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Mitigation Action Plan For the Site-Wide Environmental Impact Statement for Continued Operation of the Los Alamos National Laboratory

MITIGATION ACTION PLAN
FOR THE SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR CONTINUED OPERATION OF THE LOS ALAMOS NATIONAL LABORATORY

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Introduction

The U.S. Department of Energy (DOE) issued the Site-Wide Environmental Impact Statement (SWEIS) for Continued Operation of the Los Alamos National Laboratory located in north-central New Mexico in January 1999 (DOE/EIS-0238). The SWEIS identifies potential impacts resulting from the four alternatives evaluated and discusses measures that DOE considered for the mitigation of these potential adverse effects.

The Acting Assistant Secretary for Defense Programs signed the Record of Decision (ROD) for the level of operation of the Los Alamos National Laboratory (LANL) as analyzed in the SWEIS on September 13, 1999. The ROD states that the DOE has decided to implement the Expanded Operations Alternative as the Preferred Alternative, with certain limitations. This alternative would expand operations at LANL, as the need arises, to increase the level of existing operations to the highest reasonably foreseeable levels, and to fully implement the mission elements assigned to LANL.

Purpose of the Mitigation Action Plan

The SWEIS Mitigation Action Plan (MAP) is a DOE management document that identifies the potential environmental impacts of operating LANL at the level decided upon in the ROD. The MAP identifies commitments made in the ROD to mitigate those potential impacts and establishes the planned actions and schedule to carry out each commitment.

The SWEIS included a discussion of existing programs, plans, and controls built into the operations at LANL that function as mitigation measures. These programs and controls include operating within applicable regulations, DOE Orders, contractual requirements, and approved policies and procedures. The DOE will undertake additional measures to further mitigate the impacts of continuing to operate LANL at the levels outlined in the ROD. In accordance with DOE's implementing procedures for the National Environmental Policy Act, 10 CFR §1021.331, this MAP is being prepared to address the mitigation commitments expressed in the ROD.

The mitigation measures presented in this MAP are of two types: (1) specific measures that are intended to further minimize the impacts identified in the SWEIS as a possible result of operating LANL in the future at levels outlined in the ROD, and (2) enhancement of existing programs that will improve operational efficiency and minimize future potential impacts from LANL operations.

1.0 Specific Measures:

1.1 Electrical Power

Objective: Manage electric power demands to prevent periods of brownouts by adjusting to the limitations of available power until a solution for a long-term increase in the power supply is in place.

Context: The SWEIS recognizes the need for an increase in electrical power supply and reliability under the preferred alternative as well as other alternatives analyzed. The impact analyses emphasize the severity of these issues and consequences if they are not resolved, e.g., brownouts. Solutions to power supply issues are essential to mitigate the effects of power demand under all alternatives. An operating plan for improved load monitoring, equipment upgrades, and optimization of some available power sources has been discussed. Additional measures being contemplated by DOE include (1) limiting operation of large users of electricity to periods of low demand, (2) contractual mechanisms to bring additional electric power to the region, and (3) options for incremental resources such as on-site cogeneration. DOE and other users of electrical power in the area have been working with suppliers to resolve these foreseeable power issues.

Background: LANL is supplied with electrical power through a cooperative arrangement with Los Alamos County, known as the Los Alamos Power Pool (LAPP), which was established in 1985. The DOE Albuquerque Operations Office (DOE/AL) and Los Alamos County have entered into a 10-year contract known as the Electric Coordination Agreement (ECA) whereby each entity's electric resources are consolidated or pooled. The capacity rating of LAPP resources, less losses, is 113 Megawatts (MW) and 95.7 MW (summer and winter seasons, respectively). The transmission import capacity is contractually limited to 95 MW and 73 MW (summer and winter seasons, respectively). A summer peak LAPP demand recently reached 83 MW.

The ability to accept additional power into the LAPP grid is limited by the regional electric import capability of the existing northern New Mexico power transmission system. In recent years, the population growth in northern New Mexico, together with expanded industrial and commercial usage, have greatly increased the power demands on the northern New Mexico regional power system. Several proposals for bringing additional power into the region have been considered. A recent one, the PNM proposal for a 345 kV power line called the Ojo Line Extension (OLE) Project, has been abandoned. Other power line corridor locations remain under consideration, but it is uncertain when any new regional power lines would be constructed and become serviceable. An additional limitation is the contractual rights held by the LAPP for importing power from the regional transmission network.

Electrical demand from LANL is projected to grow rapidly over the next few years with most of the growth in electrical demand due to new facilities or upgrades of old facilities.

Much of the demand for power is a function of programmatic directions, which can change. For example, the Low Energy Demonstration Accelerator Project (LEDA) was projected to need up to 29 MW of power in the SWEIS. Currently, LEDA is expected to need a maximum of 8 MW for two of three years of projected operation (2000 and 2001.) Based on a recent high electric demand forecast, it is possible that a LAPP peak demand may increase to 109 MW by the year 2002. These estimates were derived from electrical demand forecasts that were approved on March 29, 1999, by LANL's Program Director for Institutional Facilities and Construction and the Group Leader for Utilities and Infrastructure.

One solution to the problem of insufficient load serving capability is to acquire additional transmission rights beyond the current 94 MW. The DOE is contemplating an addition of 50 MW of transmission import capability. Clearly, the additional 50 MW would solve the electrical energy supply problem for the pool for the foreseeable future. The difficulty may be in finding an additional 50 MW source of off-site power to supply the line. An on-site co-generation facility is being considered. These options are currently being evaluated, but no decision has been made.

The Laboratory has a plan for load shedding in the event of a substantive reduction in the supply of power (Power Pool Procedures C10). This plan includes a priority list of facilities. The plan was not necessarily designed to serve for selected reduction in operations that would be needed for managing excess demand, but it could be used for that purpose.

Although conservation alone will not solve the electrical demand problem, conservation can provide some modest short-term relief. LANL prepared an Energy Management plan in 1997 and implements improvements in efficiencies, such as replacing HVAC, lighting, and other units on an annual basis.

Executive Order 12902 of March 8, 1994, mandates a 30 percent reduction in energy use for agencies by 2005 compared with FY 1985. The Laboratory has a performance measure in the University of California/DOE contract that specifically addresses this reduction. The measure is based on a reduction in energy usage from FY 1985 levels in BTUs per gross square feet of building, expressed as a percentage of FY 1985 energy usage. Total energy BTUs includes electricity, natural gas, and LPG. The performance measure calls for a reduction in FY 2000 of 25.5 percent to achieve an "outstanding" rating. Utility loads associated with the operations of LANSCE (defined as experimental processes) are excluded from the measure. The Laboratory already has achieved a 42 percent reduction in FY 1998.

Actions/Schedules:

- LANL to provide bulk electrical forecasts for the next 10 years to DOE. Forecasts were approved by LANL's Program Director for Institutional Facilities and Construction - Completed March 1999.

- **Secure additional electrical services:**

  - An Options Study was completed by DOE/AL and LANL and transmitted to DOE/HQ - July 1999.

  - A Utility Procurement Plan was completed by DOE/AL and transmitted to DOE/HQ - July 1999.

  - DOE Approval and implementation of the Utility Procurement Plan - November 1999.

- Review and revise the C10 plan every five years. Initial review and revision to focus on a power scheduling plan for a fixed consumption level – January 2000.

1.2 Water Supply and Demand

Objective: Manage water demand to prevent exceedances of DOE water rights.

Context: Prior to September 8, 1998, DOE supplied all potable water for LANL, Bandelier National Monument, and Los Alamos County, including the towns of Los Alamos and White Rock. This water was obtained from DOE's groundwater right to withdraw 5,541.3 acre-feet/year or about 1,806 million gallons of water per year from the main aquifer. On September 8, 1998, DOE leased these water rights to Los Alamos County. This lease also included DOE's contracted annual right obtained in 1976 to 1,200 acre-feet/year of San Juan-Chama Transmountain Diversion Project water. The lease agreement is effective for three years, although the County can exercise an option to buy sooner than three years. DOE expects to convey 70 percent of the water rights to Los Alamos County and lease the remaining 30 percent to them. The San Juan-Chama rights will be transferred in their entirety to the County. The agreement between DOE and the County does not preclude provision of additional waters in excess of the 30 percent agreement, if available. However, the agreement also states that should the County be unable to provide water to its customers, the County shall be entitled to reduce water services to DOE in an amount equal to the water rights deficit.

Background. The DOE and LANL recognize the need to adhere to the provisions of the lease agreement. However, it is important to make a distinction between water rights and water use. For example, in 1997, LANL used 38 percent of the total water used, and Los Alamos County used the remaining 62 percent, for the 100 percent total. However, this water use did not use 100 percent of the water rights. LANL used only 27 percent of the

water rights, while Los Alamos County used 44 percent of the water rights, leaving 29 percent of the water rights unused. That unused portion of water rights is available for sale, according to the agreement. The future development of the County could, however, increase the County's water use. Thus, the Laboratory is neither guaranteed 1,662 acre-feet/year nor necessarily limited to 1,662 acre-feet/year.

In addition, it is also important to understand how the Laboratory water use has been determined. Up to the October 1998 transfer of the water production system to the County, the Laboratory was responsible for water production. Water usage by the County was metered. The Laboratory water usage was estimated by subtracting the county usage from the known well production. Until the transfer, users such as Bandelier National Monument and others were included in the Laboratory total, as were losses in the supply system, such as would occur from the purging of wells.

Water is a precious resource, and conservation is appropriate. DOE and LANL reflected this by proposing conservation measures for cooling water associated with TA-3 and TA-53 cooling towers. These conservation measures will allow the Laboratory to bring on additional initiatives and remain within the County allocated water limits.

A first step in developing water conservation measures is the identification of patterns of water usage. Metering of LANL's actual water usage began in October 1998 when Los Alamos County took over the water production system. Meters are planned to be added at selected facilities/equipment and trunk lines to begin to determine specific use at LANL.

A survey of the water infrastructure was conducted to identify leaks. It was determined that leaks were not a major source of water loss. Leaks that are cost effective will be pursued. The losses are primarily associated with fire hydrants. Repairs are currently being conducted.

Cooling towers use over 50 percent of the Laboratory's water. The largest cooling towers, by volume of water consumed, are at TA-53, LANSCE, and at TA-3, for the computing centers. The major constraints on cooling water efficiency are the naturally occurring silica and arsenic concentrations in the water. The concentration of silica in the groundwater is about 88 ppm. Silica begins to precipitate and foul heat-exchanger surfaces as the concentration reaches 200 ppm. Currently, the silica concentration is controlled by operating the towers at 1.5-2.5 cycles. The Laboratory is turning to industry to help identify the best approach to increase the cooling tower water efficiency.

The Laboratory is developing a water roadmap and will update this roadmap annually. This will detail both the water conservation successes and identify opportunities for conservation. LANL will continue to focus on responsible management and use of water through the ongoing development and implementation of programs and operations that seek to conserve water through institutional education, recycling, and innovative technologies. The goal is to integrate water conservation into the operation of LANL.

Actions/Schedule:

- LANL to establish an initial baseline of LANL's actual water usage - October 1999.
- LANL to develop and implement procedures to assure that all new projects will implement water conservation design and techniques - June 2000.
- LANL to determine which equipment and facilities are major users of water and install water meters appropriately - August 2000.
- LANL to complete a water roadmap for water supply and demand at the Laboratory and update annually - October 2000.
- LANL will identify and repair major leaks (primarily fire hydrants) - December 2000.
- LANL to prepare and begin implementation of water conservation goals - October 2001.

1.3 Waste Management

Objective: Reduce waste generation.

Context: Waste treatment, storage and disposal, although not the primary business at LANL, are central to all facilities and technical areas within LANL. The SWEIS provided projections of waste generation for all waste types. Pollution prevention programs are also in place at LANL and have been successful in reducing overall LANL wastes requiring disposal by 30 percent over the last five years. DOE has set goals for the prevention of pollution through reduction in the volume of waste generated by routine operations and through affirmative procurement and recycling for all operations. The most immediate performance measure is the DOE pollution prevention goal of achieving a 50 percent reduction in routine hazardous waste by 1999 compared to 1993.

DOE is in the process of proposing by the year 2005 an 80 percent reduction goal for routine hazardous, low-level, and mixed low-level wastes again compared to a 1993 baseline. In addition, the Laboratory prepares an annual environmental stewardship, waste management, and pollution prevention consolidated roadmap that detail the sources of waste generation and environmental releases and identify the most cost effective actions to eliminate them.

Background: LANL has a set of performance measures in the University of California/ DOE contract that specifically address waste minimization: Routine waste generation will be reduced by 8 percent each year based on the 1993 baseline for low-level waste, hazardous waste, and mixed low-level waste. LANL will also purchase EPA-designated items with recycled content according to the conditions of Executive Order 12873. The Laboratory is pursuing over 50 waste minimization projects addressing all kinds of

Laboratory waste. Waste minimization is integrated into the operation of every major facility. Several Laboratory groups, divisions, and facilities have applied, or are going to apply, for the New Mexico Green Zia Environmental Excellence Award. In addition, waste minimization is being integrated into Integrated Safety Management (ISM). A LANL Implementing Requirement for waste minimization activities is currently in draft. Waste minimization plans developed for DOE and for NMED will be integrated into the ISM system so that the Laboratory has a single integrated framework for managing and communicating environment, health, and safety aspects of site operation. The Environmental Stewardship Office will continue to prepare an annual Pollution Prevention Plan.

Actions/Schedule:

- LANL to develop and implement procedures to assure that all new projects will implement waste minimization for TRU and Mixed TRU waste streams - June 2000.

- LANL to complete a plan for the integration of waste minimization into Integrated Safety Management - October 2000.

- LANL to develop a strategy for implementation of waste minimization and pollution prevention - December 2000.

- LANL to begin implementation of the strategy for waste minimization and pollution prevention - December 2001.

- LANL to reduce waste from routine operations by 80 percent using 1993 as a baseline for the following waste types - December 2005:

  $Hazardous
  $Low Level Radioactive
  $Mixed Low Level Radioactive

$ LANL to recycle 40 percent of sanitary waste from routine operations - December 2005**.**

1.4 Wildfire

Objective: Reduce the threat of a major wildfire impacting facilities, operations, and the environment.

Context: The LANL site and surrounding vicinity are generally forested areas with high fuel loading. The final SWEIS included an accident scenario from a wildfire that was initiated on land adjacent to LANL and spread to the LANL site. It concluded that a major fire is not only credible but also likely. The probability is in the order of 0.1 per year (1 in every 10 years). The current and future risks of wildfires at LANL can only be

mitigated through purposeful environmental intervention and active land management. The development of a comprehensive plan for the active management of forest resources is addressed in the section of this MAP that discusses enhancement to existing programs. The actions discussed in this section relate directly to the mitigation of the wildfire hazard, principally through the reduction of forest fuels.

Background: In 1996, the need for a regional approach to forest management, wildfire hazard reduction, and fire suppression was recognized, and a regional Interagency Wildfire Management Team (IWMT) was formed. The IWMT efforts have fostered consultations between agencies and resulted in the development of data for evaluating the nature of the wildfire problem and for proposing optimal mitigation strategies. During the past several years, in coordination with the IWMT, LANL has completed a number of projects to reduce the fire hazard surrounding key facilities, and increase wildfire response and suppression capabilities.

The wildfire hazard at LANL is currently being addressed by thinning trees along State Route 501, maintaining fire roads and fire breaks and reducing forest fuels near key facilities. Trees were thinned at TA-54 (Area G and L), TA-15 (DARHT), TA-36 (Firing Site), TA-59, and TA-16 (WETF). However, only a limited part of the problem has been addressed thus far. A larger, long-term effort will be required to significantly reduce the hazard.

Actions/Schedule:

$ LANL to develop preliminary program plans for comprehensive wildfire mitigation including construction and maintenance of strategic fire roads and fire breaks, creation of defensible space surrounding key facilities, and active forest management to reduce fuel loadings - December 1999.

$ DOE to complete a programmatic environmental assessment for proposed wildfire mitigation actions - March 2000.

$ LANL to finish second phase of wildfire mitigation actions - September 2000.

2.0 Enhancement of Existing Programs

The mitigation measures that are included in this section are those that will improve operational efficiency and minimize future potential impacts from LANL operations. The mitigations will support the continued development, implementation and refinement of natural and cultural resource programs and plans at LANL. These measures will improve site operations and DOE's role as a regional steward of natural and cultural resources. The plans and their implementation will provide the opportunity for:

- future site development and operations planning;
- identification and assessment of potential impacts;

- development of appropriate and cost effective mitigation measures;
- expedited required regulatory review and compliance processes;
- cost effective operations by improving site-specific policies and implementation requirements for day-to-day operations;
- improving interactions with external regulators and stakeholders.

2.1 Cultural Resources

Objective: Manage, preserve and protect cultural resources using an integrated approach.

Context: Federal Law requires that all Federal Agencies comply with the National Historic Preservation Act, Federal regulations, Executive Orders, standards and other laws that mandate consideration of the effects of Federal actions on historic properties. The LANL site has a significant quantity and diversity of archaeological sites. Approximately 60 percent of LANL lands have been surveyed for archaeological sites and approximately 1,600 sites have been identified in this process. Less attention has been given to historic buildings and structures dating back to the Manhattan period. The need for a comprehensive, integrated approach to cultural resource management has been recognized.

Background: DOE will prepare an Integrated Cultural Resource Management Plan (ICRMP) that will detail how LANL will manage, preserve, and protect cultural resources within the scope of Federal and State laws, regulations, Executive Orders, standards, as well as to the extent practicable, follow Tribal criteria and guidelines. The ICRMP will provide a basis for a unified approach to address the multiplicity of cultural resources located on LANL lands. The plan will serve to streamline many of the administrative steps required by Federal and State laws and regulations.

The scope of the ICRMP will include: preparation of management guidelines, setting forth general Laboratory policy for cultural resources; development of an archaeological overview and research design, including methodologies for site monitoring; definition of periods of significance and identification of the historic context for Laboratory buildings and structures, and identification of those buildings requiring evaluation; preparation of standard operating procedures for cultural resource management; and development of programmatic agreements and memorandum of understanding with the State Historic Preservation Officer to streamline the compliance process.

In FY 1999, an activity to QA/QC past Archaeological Surveys was undertaken. Survey methods and mapping technology has changed significantly over the past 30 years, especially with the use of geographical positioning systems (GPS). Many sites identified in early surveys are difficult to relocate. Precise locational data for sites is needed for effective site planning and project screening. This assessment of past surveys will be used to plan for a program of field verification and differential GPS for site locations in FY 2000.

Actions/Schedule:

- LANL to complete verification of past cultural resource surveys and plan for program of field verification - January 2000.

- LANL to prepare and submit to DOE an annotated outline for the Integrated Cultural Resource Management Plan (ICRMP) - June 2000.

- LANL to complete a draft ICRMP - September 2001.

- LANL to complete archaeological resources overview and research design for evaluation of site significance - December 2001.

- LANL to complete definition of periods of significance for historic buildings and identification of buildings requiring evaluation - January 2002.

- LANL to complete and begin implementation of Standard Operating Procedures for cultural resource management - January 2002.

- LANL to complete Final ICRMP - April 2002.

- LANL to begin implementation of ICRMP - June 2002.

- DOE to negotiate Programmatic Agreement and Memorandum of Agreement with the State Historic Preservation Officer to streamline the compliance process - December 2002.

2.2 Traditional Cultural Properties

Objective: Protection of traditional cultural properties.

Context: Within LANL's limited access boundaries, there are ancestral villages, shrines, petroglyphs, sacred springs, trails and traditional use areas that could be identified by Pueblo and Athabascan communities as Traditional Cultural Properties (TCPs). DOE is committed through ongoing consultation processes with affected Native American Tribes to ensure protection of cultural resources and sites of cultural, historic or religious importance to the tribes.

Background: With input from the tribes participating in the Los Alamos Pueblos Project, DOE will explore the development of a strategy for consultation and coordination for traditional cultural properties and sacred sites in the LANL area. Such a strategy would be intended to increase understanding of traditional cultural properties at LANL to determine strategies for the long-term management of identified traditional cultural properties and sacred sites and to determine appropriate mitigation measures for specific traditional cultural properties.

The strategies will include identification of culturally affiliated Native American Tribes and Organizations, the development of access agreements to traditional cultural properties and sacred sites. In the past, attempts to identify specific traditional cultural properties at LANL have encountered concerns from traditional groups because of the potential for increased risk to these resources if they are individually identified; thus, DOE will explore the potential benefits and risks of such a study, and options to such a study, with the Los Alamos Pueblos Project tribes. This approach is intended to ensure appropriate respect and consideration regarding cultural concerns, while attempting to provide the information and ability to mitigate or avoid potential impacts to traditional cultural properties.

The goal of the consultation and coordination would be an agreement with the relevant Native American tribes for the management of these resources. In FY 1999, an initial effort was undertaken to develop alternative strategies for consultations regarding traditional cultural properties and sacred sites at LANL.

Actions/Schedule:

- LANL to identify and DOE to consult with culturally affiliated Native American Tribes and Organizations - October 1999.

Strategy for consultation and coordination to provide protection for traditional cultural properties and sacred sites:

- LANL to develop and submit to DOE an annotated outline of a strategy for consultation and coordination - December 1999.

- LANL to prepare and submit to DOE for review a draft strategy for consultation and coordination - June 2000.

- DOE to consult with culturally affiliated Native American Tribes and Organizations regarding strategy - August 2000.

- LANL to submit to DOE a draft Memorandum of Agreement with culturally affiliated Native American Tribes and Organizations - April 2001.

- DOE to complete Memorandum of Agreement with culturally affiliated Native American Tribes and Organizations - June 2001.

- LANL to prepare a final strategy, including appropriate mitigation measures - December 2001.

- LANL to negotiate access agreements, as needed - August 2002.

2.3 Natural Resources Management

Objective: Manage natural resources in a fashion that directly supports DOE's Land and Facility Use Planning Policy by integrating mission, economic, ecological, social, and cultural factors in a comprehensive process for guiding land and facility use decisions at LANL.

Context: The concept of integrated natural resource management has become an increasingly important factor in planning and implementing the DOE mission at LANL. In 1994, the Secretary of Energy issued a Departmental policy designed to strengthen and formalize DOE's role in the stewardship of DOE lands. The DOE's Land and Facility Use Planning Policy states:

> "It is the Department of Energy Policy to manage all of its lands and facilities as valuable natural resources. Our stewardship will be based on the principles of ecosystem management and sustainable development. We will integrate mission, economic, ecological, social, and cultural factors in a comprehensive plan for each site that will guide land and facility use decisions. Each comprehensive plan for each site will consider the site's larger regional context and be developed with stakeholder participation. This policy will result in land and facility uses which support the Department's critical missions, stimulate the economy and protect the environment."

The development and implementation of a comprehensive natural resources management plan at LANL will directly support DOE's policy to manage all of its land and facilities as valuable national resources. Through the implementation of such a plan, DOE will improve the agency's role as a steward of natural resources by integrating its mission and operations with biological, water and air resources, using a comprehensive process that will guide land and facility use decisions. One of the goals of natural resource management at LANL is to determine conditions and to recommend management measures that will restore, sustain, and enhance the biological quality and ecosystem integrity at LANL within the regional context of the Pajarito Plateau ecosystem. This process will furthermore consider the site's larger regional context and be developed in consultation with regional land managing agencies and owners (particularly Bandelier National Monument, Santa Fe National Forest, and Native American Pueblos), State agencies, and the U.S. Fish and Wildlife Service. This cooperative effort will ensure a consistent, integrated, and sustainable approach to regional natural resources management.

Background: The historic presence of LANL, with its highly restricted access and other unique land use practices, continues to support a rich diversity of natural resources within northern New Mexico. While restricted access has provided habitat and protection for a rich diversity of plants and animals, other land use practices have resulted in natural resource management concerns that require effective and sustainable solutions. DOE is

committed to continuing to protect its natural resources and improve natural resources management through a regionalized management strategy. A regionalized management strategy would significantly lessen the potential for a loss or decline in quality of regional natural resources resulting from anthropogenic disturbances (e.g., catastrophic wildfire, watershed degradation, erosion, elk overpopulation, spread of contaminants, and habitat loss and fragmentation). As part of the DOE mission at LANL, such an effort would result in a better scientific understanding of the extent and condition of its natural resources in the context of multi-agency land use issues and the regional ecosystem.

As part of existing and ongoing DOE operations, LANL will continue to develop and implement the following natural resource-specific management plans: Threatened and Endangered Species Habitat Management Plan; Groundwater Protection Management Program Plan; Watershed Management Plan; and a Wildfire Program (as described in this MAP). Information contained in these plans and any associated recommendations will be integrated into the Natural Resource Management Plan (NRMP) to achieve its role in guiding land and facility use decisions for the conservation and enhancement of natural resources. In addition, LANL continues to play a key role in establishing a natural resource management policy through active participation in regional planning groups such as the East Jemez Resources Council and the Interagency Wildfire Management Team.

To augment and integrate these efforts, LANL will prepare for DOE an overall NRMP. The NRMP is viewed as a living and evolving planning document. Specific studies and tasks that are identified during the development of the plan will be undertaken as part of the process. It may include new initiatives as well as integrating ongoing programs, plans, and activities at LANL, some of which may be reassessed to ensure their contribution to the goals and objectives of integrated ecosystem management. Specific tasks and studies that are identified during the development of the plan will be undertaken as part of the process.

Actions/Schedule:

DOE will complete and implement an integrated Natural Resources Management Plan with biological, soils, water, and air resource elements that will integrate the principles of ecosystem management into the critical missions of LANL.

- Establish a tripartite planning, management and review team (PMRT) representing the Los Alamos Area Office, Albuquerque Operations Office, and Los Alamos National Laboratory - October 1999.

- LANL to prepare and submit to the PMRT a Work Plan for the development of the NRMP, including identification of specific studies and tasks - December 1999.

- LANL to submit a Preliminary Draft NRMP to the PMRT - December 2000.

- DOE to coordinate formal stakeholder coordination/review of Preliminary Draft NRMP - February 2001.

- LANL to revise Draft NRMP to reflect comments received by stakeholders and submit to PMRT - December 2001.

- DOE coordinates formal stakeholder coordination/review of Revised Draft NRMP - February 2002.

- LANL to submit Final NRMP to PRMT, including implementation strategy - April 2002.

- LANL to begin implementation of NRMP - October 2002.

3.0 Mitigation Action Plan Monitoring and Reporting

Mitigation Action Plan activities will be reported in a LANL Mitigation Monitoring Annual Report to be published each September beginning September 2000. The Annual Report will discuss activities accomplished in the previous year and activities to occur within the next year with specific actions to be taken.