mitigation efforts and had either omitted or not adequately considered a number of other items specified in Federal policy, Departmental guidance, and the Initial Joint Review when developing their fire protection plans. In addition, Federal officials had not always actively monitored contractor wildland fire protection programs, coordinated protective efforts, or validated the effectiveness of contractor fire mitigation activities.

### Implementation of Wildland Fire Management Policies

Although specified by Department guidance and considered one of the principal tenants of the 2001 Federal Wildland Fire Management Policy, a comprehensive risk-based evaluation of mitigation activities and the potential consequences of not completing them had not been performed by any of the three sites reviewed. As noted in the Federal policy, risk management should be a foundation for all fire management activities, and that risks must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing a particular activity. While sites had identified certain activities as high-risk or critical or had made some subjective engineering decisions on a case-by-case basis, they had not



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completed a formal risk assessment and had not developed a prioritized list of mitigation activities. Site officials were not specifically aware of a requirement to do so.

A number of specific items – some integral to a risk-based approach to wildland fire management – addressed in Federal policy, Departmental guidance, and the Initial Joint Review had also not been adequately considered or had been completely omitted from the site-level plans. For example:

- Neither Nevada nor Idaho had developed a long-term list of activities and associated budget requirements. Such planning is important because not all activities are annual and recurring, and long-term planning ensures that such activities are adequately considered. In contrast, Los Alamos had identified long-term activities including the requirement to update land cover information once every five years.
- Neither Los Alamos nor Idaho planned to update their Fire Plans for FY 2006. Los Alamos officials told us that resources were not available to update the plan, while Idaho officials stated that other priorities had taken precedence.
- Neither Nevada nor Idaho had evaluated the possibility of using prescribed burns to control and manage excess vegetation at the time of our review. Nevada, however, was able to communicate the rationale for not including this strategy in their mitigation activities during discussions we held with them. To their credit, Nevada officials subsequently incorporated details into the Fire Plan during a 2006 update. While Idaho could communicate their rationale for a similar conclusion, incorporation of details continues to be lacking in their Fire Plan. Such consideration is important because prescribed burning is cited as one of the primary methods of vegetation management in Federal policy. While this approach to fire management requires detailed planning and close attention, Federal guidance indicates that these burns can help prevent the quick spread of fires and reduce future mitigation costs. The Lawrence Livermore National Laboratory had taken

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advantage of this technique and had conducted prescribed burns for the past several decades at its 7,000 acre remote Explosive Test Facility.

- Our review of hazard and fire protection assessments also disclosed that sites had not evaluated or documented the unique ancillary hazards from wildland fires at their locations. Although sites had conducted extensive evaluations of the direct impacts of wildland fire such as the potential for the flames to reach and ignite facilities and other assets, the Initial Joint Review noted that evaluation and documentation of the potential ancillary hazards is critical to identifying unique challenges associated with wildland fires such as smoke intrusion that can adversely affect facilities' support systems even when the fire is not in the immediate vicinity. While an analysis that considered these particular risks had been performed for the Advanced Mixed Waste Treatment Facility at Idaho, officials told us that it was completed as part of an Operational Readiness Review and was not used for wildland fire preparation and planning. They went on to say that similar analyses had not been conducted at other Idaho facilities.
- Not all sites had included wildland fire and response capabilities in their fire safety and emergency management self-assessments. The inclusion of these areas, even though specifically recommended by the Initial Joint Review, had not been performed for Idaho and Los Alamos.
- Los Alamos also had not performed needed updates to its Land Cover Map database. This database provides important information about fuel conditions and was proven to be a critical component of the protective strategy during the Cerro Grande fire when it was used to model fire behavior and devise response strategies. It also provides the basis for determining needed vegetation reduction activities.

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While contractor officials told us that, in many instances, they had not completed necessary planning or mitigation activities because of a lack of resources, we noted that their very lack of planning – in particular the lack of a risk-based and prioritized remediation schedule – most likely exacerbated or contributed to their inability to obtain funding. Fire protection officials indicated that mitigation efforts had to compete with many other programs funded through site overhead assessments such as building maintenance and procurement, and that once the needs of those programs were considered, insufficient funds remained to address all needed protective activities. Although not a certainty, had officials developed a prioritized schedule of mitigation needs – citing the risk of not completing the needed work – they may have been better positioned to have obtained funding necessary to address the most critical vulnerabilities.

Monitoring, Validation, and Coordination  
of Mitigation Activities

Although required by the Secretarial directive announcing adoption of the 2001 Federal Wildland Fire Management Policy and Implementing Actions by the Department, federal officials at the sites visited had not always reviewed and approved contractor fire plans or mitigation activities for adequacy. Even though this directive had been issued in 2003, officials at each of the sites told us that they were not aware of the requirement for Federal officials to review contractor plans for sufficiency. This lack of knowledge may have been attributable to the fact that the direction to comply with the Federal Wildland Fire Management Policy was never formally incorporated into Departmental directives.

**Wildland Fire  
Risks**

Without comprehensive wildland fire planning, the Department's field sites risk catastrophic damage from events similar to the fires of 2000. In that year alone, these types of fires burned over 212,000 acres of Department land at three sites and resulted in fire-related costs totaling almost \$130 million at Los Alamos alone. The Department maintains hundreds of thousands of acres that are susceptible to wildland fire, and these types of fires remain a constant threat during the wildland fire season. While this threat cannot be completely eliminated, certain

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enhancements to the Department's wildland fire protection strategies could provide increased protection for the Department's assets, as well as the health and safety of its workers and the public.

As demonstrated by recent statistics, the risk of catastrophic damage to the nation at large from wildland fires continues to increase. From January through the beginning of November 2006, wildland fires had consumed over 9,000,000 acres across the country. The average acreage burned by wildland fires from 2000 through 2005 amounted to about 73 percent greater than experienced during the 1990s. The threat continues to grow, with the Federal government spending about \$1.5 billion in FY 2006 fighting wildland fires at various facilities and locations across the country. Comparatively, the Federal government had spent about \$900 million in each of the two previous years. Experts have predicted that catastrophic damage from wildland fires probably will continue to increase until an adequate long-term Federal response is implemented.

## **RECOMMENDATIONS**

To ensure that wildland fire management is consistently applied, we recommend that the Chief Health, Safety and Security Officer:

1. Ensure that the Federal Wildland Fire Management Policy is specifically incorporated into Departmental directives.

To help reduce the risks associated with wildland fires, we recommend that the Administrator, NNSA, and the Assistant Secretary for Nuclear Energy, in coordination with the Chief Health, Safety and Security Officer, require that site Federal fire protection officials:

2. Ensure that contractors utilize a risk-based approach, including prioritized mitigation activities, when preparing Fire Plans;
3. Ensure that contractor-prepared Fire Plans incorporate or specifically consider planning elements or mitigation activities discussed in the Federal Wildland Fire Management Policy as required by Department guidance;

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4. After plans are updated and risk-based principles have been employed, evaluate resource allocation decisions to ensure that critical mitigation or prevention activities are adequately funded; and,
  5. Review and approve Fire Plans and verify that vegetation removal activities have been conducted as planned.

## **MANAGEMENT REACTION**

The NNSA and the Offices of Nuclear Energy and Health, Safety and Security each provided comments on this report. All agreed, at least in part, with the recommendations made in the report.

NNSA officials agreed to ensure that a risk-based approach is utilized, mitigation activities are considered, and resource allocation decisions are evaluated. They added that they would coordinate with their own environment, safety and health element to ensure these wildland fire management requirements are implemented. However, they disagreed with some of the specific details contained in the report. In particular, they indicated that the information on the 1,300 acres of canyon at Los Alamos was not presented in context and that the acreage cited represented only a small percentage of the potential threat at that site. In addition, NNSA stated that they do evaluate and document unique hazards and consequences presented by wildland fires; use risk-based techniques to prioritize mitigation efforts by means of engineering assessments of risk; and, have plans to complete additional remediation work prior to the onset of critical fire weather in FY 2007. Finally, NNSA indicated that, in order to recognize the requirements of the Federal Wildland Fire Management Policy, it should be incorporated into Departmental fire protection directives.

The Office of Nuclear Energy (NE), through its Idaho Operations Office, concurred with the recommendations and presented a list of proposed actions and completion dates for all of the recommendations. However, NE did not agree with all of the information pertaining to the Idaho site. In supplemental comments, the Idaho Operations Office cited a demonstrated ability to effectively manage the risk of large wildland fires throughout the 1990s that

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resulted in no injuries, damage to structures, or significant operational interruptions. Further, the Idaho Operations Office asserted that, as a result of program improvements made since 2000, the Idaho wildland fire management program is based on comprehensive elements identified in the Federal policy and Department guidance.

The Office of Health, Safety and Security (HSS) agreed with the audit's overall conclusion and advised that they will coordinate with appropriate program offices to support implementation of the draft audit report's recommendations.

**AUDITOR  
RESPONSE**

Comments from each of the three organizations acknowledge that some changes are needed to improve wildland fire management and management's planned actions are responsive to the report's recommendations. In particular, NNSA and NE agreed to utilize risk-based approaches to fire management, conduct mitigation activities as appropriate, and evaluate resource allocation decisions as necessary. Additionally, HSS agreed to coordinate these activities with program offices. Our specific comments related to the objections raised by NNSA and NE are detailed below.

With respect to NNSA's comment that we did not present our findings at Los Alamos in context, we made revisions to the report to more fully describe mitigation activities already conducted and noted that the 1,300 acres we cited had been identified as a critical mitigation activity for site protection. While work at Los Alamos has been substantial, it has not, as noted in our report, been completed and may not have focused on the most critical mitigation activities. During FY 2005, Los Alamos completed mitigation of only about one-third of the acreage contained in site-level plans. In FY 2006, even fewer mitigation activities received adequate attention. These areas where mitigation efforts were not completed include the 1,300 acres of canyons and the critical fire break cited in the report.

In addition, we recognize the effort NNSA has put forth to evaluate the risks, hazards, and consequences of wildland fires; however, the activities cited by NNSA in their comments, as confirmed by one of NNSA's fire protection officials, are conducted on an individual basis – such as on an individual facility basis – were subjective in nature, and

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not documented. This type of analysis is not sufficient to meet the requirements of the Federal policy for a comprehensive risk assessment of all mitigation activities. According to the Initial Joint Review, unique ancillary analyses should be included in hazard and fire protection assessments. In conducting our review, we analyzed these documents for each site visited and did not find evidence of such analyses. Additionally, absent completion of the risk assessment required by the Federal policy, Los Alamos cannot demonstrate the relative importance of the work conducted in comparison to activities not performed.

Finally, while we agree that Idaho has demonstrated an ability to respond to large wildland fires in the past and has implemented some program improvements since 2000, our audit identified situations where Idaho has had an increased exposure to damage from wildland fires. For example, in 2004 and 2005, the Idaho Operations Office conducted oversight reviews that identified excessive vegetation in several areas of the Advanced Mixed Waste Treatment Facility, and an Operations Office official orally confirmed that certain vegetation removal activities still had not been performed at the time of our site visit. Further, our report identifies instances where Idaho is not in compliance with the Federal Wildland Fire Management Policy and DOE G 450.1-4. Specifically, Idaho had not: (1) performed a comprehensive risk-based evaluation of mitigation activities and the potential consequences of not completing them; (2) developed a list of long-term mitigation activities and associated budget requirements; (3) updated their Fire Plans for FY 2006; and, (4) documented the rationale for using or not using prescribed burns in the Fire Plan.

Management's comments are included in their entirety in Appendix 3 and have been incorporated into the body of the report where appropriate.

## Appendix 1

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### OBJECTIVE

The objective of our audit was to determine whether the Department had taken action to identify possible hazards and mitigate the potential impacts of wildland fires.

### SCOPE

The audit was performed between September 2005 and December 2006. We conducted work at Headquarters in Washington, D.C., and Germantown, MD; Idaho National Laboratory in Idaho Falls, ID; Los Alamos National Laboratory in Los Alamos, NM; and, the Nevada Test Site near Mercury, NV.

### METHODOLOGY

To accomplish our audit objective, we:

- Reviewed regulations and policies and procedures relevant to the Department of Energy's wildland fire program;
- Reviewed site specific guidance and policies and procedures;
- Held discussions with Headquarters program officials regarding wildland fire at Department sites;
- Held a discussion with officials from the Government Accountability Office about work they have conducted related to the Federal government's implementation of wildland fire programs;
- Held discussions with officials from the Idaho Operations Office, and the Los Alamos and Nevada Site Offices regarding wildland fire programs in place at Department sites;
- Held discussions with officials from the Idaho and Los Alamos National Laboratories, and the Nevada Test Site and reviewed relevant documentation regarding their planning and mitigation activities for wildland fires;



- Reviewed site specific planning documents, analyses, and reports of fire damages and response evaluations;
- Participated in site tours to examine mitigation activities and vegetation conditions;
- Held a discussion with Office of Independent Oversight officials that participated in the 2000 Initial Joint Review, and reviewed field site responses, implementation plans, and results related to the Review; and,
- Reviewed historical wildland fire information from the National Interagency Fire Center.

The audit was conducted in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Additionally, we assessed performance measures established under the Government Performance and Results Act of 1993. While specific performance measures concerning the wildland fire program did not exist, performance in this regard was measured as an element under environment, safety, and health performance. Because our review was limited, it would not necessarily disclose all internal control deficiencies that may have existed at the time of our audit. We did not use computer processed data during the review; therefore, we did not test for data reliability.

We held an exit conference with officials from the Offices of Health, Safety and Security and Nuclear Energy, as well as, representatives from the Idaho Operations Office on February 28, 2007. NNSA elected to waive the exit conference.

### PRIOR REPORTS

#### Government Accountability Office

- *Wildland Fire Management: Important Progress Has Been Made, but Challenges Remain to Completing a Cohesive Strategy* (GAO-05-147, January 2005). This review found that the Forest Service in the Department of Agriculture and land management agencies in the Department of the Interior have made important progress in responding to wildland fires. These agencies had adopted various national strategy documents addressing the need to reduce wildland fire risks; established priorities for protecting communities in the wildland-urban interface; and increased efforts and amounts of funding committed to addressing wildland fire problems. However, none of these documents constituted a cohesive strategy that explicitly identified the long-term options and related funding needed to reduce fuels in national forests and rangelands and to respond to wildland fire threats. Both the agencies and the Congress need a comprehensive assessment of the fuel reduction options and related funding needs to determine the most effective and affordable long-term approach for addressing wildland fire problems.
- *Wildland Fire Management: Additional Actions Required to Better Identify and Prioritize Lands Needing Fuels Reduction* (GAO-03-805, August 2003). The review found that the Forest Service and Interior had identified three categories of land for fuels reduction: (1) lands with excess fuels buildup; (2) lands in the wildland-urban interface where federal lands surround or are adjacent to urban development and communities; and, (3) lands where vegetation grows rapidly and requires regular maintenance treatments to prevent excess fuels buildup. However, the agencies had not yet reliably estimated the amount or identified the location of these lands. Local land management units prioritized lands for fuels reduction using a variety of methods, including professional judgment and ranking systems. Prioritization methods varied, in part, because the Forest Service and Interior had not issued specific national guidance on prioritization. Without specific national guidance on prioritization, it was difficult for the Forest Service and Interior to ensure that the highest priority fuels reduction projects nationwide were being implemented.
- *Wildland Fire Management: Improved Planning Will Help Agencies Better Identify Fire-Fighting Preparedness Needs* (GAO-02-158, March 2002). The Forest Service and Interior had not effectively determined the amount of personnel and equipment needed to respond to and suppress wildland fires. Although the agencies had acquired considerably more personnel and equipment than were available in 2000, they had not acquired all of the resources needed to implement the new strategy. Also, despite

## **Appendix 2 (continued)**

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having received substantial additional funding, the two agencies had not yet developed performance measures. The Forest Service simply measured the amount of fire-fighting resources it will be able to devote to fire-fighting at each location, regardless of risk. Without results-oriented performance measures, it was difficult to hold the Forest Service accountable for the results it achieves. Further, the Forest Service and the Interior agencies used different methods to report fire-fighting personnel costs - an approach that was not in keeping with policies requiring coordination and consistency across all aspects of fire management, including accounting for fire-related costs.

## Appendix 3

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Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585



February 5, 2007

MEMORANDUM FOR Rickey R. Hass  
Assistant Inspector General  
for Financial, Technology, and Corporate Audits

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

SUBJECT: Comments to IG's Draft Report on Wildland  
Fire Planning, A05PT044/2005-34525

The National Nuclear Security Administration (NNSA) appreciates the opportunity to review the Inspector General's (IG) draft report, "The Department's Wildland Fire Planning and Preparation Efforts." We understand that this audit was conducted to determine whether the Department had taken action to identify possible hazards and mitigate the potential impacts of wildland fires.

We believe it is important to note that the IG should include a recommendation to the effect that future revisions of "DOE Order 420.1B" or "DOE STD 1066-99" include references to wildland fire plans and the Federal Wildland Fire Management Policy. For the sake of accuracy in the recommendations, NNSA will coordinate with its own Environment, Safety and Health element to ensure that our Federal fire protection officials ensure a risk-based approach is utilized, consider planning elements or mitigation activities, evaluate resource allocation decisions, and verify activities have been conducted as planned.

The report notes that mitigation for 1,300 acres of canyon at the Los Alamos National Laboratory was not completed. While that is a correct statement it is not accurately presented in context. The 1,300 acres are but a small percentage of total acreage or total acreage that represents a potential threat. For example, more than 10,000 acres of heavily forested land was successfully treated during the Cerro Grande Rehabilitation Project (CGRP) alone. Much of the canyon land not mitigated earlier resides within steep slopes, has multiple issues with threatened and endangered species, and ecological issues such as erosion and water quality. It is also important to note that Defensible Space was created for all major Laboratory facilities, lesser structures, and mesa tops near canyons as prescribed in the Urban-Wildland Interface Code. In addition



several miles of forested land was cleared in utility corridors as prescribed by the United States Department of Agriculture/Forest Service Guidance. Mitigation work has continued post CGRP. Regardless of funding levels, work continues in many Laboratory areas -- most notably in areas designated for testing of explosive assemblies. While much has been completed, more work is expected prior to the onset of critical fire weather in FY'07. Prior to that, fire breaks and roads will be treated and reconditioned, facilities, utilities and infrastructure will be reviewed to ensure that critical operations will not be affected by a wild fire.

The report states that we do not use a risk-based technique to plan wild land fire mitigation efforts, when, in fact, NNSA does prioritize efforts on those areas that represent the greater threat based on an engineering assessment of risk. Equally, the report states that our sites had not evaluated unique hazards when, in fact, we do evaluate and document hazards and potential consequences of wild land fires under fire, environmental, cultural, and emergency management programs. These hazards and consequences are extensively documented. In fact, in the case of Los Alamos, fire pre-plans were updated where there was significant change that warranted a change.

Should you have any questions about this response, please contact Richard Speidel, Director, Policy and Internal Controls Management, at 202-586-1913.

cc:   Manager, Los Alamos Site Office  
      Deputy Administrator for Defense Programs  
      Senior Advisor for Environment, Safety and Health  
      Associate Administrator for Environment and Infrastructure  
      Senior Procurement Executive  
      Director, Service Center

United States Government

Department of Energy

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# Memorandum

DATE: February 2, 2007

REPLY TO:


ATTN OF: NE-32

SUBJECT: Response to the Office of the Inspector General's Draft Report on "The Department's Wildland Fire Planning and Preparation Efforts"

TO: Rickey R. Hass, Assistant Inspector General for Financial, Technology, and Corporate Audits, IG-34

This memorandum responds to your request of December 21, 2006, for comments on the subject draft report. The Idaho Operations Office has prepared the attached comments, and the Office of Nuclear Energy concurs with their response. Action plans and completion dates are given for each of the recommendations.

If you have any further questions, please call Owen Lowe at 3-3321.



Dennis R. Spurgeon, Assistant Secretary  
for Nuclear Energy

Attachment

United States Government

Department of Energy

memorandum

Idaho Operations Office

Date: January 25, 2007

Subject: Management Response to the OIG Draft Report on "The Department's Wildland Fire Planning and Preparation Efforts" (A05PT044) (AS-BMD-FS-07-022)

To: R. Shane Johnson, Principle Deputy  
Assistant Secretary for Nuclear Energy

Reference: Memo, Rickey R. Hass to Assistant Secretary for Nuclear Energy, NE-1, Subject: "Draft Report on 'The Department's Wildland Fire Planning and Preparation Efforts,'" dated December 21, 2006

Attached is the management response from the Idaho Operations Office for the subject OIG Audit. While we have some concerns with the findings regarding Idaho, we concur with the recommendations and have provided our action plans and completion dates for all of the recommendations.

Should you have any questions regarding technical content, please contact Taryn Couchman at (208) 526-7278.



Elizabeth D. Sellers  
Manager

Attachment

cc w/att.: Dennis M. Miotla, DOE-HQ, NE-3  
Patrick N. Holman, DOE-HQ, NE-42  
Marvis A. Aleem, DOE-HQ, NE-ID.2



**Department of Energy**  
Washington, DC 20585

January 19, 2007

*Audit Sum*

MEMORANDUM FOR GREGORY H. FRIEDMAN  
INSPECTOR GENERAL

FROM: GLENN S. PODONSKY  
CHIEF HEALTH, SAFETY AND SECURITY OFFICER  
OFFICE OF HEALTH, SAFETY AND SECURITY

SUBJECT: COMMENTS FOR IG DRAFT REPORT: "The Department's  
Wildland Fire Planning and Preparation Efforts" (AO5PT044)

The Office of Health, Safety and Security (HSS) has reviewed the subject draft inspection report provided by the Inspector General's memorandum of December 21, 2006, and provides the following comments.

HSS agrees with the report's conclusion that: "While [the threat of wildland fire] cannot be completely eliminated, certain enhancements to the Department's wildland fire protection strategies could provide increased protection for the Department's assets, as well as the health and safety of its workers and the public." Further we conclude that the recommendations for improving DOE's preparedness for preventing and mitigating wildland fires are appropriate. HSS will coordinate with appropriate program offices to support implementation of the recommendations.

If you have any questions, you may contact me at (301) 903-3777 or have a member of your staff contact James Bisker at (301) 903-6542.

cc: Richard Speidel, NA-66  
Taryn Couchman, NE-ID



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## CUSTOMER RESPONSE FORM

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