Independent Oversight Review of the Los Alamos Field Office Processes for Laboratory Oversight of Radiological Controls Activity-Level Implementation

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Office of Safety and Emergency Management Evaluations
Office of Enforcement and Oversight
Office of Health, Safety and Security
U.S. Department of Energy

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Acronyms

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
CRAD	Criteria, Review, and Approach Document
CY	Calendar Year
DOE	U.S. Department of Energy
DSA	Documented Safety Analysis
EWMO	Environmental and Waste Management Operations
FAM	Functional Area Manager
FOD	Facility Operations Directorate
FR	Facility Representative
FY	Fiscal Year
HSS	DOE Office of Health, Safety and Security
IRSC	Institutional Radiation Safety Committee
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
LANSCE	Los Alamos Neutron Science Center
LASO	Los Alamos Site Office
LLW	Low-Level Radioactive Waste
MP	Management Procedure
NA-LA	NNSA Los Alamos Field Office
NNSA	National Nuclear Security Administration
OFI	Opportunity for Improvement
PCM	Personnel Contamination Monitor
POD	Plan of the Day
RAM	Radioactive Material
RCT	Radiological Control Technician
RP	Radiation Protection
RPO	Radiation Protection Observation
RPP	Radiological Protection Program
RWP	Radiological Work Permit
SD	Supplemental Directive
SME	Subject Matter Expert
SMP	Safety Management Program
TA	Technical Area
TRU	Transuranic Waste
WNR	Weapons Neutron Research Facility

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1.0 PURPOSE

The Office of Enforcement and Oversight (Independent Oversight), within the Office of Health, Safety and Security (HSS), conducted a review of National Nuclear Security Administration (NNSA) Los Alamos Field Office (NA-LA) processes for laboratory oversight of radiological protection program (RPP) activity-level implementation by Los Alamos National Security, LLC (LANS) and its subcontractors at Los Alamos National Laboratory (LANL) at the Los Alamos Neutron Science Center (LANSCE) and the Environmental and Waste Management Operations (EWMO) Technical Area (TA)-54 Area G facilities.

Independent Oversight conducted the review within the broader context of ongoing targeted assessments of radiological control programs, with an emphasis on the implementation of radiological work planning and control across U.S. Department of Energy (DOE) sites that have hazard category 1, 2, and 3 facilities. The purpose of this set of facility-specific targeted reviews is to evaluate the flowdown of occupational radiation protection (RP) requirements (as expressed in facility RPPs) into work planning, control, and execution processes, such as radiological work authorizations that include radiological work permits (RWPs) and other technical work documents, and to evaluate DOE and NNSA processes for laboratory oversight.

To meet the goals of the targeted review, Independent Oversight performs assessments that are primarily driven by activity-level observations. After completing a set of facility-specific reviews, HSS will develop a report with a compiled analysis of RPP activity-level implementation throughout the DOE complex.

This targeted review was performed at NA-LA from January 13-16, 2014. This report discusses the scope, background, methodology, results, and conclusions of the review, as well as opportunities for improvement (OFIs).

2.0 SCOPE

The scope of this review included a review of the processes used by NA-LA – formerly known as the Los Alamos Site Office (LASO) – for oversight of radiological control activities associated with laboratory operations at LANSCE (also known as TA-53) and EWMO TA-54 Area G facilities that are conducted under the LANL RPP.

At LANSCE, Independent Oversight's review included the Lujan Center and the Weapons Neutron Research Facility (WNR). The Lujan Center is a national user facility for defense and civilian research in nuclear and condensed-matter sciences, hosting scientists from national laboratories, universities, industry, and international research facilities. WNR, also a user facility, also conducts fundamental and national security research, utilizing methods that include neutron induced reactions, single pulse experiments, lead slowing-down spectrometry, high power target testing, and isotope production measurements. EWMO performs a variety of low-level radioactive waste (LLW) and transuranic waste (TRU) management operations within TA-54 Area G.

The scope of this review did not include RPP activity-level implementation performed by LANS and its subcontractors at LANL, as noted in *Plan for the Independent Oversight Targeted Review of Radiological Controls Activity Level Implementation at the Los Alamos National Laboratory*, dated July 12, 2013. Independent Oversight previously evaluated this area at LANL on August 19-29, 2013, and the results were reported separately in *Independent Oversight Review of the Los Alamos National Laboratory Radiological Controls Activity-Level Implementation*, dated November 2013.

3.0 BACKGROUND

The Independent Oversight program is designed to enhance DOE safety and security programs by providing DOE and contractor managers, Congress, and other stakeholders with an independent evaluation of the adequacy of DOE policy and requirements, and the effectiveness of DOE and contractor line management performance in safety, security, and other critical functions as directed by the Secretary of Energy. The program is described in and governed by DOE Order 227.1, *Independent Oversight Program*, a comprehensive set of internal protocols, and HSS criteria, review, and approach documents (CRADs).

Activity-level implementation of radiological controls was identified as an Independent Oversight targeted review area for 2013 in an HSS memorandum from the Chief Health, Safety and Security Officer to DOE senior line management, *Independent Oversight of Nuclear Safety – Targeted Review Areas Starting in FY 2013*, dated November 6, 2012. The memorandum also stated that the performance of the DOE oversight function would be evaluated during the targeted reviews to provide input to the overall evaluation of DOE Federal assurance capability. As noted, the *Plan for the Independent Oversight Targeted Review of the Radiological Controls Activity Level Implementation at Los Alamos National Laboratory*, dated July 12, 2013, defines the specific focus at LANL for this targeted review area. Title 10 CFR Part 835, *Occupational Radiation Protection*, establishes the requirements for developing, implementing, and maintaining an RPP. Title 10 CFR 835.101(a), *Radiation protection programs*, states that "A DOE activity shall be conducted in compliance with a documented radiation protection program (RPP) as approved by the DOE." Each DOE site that works with radiological material has developed an RPP and supporting implementing procedures for radiological control.

The LANL RPP is documented in the LANL *Los Alamos National Laboratory 10 CFR 835 Radiation Protection Program*, Rev. 7.0, dated June 1, 2011, and approved by NA-LA on May 31, 2011.

In August 2013, Independent Oversight conducted a review of RPP activity-level implementation performed by LANL and found LANL has a sound radiation protection infrastructure and has developed appropriate programmatic radiological protection documentation. Both LANSCE and Area G make effective use of robust engineering controls to mitigate hazards associated with radiological operations. Appropriate levels of external and internal radiological exposure control measures are in place, and the Lujan Center effectively defined and implemented a number of corrective actions to a recent Tc-99 contamination event. While a number of positive attributes were noted during observation of LANSCE and Area G work, Independent Oversight also found examples of weaknesses in proper application of institutional and facility radiological requirements in some areas. These weaknesses included use of radiation work permits and facility radiation protection requirements documents, consistency and clarity of radiological posting and labeling, proper personnel protective equipment doffing and contamination control, and response to abnormal operations.

4.0 METHODOLOGY

This review was guided by selected lines of inquiry associated with field element oversight processes contained in HSS CRAD 45-21, Rev. 1, *Feedback and Continuous Improvement Inspection Criteria and Approach – DOE Field Element*, to collect and analyze data on NA-LA oversight activities. The following CRAD elements were reviewed:

- *The Field Office has developed and implemented processes and procedures to effectively oversee laboratory RPP performance. (DOE Order 226.1B)*

- *The Field Office has adequately trained and qualified staff to oversee laboratory RPP performance. (DOE Order 226.1B, DOE Order 360.1C)*

- *The Field Office has established formal training and qualification requirements and staffing levels for Facility Representatives (FRs). Assigned FRs are qualified and minimum staffing levels are met. (DOE Order 426.1)*

- *Issues identified during previous reviews (e.g., CDNS* [Chief of Defense Nuclear Safety] *Biennial Reviews, HSS reviews, self-assessments, etc.) have been appropriately resolved, corrective actions have been completed and are adequate, or a clear path to completion is indicated. (DOE Order 226.1B)*

Review of NA-LA processes for laboratory oversight included NNSA supplemental directives and NA-LA procedures for oversight, assessment plans and schedules, line management oversight activity and surveillance reports (e.g., Facility Representative daily reports, surveillances, assessments), records for documenting and communicating issues (e.g., Attachment A forms), and training and qualification records.

5.0 RESULTS

The results of the Independent Oversight review are organized to address the following aspects of NA-LA oversight processes and procedures for ensuring the effectiveness of the flowdown of laboratory occupational RP requirements to work planning, control, and execution processes:

- NA-LA Program Plans and Processes
- NA-LA RP Functional Area Manager (FAM) Oversight Activities
- NA-LA Facility Representative Activities
- Assessments of NA-LA Radiation Program Oversight Program

NA-LA Program Plans and Processes

The *LASO Integrated Management System Description*, including *LASO Functions, Responsibilities, and Authorities*, Plan 00.14 Revision 1, identifies NA-LA procedures and mechanisms associated with the day-to-day oversight of laboratory activities. The *LASO Management Procedure* (MP) 00.08, *Implementation of Los Alamos Site Office Line Oversight*, defines NA-LA's overall approach for conducting line oversight of LANL, which is consistent with requirements and direction contained in DOE Order 226.1B and NNSA NA-1 Supplemental Directive (SD) 226.1A, *NNSA Line Oversight and Contractor Assurance System Supplemental Directive*. NA-LA's oversight of LANL safety management programs (SMPs), including the RPP, uses the risk-informed process defined in LASO MP 00.13, *LASO Risk-Informed Oversight Planning*. NA-LA has one subject matter expert (SME) who serves as the NA-

LA RP FAM who performs oversight of LANL RPP implementation. The NA-LA RP FAM is also assigned responsibility for oversight of the LANL packaging and transportation functional area.

NA-LA RP FAM indicated that the determination of the level of RP oversight at the laboratory considers the vulnerability of various elements and activities of the laboratory's RPP, which include contamination control, work planning, and material release. Work planning, including work control, was judged to be the highest risk, and particularly significant in nuclear facilities. In addition, the NA-LA RP FAM indicated that the implementation and transparency of the LANL contractor assurance system for RPP were judged to be very mature. As a result, for the last three annual risk-based assessment planning cycles, including the current fiscal year (FY) 2014 assessment cycle, the NA-LA RP FAM did not identify a need for any additional NA-LA assessments beyond those already planned by the laboratory.

The NA-LA assessment planning documents for FY 2014 identify plans for shadowing of a scheduled LANL internal assessment of 10 CFR 835 implementation, an external assessment of the LANL dosimetry program, and a LANL internal assessment of activity-level radiological work and contamination control. However, LANL cancelled the scheduled internal assessment of activity-level radiological work and contamination control review after considering the efforts and results of other oversight activities that assessed similar aspects of RPP performance (i.e., an FY 2013 LANL triennial assessment of field implementation of RPP, the August 2013 Independent Oversight targeted review of LANL radiological controls at the activity level, and the HSS Voluntary Protection Program review that also sampled aspects of radiological work).

NA-LA Radiation Protection Functional Area Manager Oversight Activities

NA-LA shadowed the prior internal LANL triennial management assessments of 10 CFR 835 implementation and the Independent Oversight targeted review. The NA-LA RP FAM also shadows scheduled LANL facility-centered assessments of LANL nuclear facilities that identify the RPP as a credited SMP within the facility's documented safety analysis (DSA). The NA-LA RP FAM also conducts other oversight and operational awareness activities, including, but not limited to, following up on LANL event critiques for RP safety events; attending LANL Institutional Radiation Safety Committee (IRSC) meetings; attending weekly LANL RP manager's technical meetings; and conducting facility walkthroughs with NA-LA FRs to observe RP postings and work practices. Typically, the NA-LA RP FAM follows up on most RP observations (RPOs) reported through the weekly LANL RP manager's technical meeting or by attendance at critiques.

Independent Oversight observed several scheduled operational awareness activities representative of activities typically performed by NA-LA RP FAM on a routine basis, including:

- **Follow-up on a critique for an RPO on a contamination event at LANL's Sigma Facility.** The NA-LA RP FAM, along with the assigned FR, walked down the basement of the Sigma Facility where a small amount of oil contaminated with samarium 151 had been found on a worker's safety shoe; the worker had been removing disconnected vacuum pumps located on a platform roughly 12 feet from the basement floor. The NA-LA RP FAM discussed the event with the FR, observed the location of the pump removal work activity and the current storage area where the pumps were relocated, and interviewed the radiological control technician (RCT) who was present during the event. Additional follow-up activities were planned for a later time, when key laboratory personnel would be available.

- **LANL RP manager's meeting on development of LANL institutional requirements document for control of dispersible radioactive material (RAM).** The purpose of the meeting was to solicit feedback from LANL RP managers on a proposed risk ranking methodology for establishing RP

controls for dispersible RAM. This action was taken in response to a Federal accident investigation into contamination at the LANSCE and was intended to strengthen LANL institutional policies and requirements for control of dispersible RAM. The NA-LA RP FAM was knowledgeable of the proposed methodology discussed in the meeting, and had provided comments for LANL's consideration during its development.

- **Monthly LANL IRSC meeting.** A number of topics were covered during this meeting, including results from a process review team established to identify improvements to reduce glove breaches and failures; calendar year (CY) 2013 As Low As Reasonably Achievable (ALARA) goal performance; proposed ALARA goals by each Facility Operations Directorate (FOD) for CY 2014; and LANL RP performance metrics and trends. The NA-LA RP FAM was an active participant during the meeting, fielding questions and providing NA-LA's perspective on observed RP performance when appropriate. The topics covered during this meeting were especially valuable in providing insights into RP performance as an operational awareness activity, particularly the review of proposed FY 2014 ALARA goals, which covered planned radiological work activities anticipated by each FOD and formed the basis for the proposed ALARA goals for IRSC approval.

Operational awareness and oversight activities specific to LANSCE and TA-54 have been performed within the last year. The NA-LA RP FAM, accompanied by the assigned FR, has conducted a number of walkthroughs at LANSCE to review RP practices and has conducted follow-up activities specific to the recovery activities and management actions in response to the Federal accident investigation into contamination at LANSCE. For example, the NA-LA RP FAM conducted walkthroughs of the experimental research areas at the Lujan Center and reviewed and demonstrated a working knowledge of the current sample management practices established at LANSCE. The NA-LA RP FAM also followed up on several reported RPOs at LANSCE. For example, during Independent Oversight's onsite visit, the NA-LA RP FAM was coordinating with the LANSCE FR on follow-up activities for a reported RPO at the WNR when a worker caused a personnel contamination monitor (PCM) alarm and the responding RCT found contamination on the worker's clothing.

The NA-LA RP FAM has also conducted several walkthroughs at TA-54 Area G. For example, the NA-LA RP FAM, the Area G FR, and another FR conducted a walkdown of Area G focused on implementation of the RPP SMP credited in Area G's DSA. These individuals identified twelve issues related to Area G designations and postings and contamination control functional areas that were non-compliant with 10 CFR 835 as implemented by LANL P121 and Area G's RPP SMP. Although the NA-LA RP FAM conducts walkthroughs of LANL facilities and all NA-LA SMEs are expected to conduct routine field work observations as part of their operational awareness activities, the NA-LA RP FAM indicated that fewer walkthroughs are conducted than are needed to meet his and NA-LA management's expectations (see **OFI-1**).

Independent Oversight reviewed the NA-LA staffing plans and the NA-LA RP FAM training and qualification records and found no concerns. The NA-LA RP FAM has a PhD in RP with over 25 years of related experience, and is currently qualified in the DOE technical qualification program in the RP functional area. Training records indicate that the NA-LA RP FAM is maintaining his continuing training requirements.

NA-LA Facility Representative Activities

NA-LA operational awareness activities for activity-level LANL RPP implementation are also performed by assigned NA-LA FRs. Although LANSCE is a non-nuclear facility, LANS elected to apply DOE Order 422.1, *Conduct of Operations*, to LANSCE, in accordance with LASO MP 06.04, *Facility Representative (FR) Program*, and NA-LA has assigned one fully qualified FR to validate

implementation of LANSCE facility safety basis requirements. The LANSCE FR responsibilities include assessing key elements of conduct of operations and credited SMPs, including RPP implementation, and verifying credited controls identified in the LANSCE authorization basis. In addition, NA-LA also assigned an FR from Area G to periodically conduct walkthroughs of LANCSE's Lujan Center experimental areas to strengthen NA-LA's presence in monitoring workplace practices. For EWMO, NA-LA currently has assigned two fully qualified FRs who share responsibilities for coverage of Area G. NA-LA also has one FR in training. In addition, a number of FRs assigned to other LANL facilities have Area G site access qualification in order to support oversight of Area G during backshift operations, as needed.

Per LASO MP 06.04, *LASO Facility Representative Program*, FRs are required to report to their assigned facility each morning, where they review operator and/or control room logs, attend plan-of-the-day (POD) and plan-of-the-week meetings, conduct facility walkthroughs, discuss topics of concern with facility management and staff, and review abnormal occurrence information. The key activities of each FR, along with the status of key facility work activities, are summarized in an FR daily report.

FR daily reports from April 1 through December 31, 2013, show evidence of routine FR activities related to RPP implementation at LANSCE, including the Lujan Center and Area G facilities. FR activities at LANSCE included attendance at both LANSCE and Lujan Center POD meetings; walkthroughs of experimental areas, including the Lujan Center; attendance at and review of LANCSE Radiation Safety Committee meeting minutes; and attendance at critiques related to RP events. Walkthroughs at LANSCE show evidence of FR review of control of radioactive samples within storage cabinets; equipment and system operating status, including PCM, hand and foot monitor(s), and Experimental Personnel Access Control System interlock checks; RCT work station operations; and researcher work practices at experimental area flight paths. Periodic checks of implementation of LANSCE sample-management controls performed by both assigned FRs were evident.

FR activities related to RPP implementation at Area G included, but were not limited to, attendance at critiques; work observations of RCTs survey performance; review of the adequacy of radiological postings and contamination controls; and work observations of RWP implementation and compliance.

NA-LA work instructions also require NA-LA Field Operations personnel (which includes FRs) to formally document the results of their surveillances and walkthroughs on an "Attachment A" form. NA-LA FRs are required to conduct and formally document a minimum of three assessments per month, at least one of which includes an assessment of facility work at the experimental and/or activity level and addresses key elements of work planning; the latter requirement, issued in November 2012 by NA-LA management in response to the Federal accident investigation at LANSCE, is intended to further focus NA-LA oversight activities on monitoring workplace practices.

FR Attachment A forms from January 1 to August 1, 2013, for LANSCE and Area G show evidence of FRs observing work activities. In several Attachment A forms, these activities identified issues in RPP implementation and resulted in several findings at Area G related to postings, contamination control, and compliance with RWP controls, similar to the observations and results of Independent Oversight's targeted review in August 2013. The FRs identified minor deficiencies in RPP implementation at LANSCE, which did not result in issuance of any finding. No concerns were identified in the control of experimental samples.

Independent Oversight reviewed the NA-LA staffing plans and NA-LA FR training and qualification records for FRs assigned to LANSCE and Area G and found no concerns. One FR is in training. All other FRs are fully qualified, have been in their positions since 2009, and are up for their five year re-

qualification in a year. Training records indicate that the NA-LA FRs are maintaining their continuing training requirements.

Assessments of NA-LA Radiation Program Oversight Program

In June 2012, an NNSA Headquarters biennial review of LANL site nuclear safety performance by NA-LA identified one weakness and one opportunity for improvement in the RP functional area. The review identified that NA-LA did not have a formal, documented process for reviewing and approving the LANL RPP, or a formal process for oversight of the RP SMP. The biennial review report stated that "the absence of formal NA-LA assessments, a limited number of shadow activities with no issues being reported to the laboratory, and lack of a mechanism for NA-LA to formally document in their laboratory oversight program other operational awareness activities gives the appearance of ineffective oversight." NA-LA developed corrective actions to address the weakness, as documented in a corrective action plan to the biennial review.

During this review, Independent Oversight found that the NA-LA RP FAM demonstrated good operational awareness of ongoing LANL RP institutional activities and performance; has established a strong and positive working relationship with LANL RP managers; is actively involved in review of institutional RPP policies and procedures and RP event follow-up; and has developed an effective working relationship with NA-LA FRs to maintain facility-specific operational awareness. Most NA-LA RP FAM operational awareness activities are documented in a personnel logbook, in email correspondence, and through established FR reporting mechanisms (e.g., FR daily reports, Attachment A forms). Independent Oversight identified no concerns about the performance of NA-LA RP FAM oversight during this review; however, at the time of this review, actions to address the results of the NNSA Headquarters biennial review still remain open. The NA-LA RP FAM indicated that NA-LA management had not yet agreed on a clear path forward to address the weakness (see **OFI-2**).

In September 2012, a Federal accident investigation board investigated a contamination event at the LANSCE Lujan Center and concluded that NA-LA oversight roles and responsibilities, as defined by the line oversight/contractor assurance system (LO/CAS) and FR programs, were so broad that NA-LA did not identify activity-level deviations from established LANL safety and health program and procedures by the Lujan Center High-Pressure Preferred Orientation Neutron Diffractometer team. One judgment of need was cited, stating that NA-LA oversight activities needed to periodically sample work practices at the experimental and activity level. In response to the accident investigation report, NA-LA established an interim policy and outlined a number of actions, including requiring all NA-LA Field Operations personnel who perform monthly operational awareness activities to make at least one of their documented activities include an assessment of facility work at the experimental and/or activity level. NA-LA also assigned an additional qualified FR to LANSCE to assist in oversight activities for a defined period of time. Based on review of the operational awareness activities discussed above, Independent Oversight concluded that NA-LA's actions have been effective in strengthening its oversight of work practices at the experimental and activity level at LANSCE. At the time of this review, NA-LA was in the process of incorporating some of these actions into its work instructions and procedures.

6.0 CONCLUSIONS

Overall, NA-LA has established and implemented processes for oversight of LANL RPP performance. For the facilities reviewed, NA-LA is sufficiently staffed by qualified, trained, and experienced personnel to oversee and monitor LANL RPP implementation. NA-LA personnel demonstrated an appropriate level of operational awareness of RPP performance, and operational awareness activities performed by NA-LA personnel have identified strengths and weaknesses in LANL RPP implementation consistent with the

results of the Independent Oversight targeted review of LANL radiological controls activity-level implementation in August 2013.

Actions to strengthen NA-LA oversight of work practices at the experimental and activity level are positive, and ongoing efforts to institutionalize these actions into NA-LA work processes should continue. Additional effort should be exercised to broaden and tailor these actions beyond the NA-LA Field Operations personnel to appropriate NA-LA Safety Operations personnel to establish formal expectations for SME operational awareness activities and their documentation.

7.0 OPPORTUNITIES FOR IMPROVEMENT

Independent Oversight identified the following opportunities for improvement. These recommendations are not intended to be mandatory. Rather, they are to be reviewed and evaluated by the responsible line management organization and accepted, rejected, or modified as appropriate, in accordance with site-specific program objectives and priorities.

OFI-1: Consider establishing minimum expectations for conduct and documentation of periodic operational awareness activities by SMEs assigned to oversight of SMPs credited in nuclear facilities' DSAs.

OFI-2: Evaluate existing reporting mechanisms, such as FR daily reports and Attachment A forms, for tailored application and use by SMEs assigned to oversight of SMPs.

8.0 ITEMS FOR FOLLOW-UP

None.

APPENDIX A
Supplemental Information

Review Dates

January 13-17, 2013

Office of Health, Safety and Security Management

Glenn S. Podonsky, Chief Health, Safety and Security Officer
William A. Eckroade, Principal Deputy Chief for Mission Support Operations
John S. Boulden III, Director, Office of Enforcement and Oversight
Thomas R. Staker, Deputy Director for Oversight
William E. Miller, Deputy Director, Office of Safety and Emergency Management Evaluations

Quality Review Board

William A. Eckroade
John S. Boulden III
Thomas R. Staker
William E. Miller
Michael A. Kilpatrick

Independent Oversight Site Lead for LANL/LLNL

Robert Freeman

Independent Oversight Team Members

Robert Freeman

APPENDIX B
Documents Reviewed

- LANL, DSESH-EWMO, LANSCE Radiological Protection (RP) Organization Charts
- LANL, *10 CFR 835 Radiation Protection Program*, Rev. 7.0, June 1, 2011
- LANL Rad Worker II Training Manual, dated April 2012
- LANL Procedure P-121, Rev. 2, *Radiation Protection*, June 01, 2011
- LANL Procedure P300, Rev 4, *Integrated Work Management*, March 30, 2012
- LANSCE, *Facility Centered Assessment*, January 10, 2013
- LANSCE-ST-121-004.R4 TA-53 *Facility Radiation Protection Requirements*, July. 2013
- *Accident Investigation into Contamination at the Los Alamos Neutron Science Center on or about August 21, 2012*
- LANL, *Facility Centered Assessment of Waste Disposition Project*, July 29, 2011
- PSM, *Management Assessment Report Radiological Protection*, November 1, 2012
- NNSA Federal Accident Investigation Report, *Accident Investigation into Contamination at the Los Alamos Neutron Science Center on or about August 21, 2012*,September 2012
- LANL, *Summary Corrective Actions for Lujan Center Contamination Event (PFITS #2012-3165)*
- Memorandum from J Krepps to Field Operations, *Subject: Los Alamos Site Office Field Operations – Interim Oversight Policy*, 11/29/2012
- *Headquarters Biennial Review of Site Nuclear Safety Performance Final Report for the Los Alamos Site Office (LASO)*, June 2012
- Memorandum from K Smith to DL Cook, *Subject: Los Alamos Site Office – Corrective Action Plan in Response to Biennial Review of Nuclear Safety Performance*, 08/30/2012
- NA-1 SD 226.1A, *NNSA Line Oversight and Contractor Assurance System Supplemental Directive*, 10/17/2008
- Plan 00.14, *Integrated Management System Description Including LASO Functions, Responsibilities, and Authorities (FRAs)*, Rev 1, 01/15/2012
- MP 00.08, *Implementation of Los Alamos Site Office Line Oversight*, Rev 4, 12/18/2009
- MP 00.12, *LASO Independent Assessment Process*, Rev 1, 02/19/2009
- MP 00.13, *LASO Risk-Informed Oversight Planning*, Rev. 1, 07/26/2010
- MP 06.04, *LASO Facility Representative Program*, Rev 1, 09/02/2008
- WI 00.04, *Assessment Shadow Activity Reporting*, Rev 3, 01/26/2009
- WI 00.06, *Line Oversight/Contractor Assurance System (LOCAS)*, Rev 1, 08/21/2009
- WI 00.13, *LASO Annual Assessment Planning*, Rev 0, 04/01/2011
- WI 06.01, *LASO Field Operations – Oversight/Surveillance Issues Reporting*, Rev 2, undated
- Facility Representative Daily Reports, 4/1/2013 - 12/31/2013
- Selected NA-LA Facility Representative Attachment A forms, 1/1/2013 to 8/1/2013
- Occurrence Reporting and Processing System (ORPS) and RPO Reports, *Group 6 ORPS reports since 01/2011 and RPOs since 01/2012*
- Selected NA-LA staff Training and Qualification Records
- Selected RP assessment planning records for FY2012 - FY2014
- Attachment 1 Management System Effectiveness Summary for RP, Periods FY-2012 through FY-2014
- NA-LA RP Risk Prioritization Tool
- LANL Institutional Radiation Safety Committee meeting handouts, 01/16/2014
- LANL RP Managers Meeting Handouts, 01/13/2014
- LANL Critique Notes, Topic 03-34, 12/11/2013