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2008 Site-Wide Environmental Impact Statement for the Continued Operation of Los Alamos National Laboratory (DOE/EIS-0380) Mitigation Action Plan

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ACRONYMS AND TERMS

BA	biological assessment
BMP	best management practice
CAA	Clean Air Act
CFR	Code of Federal Regulation
CMRR	Chemistry and Metallurgy Research Replacement
CMRR-NF	Chemistry and Metallurgy Research Replacement Nuclear Facility
DARHT	Dual-Axis Radiographic Hydrodynamic Test Facility
DD&D	decontamination, demolition, and decommissioning
DOE	(US) Department of Energy
DSA	decision support application
EA	environmental assessment
EIS	environmental impact statement
EMS	Environmental Management System
ENV-DO	(LANS) Environmental Protection Division
ENV-ES	(LANS) Environmental Stewardship Services Group
ESA	Endangered Species Act
FONSI	finding of no significant impact
FRS	flood retention structure
FY	fiscal year
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
LANSCE	Los Alamos Neutron Science Center
LEED	Leadership in Energy and Environmental Design
LTSESS	Long-Term Strategy for Environmental Stewardship and Sustainability
MAP	mitigation action plan
MAPAR	MAP Annual Report

MDA	material disposal area
NEPA	National Environmental Policy Act
Rad-NESHAP	Radionuclide National Emission Standards for Hazardous Air Pollutants
NNSA	National Nuclear Security Administration
NPDES	National Pollutant Discharge Elimination System
PPTRS	Pollution Prevention and Tracking and Reporting System
PR-ID	project requirements identification
PRS	potential release site
RLUOB	Radiological, Laboratory, Utility Office Building
RLWTF	Radioactive Liquid Waste Treatment Facility
ROD	record of decision
SEA	Special Environmental Analysis
SERF	Sanitary Effluent Recycling Facility
SWEIS	Site-Wide Environmental Impact Statement
SSP	Site Sustainability Plan
TA	Technical Area
T&E	threatened and endangered
US	United States
USFWS	US Fish and Wildlife Service
WIPP	Waste Isolation Pilot Plant

1.0 INTRODUCTION

The National Environmental Policy Act (NEPA) Implementing Procedures of the United States (US) Department of Energy (DOE) (Title 10 *Code of Federal Regulations* [CFR] 1021.331) requires completion of a mitigation action plan (MAP) following each environmental impact statement (EIS) and its associated record of decision (ROD) to address mitigation commitments expressed in the ROD(s). The DOE/National Nuclear Security Administration (NNSA) issued the *Final Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory* (2008 SWEIS) (DOE 2008a) in May 2008 and issued a ROD on September 19, 2008 (2008 SWEIS ROD or ROD; DOE 2008b); the ROD was published in the Federal Register (FR26SE08N) on September 26, 2008. In the ROD, DOE/NNSA decided to implement the No Action Alternative and certain elements of the Expanded Operations Alternative. A second site-wide environmental impact statement (SWEIS) ROD (DOE 2009) was published in the Federal Register on June 29, 2009, and again, the No Action Alternative was selected with additional projects from the Expanded Operations Alternative. It is likely that DOE/NNSA will issue other RODs for the continued operation of Los Alamos National Laboratory (LANL or Laboratory) based on the 2008 SWEIS. Any mitigations described in future RODs will be incorporated into this MAP.

In December 2008, DOE issued the SWEIS MAP (DOE 2008c) which included commitments made in the September 2008 and June 2009 SWEIS RODs. The SWEIS MAP is implemented by Los Alamos National Security, LLC (LANS) as the LANL Management and Operations Contractor for DOE/NNSA. The SWEIS MAP may be revised to meet additional requirements associated with future RODs, or to meet the objectives set out in the 2008 SWEIS. This MAP will be made available on the DOE website (http://www.energy.gov/nepa/office-nepa-policy-and-compliance) and in the appropriate DOE/NNSA public reading room(s) or other locations for a reasonable time. Copies of this MAP are available upon written request to DOE/NNSA.

The 2008 SWEIS identified potential environmental impacts resulting from implementation of three alternatives (No Action, Reduced Action, and Expanded Operations) and discussed measures that DOE/NNSA considered for the mitigation or reduction of potential adverse effects. The SWEIS MAP is a DOE/NNSA management document that explains how the mitigation measures identified in the 2008 SWEIS and the 2008 and 2009 RODs will be planned and implemented.

DOE issued a MAP Addendum in September 2009, which included decisions contained in the second ROD. The MAP was further updated and revised to incorporate the mitigations in the *2010 Final Environmental Assessment for the Expansion of the Sanitary Effluent Reclamation Facility and Environmental Restoration of Reach S-2 of Sandia Canyon at Los Alamos National Laboratory Los Alamos, New Mexico* (DOE 2010a) and mitigated finding of no significant impact (FONSI) (DOE 2010b). This MAP has been updated and revised to incorporate the mitigations in the 2011 *Mitigation Action Plan for the Nuclear Facility Portion of the Chemistry and Metallurgy Replacement Project at Los Alamos National Laboratory, Los Alamos. New Mexico* (DOE 2011) and to formally close out those 2008 SWEIS mitigations that have been completed or integrated into established LANL programs.

1.1 Purpose and Organization of the MAP

The SWEIS MAP describes the mitigation measures that will be implemented from the 2008 SWEIS and explains how the mitigation measures will be planned and implemented for those actions selected in the two RODs. There are several types of mitigation measures included in the SWEIS MAP, which are outlined in Section 3.0. Planning and implementation of the mitigation measures and reporting requirements are included in Sections 1.2 and 2.0. Additionally, both SWEIS RODs included commitments to Santa Clara Pueblo as part of ongoing government-to-government relations regarding the 2008 SWEIS. These commitments are outlined in Section 4.0.

1.2 MAP Monitoring and Reporting

1.2.1 SWEIS Yearbook

To measure the accuracy of the 1999 *Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory* (1999 SWEIS) (DOE 1999a) impact analysis, DOE implemented a program to compare actual operational data with the environmental impacts identified in the 1999 SWEIS. These comparisons were published in annual SWEIS Yearbooks. The Yearbooks provided data that could be used to develop an impact analysis for future EISs for the Laboratory. This MAP requires continuation of the SWEIS Yearbooks for implementation of the 2008 SWEIS and the associated RODs. The 2008 SWEIS will be implemented over about a five-year period and the SWEIS Yearbooks will provide NNSA with data to facilitate the production of a new SWEIS if deemed necessary. The SWEIS Yearbooks are prepared by LANS for DOE/NNSA Los Alamos Field Office review and approval through the NEPA Compliance Officer and made available to the public.

1.2.2 MAP Annual Report

Section 5.d(12)(f) of DOE Order 451.1B, *NEPA Compliance Program*, requires the Los Alamos Field Office to prepare an annual report documenting actions taken in accordance with an issued MAP. The first MAP Annual Report (MAPAR) for the 2008 SWEIS was published in fiscal year (FY) 2010 (LANL 2010) and reported actions taken to address the mitigations identified in the 2008 SWEIS MAP and other MAPs issued during FY 2008 and FY 2009. A draft MAPAR summarizing the work conducted in the previous FY will be submitted to Los Alamos Field Office in October of each year for review. The Los Alamos Field Office finalizes and publishes the MAPAR.

2.0 IMPLEMENTATION

The MAP implementation process involves the Los Alamos Field Office and several LANL organizations. The implementation process includes mitigation action management, task scoping, and funding allocation, tracking, technical implementation, annual reporting, and mitigation action commitment closure.

2.1 Roles and Responsibilities

The Los Alamos Field Office is responsible for implementing and tracking the mitigations in the MAP. The daily coordination and management of MAP activities has been delegated by the Los Alamos Field Office to LANS in accordance with their Management and Operations contract (Contract #DE-AC52-06NA25396). The Environmental Protection Division's (ENV-DO) SWEIS Project Office is responsible for implementation of the MAP. The SWEIS Project Office coordinates technical issues regarding the scope and schedule of individual mitigation measures of the MAP with other organizations within LANS. These projects and activities have been assigned to LANL organizations that have primary institutional responsibility for operations that the mitigation actions address.

2.2 Mitigation Tracking

LANS will maintain a log to track the scope, schedule, interim milestones, deliverables, and closure of mitigation action commitments outlined in this MAP. A copy of the tracking log will be transmitted quarterly to the Los Alamos Field Office NEPA Compliance Officer. Any issues in meeting the commitments should be identified when LANS transmits the log to the Los Alamos Field Office.

2.3 MAP Review and Revision

This MAP will be reviewed annually (during the preparation of the MAPAR) to determine if the mitigation measures remain effective and also if mitigation measures have been completed and need to be formally closed. The MAP may be revised to address significant changes, new mitigations, or deficiencies.

Additionally, the MAP will be reviewed after each new ROD or mitigated FONSI is issued to determine if new mitigation measures are required or if mitigation measures previously identified need to be revised.

2.4 MAP Duration and Mitigation Closure

The duration for specific mitigation action commitments will be identified in the MAP tracking log prepared by LANS. As currently scheduled, the implementation of the MAP and all associated mitigation actions is anticipated to be completed at the end of calendar year 2018, or until directed by the Los Alamos Field Office. As individual projects and activities that address specific mitigation measures are completed, LANS will provide formal documentation and rationale for recommending mitigation action closure in their quarterly/annual reports. The Los Alamos Field Office will review the documentation and provide authorization of closure or direction for further action. Final closure of mitigation actions authorized by the Los Alamos Field Office will be reported in the MAPAR and tracked in Section 5.0 of this MAP.

3.0 MITIGATIONS

This section outlines the mitigation measures required to implement the 2008 SWEIS and are based on the mitigation measures incorporated in the SWEIS alternatives. In addition,

mitigations from other NEPA decisions are incorporated into this MAP. There are five types of mitigation measures addressed in this MAP:

(1) Continuing mitigation commitments established by the earlier 1999 SWEIS MAP and mitigation commitments that reflect NEPA decisions that have occurred since the issuance of the 1999 SWEIS ROD (DOE 1999b) (Section 3.1).

(2) Detailed mitigation action commitments for specific projects analyzed in the 2008 SWEIS and included in the ROD intended to minimize the identified environmental impacts (Section 3.2).

(3) Institutional resource management responsibilities, including Laboratory-wide commitments and mitigation (Section 3.3).

(4) Enhancement of existing programs that will improve operational efficiency and minimize future potential impacts from LANL operations (These mitigations have been closed and are listed in Section 5.0).

(5) Mitigation commitments that reflect NEPA decisions that have occurred since the issuance of the 2009 SWEIS ROD (Section 3.4).

Current mitigations are listed below. Mitigations that have been completed and closed are listed, with justification, in Section 5.0.

3.1 Transition of Previous LANL NEPA Mitigation Commitments into the 2008 SWEIS MAP

This section provides an overview of continuing mitigation commitments from the 1999 SWEIS MAP and mitigation commitments resulting from projects initiated after the issuance of the 1999 SWEIS ROD. These NEPA mitigation commitments are included in the 2008 SWEIS MAP reporting process.

3.1.1 Dual-Axis Radiographic Hydrodynamic Test Facility Final EIS

Objective

Update the Dual-Axis Radiographic Hydrodynamic Test (DARHT) Facility MAP (DOE 1996) requirements to reflect current transition to fully contained experiments and close mitigation actions that have been completed.

NEPA and Other Drivers

DOE issued the Final EIS on the DARHT Facility (DOE 1995a) in August 1995 and issued a ROD on October 16, 1995 (DOE 1995b). The DARHT ROD states that DOE has decided to complete and operate the DARHT Facility while implementing a program to conduct most tests inside steel containment vessels with containment to be phased in over 10 years (the Phased Containment Option of the Enhanced Containment Alternative). The DARHT MAP elaborates upon those commitments (DOE 1996).

Mitigation Action Commitment

- Monitor contaminants by sampling soils, plants, mammals, birds, and road kills at the facility and surrounding areas as well as at a control site away from the DARHT Facility.
- Site monitoring and evaluation will consist of periodic soil, water, and other environmental analyses for solid, hazardous, mixed, and radioactive wastes.
- Conduct annual Tribal tours of Nake'muu and maintenance visits.

3.1.2 MAP for the Proposed LANL Trails Management Program

Objective

Continue to implement the Trails Management Program and integrate future mitigation actions into the SWEIS MAPAR to decrease risks associated with recreational trails use on DOE/LANL lands.

NEPA Drivers

In 2003, DOE/NNSA directed LANS to look at establishing a Trails Management Program. DOE/NNSA published the *Final Environmental Assessment for the Proposed Los Alamos National Laboratory Trails Management Program* (DOE 2003a) and FONSI (DOE 2003b) on September 2, 2003. DOE/NNSA issued a MAP (DOE 2003c) for this environmental assessment (EA) on the same date. The public offered more than 125 comments on the draft EA and representatives from San Ildefonso and Santa Clara Pueblos participated, explaining their concerns and perspectives. The National Park Service and Los Alamos County also participated.

Mitigation Action Commitments

- Complete eligibility evaluations for historic trails under the National Historic Preservation Act and identify additional environmental issues on trails use.
- Evaluate and manage trails to determine appropriate closures and/or restrictions.
- Prepare a management plan for trails at LANL.
- Support the use of volunteers for selected trails maintenance projects at LANL.
- Plan, maintain, repair, and construct trails.

3.1.3 Special Environmental Analysis MAP

Objective

Continue to implement ongoing requirements of the Special Environmental Analysis (SEA) MAP (DOE 2000a).

NEPA Drivers

DOE/NNSA prepared and issued the SEA in September 2000 (DOE 2000b). The SEA describes and analyzes DOE and LANS actions taken in response to the Cerro Grande Fire. The SEA identified various mitigation measures that must be implemented under the SEA MAP as an extension of the fire suppression, erosion, and flood control actions.

Mitigation Action Commitments

- Monitor biota and sediment contamination behind the Los Alamos Canyon Weir and the Pajarito Canyon Flood Retention Structure (FRS) and report results in the Annual Site Environmental Report (see Section 3.1.4 for additional information on the FRS).
- Periodically remove sediment from the Los Alamos Canyon Weir based on sedimentation rate and contamination accumulation rate.

3.1.4 Flood and Sediment Retention Structure

Objective

Annually monitor the Technical Area (TA) 18 FRS for safe operation until it is removed, and comply with previous NEPA commitments per the 2008 SWEIS ROD.

NEPA Drivers

DOE/NNSA prepared and issued the 2002 EA, *Proposed Future Disposition of Certain Cerro Grande Fire Flood and Sediment Retention Structures at Los Alamos National Laboratory, Los Alamos, New Mexico* (DOE 2002) and the 2008 SWEIS ROD (DOE 2008b). In 2001, NNSA constructed the FRS in the wake of the Cerro Grande Fire as part of its emergency response actions. Compliance with the EA requires the eventual removal of the FRS in Pajarito Canyon. This structure was constructed to control flooding resulting from increased water flow due to post-Cerro Grande Fire hydrologic conditions.

Mitigation Action Commitments

- Annually monitor the FRS for structural integrity and safe operations until removed.
- Remove portions of the FRS in accordance with DOE/EA-1408.
- Recycle demolition spoils from FRS decontamination, demolition, and decommissioning (DD&D) as appropriate.
- Leave an aboveground portion of the FRS equivalent to the dimensions of a low-head weir to retain potentially contaminated sediments on Laboratory land.
- Remove aboveground portions of the steel diversion wall below the FRS.
- Recontour and reseed disturbed areas to protect surface water quality in Pajarito Canyon after the FRS is removed.

3.2 Project-Specific Mitigation Measures Analyzed in the 2008 SWEIS

3.2.1 Eliminate Effluent Discharge at the Radioactive Liquid Waste Treatment Facility

Objective

Address biological resource compliance requirements associated with eliminating effluent discharges from LANL's National Pollutant Discharge Elimination System (NPDES)-permitted Radioactive Liquid Waste Treatment Facility (RLWTF) outfall.

NEPA and Other Drivers

The 2008 SWEIS considers the impacts of one major discharge elimination project at the RLWTF. Elimination of effluent was evaluated for impacts to threatened and endangered (T&E) species in a biological assessment (BA) for the 2008 SWEIS, *Biological Assessment of the Continued Operation of Los Alamos National Laboratory on Federally Listed Threatened and Endangered Species* (LANL 2006a). The resulting consultations with the U.S Fish and Wildlife Service determined that the action may affect, but would not adversely affect, the Mexican Spotted Owl. It was determined that there would be no effect on the Bald Eagle or Southwestern Willow Flycatcher.

LANL's industrial effluent outfalls are regulated by the State of New Mexico under the Clean Water Act (33. U.S. Code [U.S.C.] § 1251 et seq.) and are NPDES-permitted. LANS has an overall goal of eliminating effluent discharges from its NPDES-permitted outfall at RLWTF as part of the institutional zero liquid discharge objective in the LANL Environmental Management System (EMS). The current and anticipated regulatory requirements for water quality standards drive this action. Wetlands are protected by federal regulation 10 CFR 1022, *Compliance with Floodplain and Wetland Environmental Review Requirements*, and T&E species are protected under the Endangered Species Act (ESA). Impacts to resources are analyzed and mitigated on a per project basis using LANL's project review process.

Mitigation Action Commitment

- All further actions affecting water flow volumes in the Sandia-Mortandad Canyon Area of Environmental Interest will be assessed for positive and negative impacts.

3.2.2 Expanded Operations of the Off-Site Sealed Source Recovery Project

Objective

Ensure adequate controls on the quantities and storage of recovered sealed sources.

NEPA and Other Drivers

The Low-Level Radioactive Waste Policy Amendments Act (Public Law 99-240) of 1985 assigned DOE the responsibility for management of greater than Class C waste. DOE's response to Congress stated that management of greater than Class C wastes was not feasible due to the lack of disposal facilities in the US. As a solution, a management approach was initiated that included DOE's commitment to the collection and storage of greater than Class C waste pending development of disposal facilities. In 1999, the DOE Waste Management Department and DOE's Albuquerque office consolidated three existing projects related to source recovery and management into the Off-Site Sealed Source Recovery Project and designated LANL as the DOE facility to operate the project.

Mitigation Action Commitment

- Institute controls on the quantities and methods of storing sealed sources containing cobalt-60, iridium-192, or cesium-137 to mitigate the effects of potential accidents.

3.2.3 MAP for the Expansion of the Sanitary Effluent Reclamation Facility and Environmental Restoration of Reach S-2 of Sandia Canyon at LANL

Objective

Implement the MAP for the *Environmental Assessment for the Expansion of the Sanitary Effluent Reclamation Facility and Environmental Restoration of Reach S-2 of Sandia Canyon at Los Alamos National Laboratory, Los Alamos, New Mexico* (DOE 2010c).

NEPA Driver

In August 2010, DOE/NNSA issued a FONSI for the *Environmental Assessment for the Expansion of the Sanitary Effluent Reclamation Facility and Environmental Restoration of Reach S-2 of Sandia Canyon at Los Alamos National Laboratory, Los Alamos, New Mexico* (DOE 2010b), on a proposal to expand the size and operational capacity of the Sanitary Effluent Reclamation Facility (SERF), and for possible environmental restoration action measures that may be taken within reach S-2 of Sandia Canyon at LANL. A MAP was published as an appendix to the EA with mitigation action commitments to address potential adverse effects that could result directly, indirectly, or cumulatively from the expansion of SERF (DOE 2010c).

Mitigation Action Commitment

- Implement the SERF MAP.

3.3 Institutional Resource Management Responsibilities

3.3.1 Wildland Fire Management

Objective

Reduce the risk of a wildfire that may adversely impact the public, workers, facilities, operations, and the environment.

NEPA and Other Drivers

Several specific mitigation measures are included in the 2008 SWEIS alternatives including direction that LANS will continue its wildfire management activities and further reduce risks by shipping legacy transuranic waste, currently stored in domes at TA-54, to the Waste Isolation Pilot Plant (WIPP). The DOE/NNSA Wildfire Management Policy (DOE 2003d) states that DOE sites are required to have wildland fire management plans in place that are consistent with DOE Order 450.1, *2001 Federal Wildland Fire Management Policy and Implementing Actions*. To fulfill the requirements of DOE Order 450.1, and address the findings of the Office of the Inspector General audit, a wildland fire management plan was developed in November 2007 and has been implemented. The plan is a detailed course of action to carry out wildland fire management site policies and help achieve fire protection objectives.

Mitigation Action Commitments

- Implement a wildland fire management plan with an adequately funded ongoing program.
- Continue to further reduce wildfire risks by shipping legacy transuranic waste, currently stored in the TA-54 domes, to WIPP (3706 campaign).

3.3.2 Reasonable and Prudent Measures from the Site-Wide BA

Objective

Implement DOE/NNSA commitments for reasonable and prudent measures to mitigate the impact of the continued operation of LANL on T&E species.

NEPA and Other Drivers

In 2006, DOE/NNSA issued the *Biological Assessment of the Continued Operation of Los Alamos National Laboratory on Federally Listed Threatened and Endangered Species* (LANL 2006a). This BA included analysis of all projects in the 2008 SWEIS and the impacts of site-wide initiatives such as zero liquid discharge and ecological risks from contaminants. All analyzed projects received concurrence from the US Fish and Wildlife Service (USFWS) that they may affect, but were not likely to adversely affect, T&E species contingent on LANS incorporating reasonable and prudent measures identified in the BA to mitigate the impacts of projects. Under provisions of Section 7(a)(2) of the ESA, a Federal agency that permits, licenses, funds, or otherwise authorizes activities must consult with the USFWS, as appropriate, to ensure that its actions will not jeopardize the continued existence of any listed species.

Mitigation Action Commitments

- Evaluate, through the project requirements identification (PR-ID) system, the use of span bridges instead of land bridges in areas that cross canyons in T&E species habitats to reduce environmental impacts (land bridge proposals will require USFWS consultation under the ESA).
- Implement all reasonable and prudent measures in the BA through the institutional project review process and implementation of the *Threatened and Endangered Species Habitat Management Plan for Los Alamos National Laboratory* (LANL 2011a).

3.3.3 Managing Biological and Cultural Resources, Implementation of Management Plans

Objective

Establish and implement proactive and cost-effective ways to meet biological and cultural resource management goals.

NEPA and Other Drivers

NEPA, while not mandating any specific standard of protection, requires consideration of biological, natural, and cultural resources in an institution's decision-making process. Mitigations for biological and cultural resources are outlined in the 1999 and 2008 SWEIS RODs. Federal laws associated with biological and cultural resources protection include the ESA, the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, the National Historic Preservation Act, and the Native American Graves Protection and Repatriation Act. There are also state laws, executive orders, DOE orders, and institutional policies for biological and cultural resource protection. Some resource management actions that do not have Federal legal drivers constitute best management practices (BMPs) for mitigating risks. Lack of such consideration can be grounds for legal action against the institution.

Mitigation Action Commitments

- Implement the Cultural Resources Management Plan (LANL 2006b).
- Implement the Biological Resources Management Plan (LANL 2007).

3.4 Transition of LANL NEPA Mitigation Commitments Since the Issuance of the 2008 SWEIS

3.4.1 Chemistry and Metallurgy Research Replacement Project

Objective

Mitigate potentially adverse environmental consequences associated with the Chemistry and Metallurgy Research Replacement Nuclear Facility (CMRR-NF) Project as the CMRR-NF is constructed and operated, and as direct, indirect, and cumulative impacts from these actions occur over time.

NEPA Driver

The mitigations contained within the *Mitigation Action Plan for the Nuclear Facility Portion of the Chemistry and Metallurgy Research Building Replacement Project at Los Alamos National Laboratory, Los Alamos, New Mexico* (DOE 2011) will be incorporated into this MAP when the project resumes.

Mitigation Action Commitments

Mitigation actions are deferred along with project implementation until at least 2017.

President Obama's FY 2013 budget request to Congress on February 13, 2012, states:

> "The Administration proposes deferring the construction of the Chemistry and Metallurgy Research Replacement (CMRR) facility and meeting plutonium requirements by using existing facilities in the nuclear complex."

The budget request further states:

> "Therefore, NNSA proposes deferring CMRR construction for at least five years. Studies are ongoing to determine long-term requirements. Instead of CMRR, NNSA will modify existing facilities and relocate some nuclear materials. Estimated cost avoidance from 2013 to 2017 totals approximately $1.8 billion. In place of CMRR for plutonium chemistry, NNSA will maximize use of the recently constructed Radiological Laboratory and Utility Office Building that will be fully equipped in April 2012, approximately one year ahead of schedule."

Since the CMRR-NF Project is deferred, the mitigations listed in the CMRR-NF MAP will not be included in this SWEIS MAP. When the CMRR-NF Project is resumed, this SWEIS MAP will be revised to include the mitigations.

4.0 COMMITMENTS TO SANTA CLARA PUEBLO

NNSA recognizes that the operation of LANL over the last 65 years has affected the people of neighboring communities in northern New Mexico, including Tribal communities. These effects, which vary in nature across communities, include alterations of lifestyles, community, and individual practices. While the analysis conducted by DOE/NNSA found no disproportionately high and adverse impacts to minority or low-income populations, based on comments from the Santa Clara Pueblo, the 2008 SWEIS ROD stated that:

> "…NNSA will undertake implementation of the decisions announced in this ROD in conjunction with a MAP. The MAP will be updated as the need arises to identify actions that would address specific concerns and issues raised by the Santa Clara Pueblo as well as those of other tribal entities in the area of LANL."

The SWEIS ROD also stated that:

> "…with respect to the concerns raised by the Santa Clara Pueblo, the NNSA will continue its efforts to support the Pueblo and other tribal entities in matters of human health, and will participate in various intergovernmental cooperative efforts to protect indigenous practices and locations of concerns. NNSA will conduct government-to-government consultation with the Pueblo and other tribal entities to incorporate these matters into the MAP."

To this end, the NNSA Los Alamos Field Office consulted with Santa Clara Pueblo and agreed to provide one-time funding to the Pueblo to develop a mutually acceptable plan to address specific environmental justice and human health concerns and issues identified by the Santa Clara Pueblo during the SWEIS process. The plan will include specific tasks and timelines, and will identify the necessary NNSA and Pueblo resources to help ensure implementation of the plan. In consultation with Santa Clara Pueblo, the NNSA Los Alamos Field Office shall then update the MAP to incorporate these actions.

5.0 COMPLETED MITIGATION COMMITTMENTS

Many of the mitigations listed in the original 2008 SWEIS MAP and its subsequent revisions have been completed or the actions are integrated into well-established LANL programs. These mitigations are no longer tracked as NEPA mitigations. Table 5-1 provides a summary of all mitigations from the LANL SWEIS MAP that have been completed or are being implemented through other programs. More detailed information relating to the justification for closure of a mitigation can be found in the MAPARs.

Table 5.1 LANL SWEIS MAP mitigations that have been completed or integrated into other programs.

Topic	Mitigation Action Commitment	NEPA Driver	Justification for Closure of Mitigation
DARHT MAP	Reduce annual surveillance sampling schedule to soils and one additional medium.	MAP for DARHT EIS (DOE/ EIS-0228; Oct. 1996)	Annual surveillance sampling was reduced in 2009. Annual sampling will continue to be done by LANL's Environmental Stewardship Services Group (ENV-ES). Mitigation Complete
	Emissions data from contained experiments and comparisons with results from previous operations, starting in 2001, will be included in the 2009 SWEIS MAPAR.		Emissions data was included in the 2009 SWEIS MAPAR (LA-UR-09-06935). Mitigation Complete
Trails MAP	Complete rehabilitation of cultural resources impacted by the Cerro Grande Fire	DOE/EA-1431 (Aug. 2003) and FONSI (Sept. 2003)	Rehabilitation was completed in 2012. Erosion controls and fencing were installed, and some vegetation was removed from the cultural sites. Mitigation complete (future site monitoring conducted as part of implementation of the LANS Cultural Resources Management Program)
	Establish the Trails Working Group to carry out the Trails Management Program.		The Trails Working Group was established in 2003 and meets monthly. Mitigation Complete
Air Emissions	Continue air monitoring program to comply with the Clean Air Act (CAA), including monitoring radiological air emissions. Monitor and track Los Alamos Neutron Science Center (LANSCE) emissions to maintain the annual dose to the public under the administrative limit.	LANL Clean Air Act Title V (42 U.S.C § 7661 et seq.) site-wide permit No: P100-R1-M1 (June 2012); MAP for the 2008 SWEIS (Dec. 2008)	LANS complies with the CAA and operates under Title V site-wide permit No: P100-R1-M1 and the Radionuclide National Emission Standards for Hazardous Air Pollutants (Rad-NESHAP) Program (40 CFR 61 Subpart H). CAA compliance will continue via the LANL Air Quality program. Mitigation Complete

Topic	Mitigation Action Commitment	NEPA Driver	Justification for Closure of Mitigation
Air Emissions (cont.)	Use existing PR-ID program and other tools to assess potential air quality impacts from new or modified projects and provide BMPs to control emissions (e.g., maintaining construction equipment and routine watering or eco-friendly chemical stabilization to control fugitive dust).		LANS complies with the CAA and operates under Title V site-wide permit No: P100-R1-M1 and the Rad-NESHAP Program (40 CFR 61 Subpart H). CAA compliance will continue via the LANL Air Quality program. Mitigation Complete
	Removal of contamination from material disposal areas (MDAs) and other potential release sites (PRSs) would be conducted in a manner that protects the environment, the public, and worker health and safety.		MDA B remediation was completed in 2012. DOE awaits a Certificate of Completion from the New Mexico Environment Department. LANS complies with the CAA and operates under Title V site-wide permit No: P100-R1-M1 and the Rad-NESHAP Program (40 CFR 61 Subpart H). CAA compliance will continue via the LANL Air Quality program. Mitigation Complete
	Removal of waste from some large MDAs may require the use of temporary containment structures to limit possible releases of contaminated material to the environment to levels within applicable standards and as low as reasonably achievable.		LANS complies with the CAA and operates under Title V site-wide permit No: P100-R1-M1 and the Rad-NESHAP Program (40 CFR 61 Subpart H). CAA compliance will continue via the LANL Air Quality program. Mitigation Complete
Environmental Justice	Continue consultations and both formal and informal public meetings.	2008 ROD for the LANL SWEIS (Sept. 2008)	Consultations and public meetings will continue via the NEPA process for individual projects. Additional information regarding Environmental Justice at LANL can be found in: *Environmental Justice Five-Year Implementation Plan Third and Fourth Year Annual Progress Reports* (DOE 2013). Mitigation Complete

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Environmental Justice (cont.)	Improve upon and implement effective communication strategies to provide fair and equitable sharing of information about LANL operations to surrounding minority and low-income communities.		LANS continues to implement Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations through its Community Commitment Plan and associated programs, the LANS Regional Purchasing Plan, the LANS Small Business Plan, and the LANS Diversity Plan, as stipulated in the LANS Prime Contract. Additional information regarding Environmental Justice at LANL can be found in: *Environmental Justice Five-Year Implementation Plan Third and Fourth Year Annual Progress Reports* (DOE 2013). Consultations will continue via the NEPA process for individual projects. Mitigation Complete
SWEIS Biological Assessment	Develop and implement a wetlands/floodplains management plan to address protection of wetlands, riparian areas, and springs.	BA for the 2008 SWEIS (LA-UR-06-6679; 2006)	Riparian Inventory completed in FY 2012. This inventory provided the data necessary to manage these resources effectively. Mitigation Complete
	Evaluate watershed-specific ecological risk assessments for T&E species and update outdated site-wide modeling for species.		Watershed-specific ecological risks are integrated into the decision support application (DSA). Ecological risk will continue to be assessed via the DSA and integrated review tool. Mitigation Complete (Compliance with regulations is managed as part of the LANS Biological Resources Management Program)

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Energy Conservation: Electrical	Upgrade electrical infrastructure in buildings to reduce electrical usage.	2008 ROD for the LANL SWEIS (Sept. 2008) LANL Site Sustain-ability Plans (SSPs) (LA-UR-11-01856; March 2011) (LA-UR-12-01337; Dec. 2011) (LA-UR-12-26715; Dec. 2012) (LA-UR-13-29595; Dec. 2013)	Installed LED lighting upgrades at: TA-16-302, TA-03-1410, TA-03-30, TA-60-01, TA-03-261, and parking lot LED lighting upgrades between Laboratory Data Communications Center and Transit station plus a photocell for reduced lighting. Solar lighting purchased for TA-54 night work. Energy conservation at LANL is implemented through the SSP. Mitigation Complete
	Install one gas-fired combustion turbine generator to support peak demand and upgrade existing steam turbines.		Rolls-Royce Combustion Gas Turbine Generator was installed in 2009. Mitigation Complete
	Meter major energy user facilities with high-end “Square-D” meters (as required), and sub-meter, when necessary, all other facilities to quantify and evaluate electrical consumption.		Created Data Center Evaluation Team and identified and evaluated the extent of metering required within Data Centers. Updated metering server Square D Powerlogic software. Mitigation is implemented through the SSP and Long-Term Strategy for Environmental Stewardship and Sustainability (LTSESS). Mitigation Complete

Topic	Mitigation Action Commitment	NEPA Driver	Justification for Closure of Mitigation
Energy Conservation: Electrical (cont.)	Implement Energy Savings Performance Contract third-party financed retrofit projects to improve building efficiencies LANL-wide with individual satellite boilers to supply steam to TA-03 buildings, including the Health Research Laboratory at TA-43.		Completed High Performance Sustainable Buildings Guiding Principle implementation in 60-175, 63-0033, 63-111, 03-1411. Completed 21 Extended Industry Standard Architecture Audits (25% of covered facilities) to identify energy conservation measures. Upgraded to Configuration Manager 2012 on eligible computers to reduce energy. Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete
	Purchase additional renewable energy and/or renewable energy credits.		Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete
	Purchase and/or lease *Energy Star* electronics.		Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete
	Improve new building efficiencies by integrating Leadership in Energy and Environmental Design/High Performance Sustainable Building design for new construction.		High-performance sustainable buildings working groups; Radiological, Laboratory, Utility Office Building (RLUOB) Leadership in Energy and Environmental Design (LEED) Gold certified. Completed High Performance Sustainable Buildings Guiding Principle implementation in 60-175, 63-0033, 63-111, 03-1411. Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete

Topic	Mitigation Action Commitment	NEPA Driver	Justification for Closure of Mitigation
Energy Conservation: Natural Gas	Meter major energy user facilities with high-end "Square-D" meters (as required), and sub-meter other facilities when appropriate to quantify and evaluate natural gas consumption to enable future conservation efforts.	2008 ROD for the LANL SWEIS (July 2008) DOE/EA-1430 EA and FONSI (Dec. 2002)	22 building meters, 1 combustion gas turbine generator meter, 1 steam/power plant (2 meters), 8 satellite steam plants, and 10 Los Alamos County Interchange meters have been installed for a total of 42 metered gas consuming facilities. Completed High Performance Sustainable Buildings thermal metering & water, air, gas, electric, and steam installations. Completed High Performance Sustainable Buildings Guiding Principle implementation in 60-175, 63-0033, 63-111, 03-1411. Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete
	Install more efficient gas-fired combustion turbine generators and upgrade existing steam turbines to conserve power and energy.		Rolls-Royce Combustion Gas Turbine Generator was installed in 2009. Mitigation Complete
Energy Conservation: Water	Expand the SERF and take advantage of additional opportunities to increase the amount of recycled water usage and reduce water consumption at LANL.	2008 ROD for the LANL SWEIS (Sept. 2008)	Expansion was completed in August 2012. Operated SERF to reuse approximately 20 million gallons of water in FY 2013 and 7 million to date on FY 2014. Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete
	Promote water conservation projects and plans that contribute to compliance with DOE Order 430.2B.		Design is complete and construction has started for site-level water meters. Mitigation is implemented through the LANL SSP and LTSESS. Mitigation Complete

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Pollution Prevention	Annually report waste reduction performance against EMS waste reduction goals.	DOE O 450.1 (June 2008) Module VIII, Section B.1, of LANL's Hazardous Waste Facility Permit (NM0890010515-1; Jan. 2013)	Waste reduction performance is tracked and reported through the Pollution Prevention Tracking and Reporting System (PPTRS) and integrated into the EMS and SSP. Mitigation Complete
	Continue to integrate waste reduction activities into LANL's EMS.		Waste reduction goals are integrated into annual Environmental Action Plans as part of the EMS. Mitigation Complete
Clean Fill	Use excavation and demolition spoils locally to minimize purchase or new excavations of clean fill when feasible.	2008 ROD for the LANL SWEIS (Sept. 2008)	The Clean Fill Database is integrated with the PR-ID and the yard is operational. The LANL Utilities and Infrastructure organization will continue to operate the clean fill yard. Mitigation Complete
	Report annually on reuse of clean fill materials from excavations and DD&D.		Clean Fill data is tracked in the PPTRS. Mitigation is implemented through the LANL SSP and PPTRS. Mitigation Complete

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Traffic Mitigations	Identify possible solutions (e.g., schedule activity for off-peak hours, reroute truck traffic, construct alternative roads, use multiple shifts, and use alternative entries and exits) to minimize traffic issues for Royal Crest Mobile Home Park and the Los Alamos Town Center related to DD&D, remediation, and site closure projects.	MAP and 2008 ROD for the LANL SWEIS (Sept. 2008) DOE Order 430.2B (Feb. 2008)	No alternate route required. Mitigation Complete
	Encourage alternative transportation, including walking, carpooling, bicycling, and public transportation.		Redesigned Gamma Ray Road to include a pedestrian walkway and bike lane from Pajarito Road to TA-48. Completed design standards for trail improvements throughout the Laboratory. Alternative transportation is integrated into the EMS. Mitigation is implemented through the LANL SSP and Green Teams. Mitigation Complete
	Consider plans for an alternative route off DP Mesa.		No alternate route required. Mitigation Complete
Site Planning	Enhance the decision support tool to offer an objective and semi-quantitative method for integrating opportunities and constraints for project planning and compliance.	MAP and 2008 ROD for the LANL SWEIS (Sept. 2008)	Task Complete; DSA training is ongoing. The Integrated Land Management Planning (now known as the Forest Management Plan) is being developed. Mitigation Complete
	Use Project Review and Requirements System in concert with the decision support tool and project site selection process to better identify potential site planning constraints early in project development.		DSA is complete. Integration of DSA with the PR-ID is ongoing. Mitigation Complete.
	Use the decision support tool to comply with Land Transfer Regulations (10 CFR 770).		DSA is complete and will be used to comply with Land Transfer regulations. Mitigation Complete

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Compliance Assurance	Implement compliance assurance process on a sample of PR-ID projects.	MAP and 2008 ROD for the LANL SWEIS (Sept. 2008)	*Compliance Assurance Subtask Pilot Project Final Report—FY 2009* LA-UR-09-06307 *Compliance Assurance Subtask Pilot Project Final Report—FY 2010* LA-UR-10-07064 Mitigation Complete
	Develop metrics and track results.		Mitigation Complete
	Implement process improvement measures as appropriate.		Process improvements identified in *Compliance Assurance Subtask Pilot Project Final Report*—FY 2009, LA-UR-09-06307 and *Compliance Assurance Subtask Pilot Project Final Report*—FY 2010, LA-UR-10-07064 have been proposed to the PR-ID program manager and several have been implemented. Mitigation Complete.
	Formally assign a functional manager for the PR-ID process and support tool and ensure supporting authority and funding for effective use in project development, compliance, and site planning.		Mitigation Complete

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