

**Office of Enterprise Assessments  
Review of the  
Delegation of Safety Basis Approval Authority for  
Hazard Category 1, 2, and 3 Nuclear Facilities**



**April 2016**

**Office of Nuclear Safety and Environmental Assessments  
Office of Environment, Safety and Health Assessments  
Office of Enterprise Assessments  
U.S. Department of Energy**

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## Acronyms

ASO	Argonne Site Office
CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
CNS	Chief of Nuclear Safety
CRAD	Criteria, Review, and Approach Document
CTA	Central Technical Authority
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
EA	Office of Enterprise Assessments
EM	Office of Environmental Management
EMCBC	Environmental Management Consolidated Business Center
FRA	Functions, Responsibilities, and Authorities
ICP	Idaho Cleanup Project
ID	Idaho Operations Office
JCO	Justification for Continued Operation
LANL	Los Alamos National Laboratory
LFO	Livermore Field Office
NA-LA	NNSA Los Alamos Field Office
NBL	New Brunswick Laboratory
NE	Office of Nuclear Energy
NELT	Nuclear Executive Leadership Training
NFO	Nevada Field Office
NNSA	National Nuclear Security Administration
NPO	NNSA Production Office
OFI	Opportunity for Improvement
OREM	EM Oak Ridge Field Office
ORP	Office of River Protection
OSO	Oak Ridge National Laboratory Site Office
PNSO	Pacific Northwest Site Office
PPPO	Portsmouth/Paducah Project Office
PSO	Program Secretarial Office
rem	Roentgen Equivalent Man
RL	Richland Operations Office
SBAA	Safety Basis Approval Authority
SC	Office of Science
SCMS	SC Management System
SFO	Sandia Field Office
SRFO	Savannah River Field Office
DOE-SR	Savannah River Operations Office
STSM	Senior Technical Safety Manager
TQP	Technical Qualification Program
WVDP	West Valley Demonstration Project

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**EXECUTIVE SUMMARY**

The U.S. Department of Energy (DOE) Office of Environment, Safety and Health Assessments, within the independent Office of Enterprise Assessments (EA), conducted a review of the delegation process for nuclear facility safety basis approval authority (SBAA) within the DOE Offices of Science (SC), Nuclear Energy (NE), and Environmental Management (EM), and the National Nuclear Security Administration (NNSA). Requirements for the delegation process are established in DOE Order 450.2, *Integrated Safety Management*, and DOE-STD-1104-2014, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*.

EA examined performance of the Headquarters organizations by reviewing compliance with the pertinent requirements of the order, including the delegation process; qualifications of delegates; treatment of the delegated authorities in the functions, responsibilities, and authorities documents; and implementation of the required annual and biennial reviews. Field office functions, responsibilities, and authorities documents were reviewed, as were the relevant safety basis submittal review procedures and technical qualification program documents.

With few exceptions, the delegation process for nuclear facility SBAA was effective across the complex. For the most part, requirements from DOE Order 450.2 have been adequately implemented using the approaches provided in DOE-STD-1104-2014. The delegation memoranda that EA examined were generally compliant with the requirements of the order. Delegations were made to specific individuals, and the delegated authorities were adequately described. In some cases, guidance developed to support the delegation process was extensive.

Additionally, EA identified two Best Practices during the review:

- EM's practice of requesting personnel qualifications from every EM site each December to support renewed delegations the following January provides an active mechanism for identifying expired qualifications while accomplishing the reviews required by the DOE order and ensuring that delegations remain current.
- The Carlsbad Field Office procedure for performing reviews of safety basis submittals is especially effective in its specification of requirements for ensuring that the personnel performing the reviews have technical qualifications appropriate to the subject matter of the submittals, thereby enhancing the effectiveness of the reviews.

Although the delegation processes were effective overall, EA noted some weaknesses with implementation in SC, EM, and NNSA. Although NNSA reported that approval actions have complied with the revised requirement, the SBAA delegations in effect for the NA-LA director includes facilities having potential dose consequences for postulated events that exceed the Evaluation Guideline, contrary to DOE-STD-1104-2014. At the site office level, the functions, responsibilities, and authorities documents at several SC, EM, and NNSA site offices do not adequately describe the delegated SBAA as required by DOE Order 450.2.

Other isolated deficiencies included:

- An EM Carlsbad Field Office delegation did not document Central Technical Authority concurrence as required by the order.
- Procedures at two NNSA sites and four EM sites contained little or no guidance on selecting reviewers with qualifications appropriate to the content of the safety basis submittal to be reviewed.
- Methods for tracking personnel qualifications differed substantially from site to site, and were not always effective. At one SC site, ineffective tracking allowed the SBAA delegate's qualifications to expire (self-identified in a biennial review earlier this year).
- SC, NE, and NNSA Headquarters organizations did not fully comply with DOE order requirements to review the delegation process annually and actual delegations biennially.
- The EM Headquarters functions, responsibilities, and authorities document was weak in describing delegated authorities, providing no discussion and noting only that delegation letters could be found on the EM website.

Overall, although some management attention is needed in specific aspects of the process, DOE line management has effectively developed and implemented delegation processes for nuclear facility SBAA.

**Office of Enterprise Assessments  
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**1.0 PURPOSE**

The U.S. Department of Energy (DOE) independent Office of Enterprise Assessments (EA) conducted a review of DOE line organizations responsible for nuclear facilities to examine processes in place for delegation of nuclear safety basis approval authority (SBAA) from the Headquarters organization to field office personnel. DOE Order 450.2, *Integrated Safety Management*, establishes requirements for the delegation process, and DOE-STD-1104-2014, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*, establishes requirements for the safety basis approval process.

This review also fulfills a commitment to assess the SBAA delegation process as part of the DOE Implementation Plan developed in response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2010-1, *Safety Analysis Requirements for Defining Adequate Protection for the Public and the Workers*, September 2011.

This report discusses the scope, background, methodology, and results of the review. Conclusions for each organization are presented in the Results section, followed by a summary of the findings and opportunities for improvement (OFIs) identified by the review team.

**2.0 SCOPE**

The scope of this review included all Headquarters organizations and field offices responsible for hazard category 1, 2, and 3 nuclear facilities as defined in DOE-STD-1027-1992, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*. Organizations and facilities within the scope of this review are listed in Table 1 below.

**Table 1 – SBAA Review Organizations and Facilities**

Office of Science (SC)	Argonne Site Office (ASO) New Brunswick Laboratory (NBL) Oak Ridge National Laboratory Site Office (OSO) Pacific Northwest Site Office (PNSO)
Office of Nuclear Energy (NE)	Idaho Operations Office (ID)
Office of Environmental Management (EM)	EM Oak Ridge Field Office (OREM) Hanford – Office of River Protection (ORP) Hanford – Richland Operations Office (RL) Idaho Operations Office, Deputy Manager for Idaho Cleanup Project (ICP) EM Los Alamos Field Office Portsmouth/Paducah Project Office (PPPO) Savannah River Operations Office (DOE-SR) West Valley Demonstration Project (WVDP) Waste Isolation Pilot Plant Carlsbad Field Office (CBFO)

National Nuclear Security Administration (NNSA)	Livermore Field Office (LFO) NNSA Los Alamos Field Office (NA-LA) Nevada Field Office (NFO) NNSA Production Office (Pantex/Y-12) (NPO) Sandia Field Office (SFO) Savannah River Field Office (SRFO)
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EA examined compliance with the requirements of DOE Order 450.2 and portions of DOE-STD-1104-2014 through review of documentation, procedures, and processes and through interviews with key personnel as defined in the *Plan for the Office of Enterprise Assessments Review of Delegation of Safety Basis Approval Authority*, January 2015.

### 3.0 BACKGROUND

The DOE Implementation Plan for DNFSB Recommendation 2010-1 includes a commitment (Commitment No. 6.4.1) for the DOE organization responsible for performing independent oversight (EA), to “establish a Criteria Review and Approach Document [CRAD] and perform assessments of nuclear safety delegations that review the proper implementation of revisions made to delegations for documented safety analysis approvals (including training and qualifications of approval authorities).” DOE regulations in 10 CFR 830 Subpart B require DOE approval of the documented safety analysis for all hazard category 1, 2, and 3 nuclear facilities. As part of its Implementation Plan, DOE issued a new directive, DOE Order 450.2, that included the requirement for each line management organization to develop, issue, and maintain a documented process for delegation of authorities to perform safety management functions consistent with the hazards and complexity of the work. Appendix A of that order provided more detailed requirements and the process criteria and attributes for delegations of authority for nuclear facility safety.

DOE also revised DOE-STD-1104 to ensure that SBAA is not delegated if there is no viable control strategy in an existing nuclear facility to prevent or mitigate the offsite dose consequence of an accident scenario from exceeding the Evaluation Guideline dose limit of 25 rem total effective dose, as defined in Appendix A of DOE-STD-3009-2014. In such cases, the approval authority must obtain concurrence from the Central Technical Authority (CTA) and consult with the Office of Environment, Health, Safety, and Security on the technical adequacy of the safety basis submittal, as specified by the DOE standard.

### 4.0 METHODOLOGY

The DOE independent oversight program is described in and governed by DOE Order 227.1A, *Independent Oversight Program*, and EA implements the program through a comprehensive set of internal protocols, operating practices, assessment guides, and process guides. Organizations and programs within DOE use varying terms to document specific assessment results. In this report, EA uses the terms “deficiencies, findings, and OFIs” as defined in DOE Order 227.1A. In accordance with DOE Order 227.1A, DOE line management and/or contractor organizations must develop and implement corrective action plans for EA findings presented in Section 6 of this report. In some areas, EA identified one or more deficiencies in Section 5 of this report that did not meet the criteria for a finding, with the expectation that line organization managers and/or field office managers will apply their internal processes for resolution. Finally, in accordance with DOE Order 227.1A, OFIs presented in Section 7 of this report are recommendations for line management consideration; they do not require formal resolution by management through a corrective action process.

DOE Order 450.2 contains specific requirements for the delegation process as it pertains to Headquarters organizations and to field offices. Those requirements formed the basis for development of a criteria review and approach document, CRAD 31-09, *Nuclear Safety Delegations for Documented Safety Analysis Approval*.

EA performed this review using the guidance in CRAD 31-09. Specific programmatic requirements were examined through review of procedures, documentation, and correspondence. Knowledge and training requirements were assessed using training records and interviews. Individuals interviewed included both Headquarters officials responsible for the delegation process and field office directors and deputy directors to whom delegations had been made.

The members of the EA review team, the Quality Review Board, and EA management responsible for this review are listed in Appendix A. A detailed list of the documents reviewed is provided in Appendix B.

## **5.0 RESULTS**

### Criteria

*The Cognizant Program Secretarial Office (PSO) or the NNSA Administrator has appropriately delegated and documented the nuclear SBAA, and the DOE field element has appropriately delegated and documented SBAA. (DOE Order 450.2)*

*Assessments of the delegation processes are conducted to verify that the processes are functioning properly. (DOE Order 450.2)*

*The SBAA has the necessary training, qualification, experience and expertise. (DOE Order 450.2)*

Key requirements applicable to Headquarters organizations delegating SBAA to field office individuals include:

- A documented process or procedure is in place to ensure that delegations are made carefully and accurately, consistent with the process criteria and attributes defined in DOE Order 450.2, Appendix A.
- Compensatory measures are identified where delegation is made before the delegate satisfies the qualification criteria.
- Delegation of SBAA to field office individuals is prohibited for facilities having dose consequences exceeding the Evaluation Guideline.
- Delegation memoranda specify the scope and limitations of delegated authorities.
- The CTA reviews the delegation process annually.
- A documented, comprehensive self-assessment of the delegation program is conducted at least every two years.

Key requirements applicable to site offices with individuals having delegated SBAA include:

- Each SBAA delegate shall have current qualification as an STSM and shall have completed the NELT.
- A delegation memorandum has been issued.
- The delegate organization must possess, or have access to, sufficient staff (with the necessary qualifications, experience, and expertise), resources, and funding to support the review of safety basis submittals.
- Delegated responsibilities (and limitations) shall be captured in the site office FRA document.



## 5.1 Office of Science

### 5.1.1 Office of Science Headquarters Review

SC currently has hazard category 1, 2, or 3 nuclear facilities at three DOE sites: Argonne National Laboratory, Oak Ridge National Laboratory, and Pacific Northwest National Laboratory. New Brunswick Laboratory, a hazard category 3 nuclear facility, is located on the premises of Argonne National Laboratory. SBAA for nuclear facilities at these sites has been delegated to the individuals identified by position in the site-specific discussions below.

SC Procedure 12, *Facilitating Office of Science Delegations of Nuclear Safety*, provides protocols for preparing letters of delegation and conducting periodic self-assessment of the delegations. It refers to the nuclear safety delegation criteria in DOE Order 450.2, Appendix A, and specifies a delegation development process that ensures concurrence by two senior officials as required by the order. The procedure states that it is intended to provide SC with a consistent method to delegate authorities and responsibilities. However, it does not include provisions for requesting and reviewing information on the safety basis review capabilities available to the DOE site office or the qualifications, experience, and expertise of a candidate for delegation. Both are necessary to provide the basis for the letter of delegation. With respect to organizational capabilities, DOE Order 450.2 requires that the organization have capabilities adequate to support the nuclear safety functional responsibilities of the individuals holding delegated authorities. However, the SC reviews to support delegations of authority provide no evidence of any judgment of adequacy of the site office's capability to provide adequate reviews and support. With respect to individuals considered for delegation, SC asks the candidate to complete a one-page Nuclear Safety Delegation Checklist, not referenced or called out in Procedure 12, that is not sufficiently detailed to support a determination of technical adequacy and typically contains abbreviated notations of the candidate's response without supporting evidence. (See **OFI-SC-01**.)

SC currently has nuclear safety authority delegations, each appropriately written and addressed by name to the most senior level program officer (or deputy) at each of the field offices noted above. The delegations adequately define the delegated nuclear safety responsibilities and typically address the period of validity by explicitly stating that the delegation will continue until rescinded, amended, or superseded in writing. Also, each delegation appropriately states whether or not the authority may be further delegated. However, there is no record, either in the letter of delegation or in SC documentation of delegation, that SC has reviewed delegation requests against the criteria specified in DOE Order 450.2. This order specifically requires the delegating official to document the review of applicable criteria for every delegation made. SC self-identified this deficiency in an internal assessment performed in March 2015.

The *Office of Science (SC) Environment, Safety, and Health (ES&H) Functions, Responsibilities, and Authorities (FRA) Document* adequately describes authority delegated to the site offices for safety basis approval. DOE Order 450.2 requires delegating officials to remain fully accountable for the outcome of actions associated with the delegated functions. The SC delegating official has demonstrated responsibility and accountability by rescinding, limiting, or revising SBAA delegations when necessary. In January 2014, the SBAA was withdrawn from the Chicago Integrated Support Center Office Manager through written notification due to nuclear safety issues at NBL. Also, in March 2015, when the aforementioned SC internal assessment identified that the OSO Manager had not completed the Senior Technical Safety Manager (STSM) five-year requalification requirements, the delegating official notified the manager by email rescinding his SBAA and, as a compensatory measure, delegated SBAA to the appropriately qualified Deputy Manager. The delegation to the OSO manager was re-issued in July 2015 after STSM requalification was complete.

DOE-STD-1104-2014 prohibits delegation of SBAA when there is no viable control strategy in a nuclear facility to prevent or mitigate the offsite dose consequence of one or more accident scenarios from exceeding the Evaluation Guideline. SC does not operate any nuclear facility where the estimated radiological consequences of an accident exceed the Evaluation Guideline. SC Procedure 12 is silent in this area, as are the delegation memoranda. An inherent weakness in this approach is that it does not address the possibility of a planned or unanticipated change, such as the loss of a mitigating system or barrier, that could result in conditions where the Evaluation Guideline might be exceeded. (See **OFI-SC-02**.)

In 2014, SC determined that the STSM and Nuclear Executive Leadership Training (NELT) qualifications of certain individuals who were delegated SBAA may be inadequate since they did not meet the qualification requirements of DOE Order 426.1, which applies to those responsible for the oversight of defense nuclear facilities. Only one of the SC nuclear facilities is a defense nuclear facility, so most SC candidates for SBAA delegation would not necessarily be qualified consistent with DOE Order 426.1, as required by DOE Order 450.2. This issue was identified in the March 2015 SC Self-Assessment of Delegation of Safety Basis Approvals. Subsequently, SC revised its qualification requirements and procedures, and has notified the affected individuals to qualify under the requirements of DOE Order 426.1. EA noted that SC does not have a controlled process in place to track personnel qualifications or to provide notification of pending expiration/re-qualification dates. EA found no site-specific procedures addressing this area as well. (See **OFI-SC-01**.)

DOE Order 450.2 requires the CTA support staff to review the delegation process annually to evaluate whether it is adequate and functioning properly, and to identify any concerns to the CTA. However, the SC CTA support staff – Chief of Nuclear Safety (CNS) or designee – had not conducted such a review. SC self-identified this non-compliance, determined that CTA support staff resources were inadequate, and is addressing this need. (See **OFI-SC-03**.)

DOE Order 450.2 also requires a periodic review (at least every two years) of the delegated authorities, and verification that the capability and capacity to execute the responsibilities and authorities still exist. The SC delegation procedure specifically incorporates this requirement for conducting self-assessments and verification of the appropriateness of each authority delegation. In March 2015, the SC Senior Nuclear Safety Advisor performed a comprehensive self-assessment that identified several findings and opportunities for improvement, including the issues discussed further below related to:

- Qualification of officials per the requirements of DOE O 426.1,
- Expired STSM qualification and lack of compensatory measures for one delegate, and
- SC compliance with DOE O 450.2 review requirements.

### **5.1.2 Office of Science Site Reviews**

#### **Argonne Site Office**

The SC Headquarters organization has delegated SBAA to the ASO Manager. EA verified that the Manager has current STSM qualification and has successfully completed NELT. The delegation memorandum clearly specifies boundaries and limitations for the delegation. No facilities within the purview of ASO exceed the Evaluation Guideline.

The ASO *Functions, Authorities, and Responsibilities Document* addresses various responsibilities and delegated authorities, but the version originally reviewed for this report did not address SBAA. However, the ASO FRA was revised in November 2015 to include adequate discussion of delegated SBAA responsibilities including a copy of the current delegation memorandum.

The ASO Manager confirmed that adequate qualified resources are available, through local staff, supplemental staff from the Chicago and Oak Ridge Integrated Support Centers, or contracted services, to accomplish the required reviews of safety basis submittals. ASO uses SC Management System (SCMS) Facility Safety and Operations Procedure 1, *Reviewing and Approving Nuclear Facility Safety Basis Documentation*, to govern its review of safety basis submittals. This SCMS procedure provides adequate guidance to ensure that the assigned individual or team has qualifications appropriate to the subject matter of the submittal.

### **New Brunswick Laboratory**

NBL, a hazard category 3 nuclear facility, is located on the premises of ANL and is managed by ASO. The SC Headquarters organization retains SBAA for NBL.

### **Oak Ridge National Laboratory Site Office**

The SC Headquarters organization has delegated SBAA to the OSO Manager. EA verified that the OSO Manager has current STSM qualification and has successfully completed NELT. The delegation memorandum clearly specifies boundaries and limitations for the delegations.

OSO-FRA-110, *Functions, Responsibilities, and Authorities Document*, adequately addresses the SBAA delegation to the site office. No facilities within the purview of OSO exceed the Evaluation Guideline.

OSO uses WP 420, *Review and Approval of Nuclear Facility Authorization Basis Documents*, to govern their review of safety basis submittals. It invokes SCMS Facility Safety and Operations Procedure 1, *Reviewing and Approving Nuclear Facility Safety Basis*. It also includes guidance regarding the qualifications of review team members. This SCMS procedure provides additional guidance to ensure that the assigned individual or team has qualifications appropriate to the subject matter of the submittal.

### **Pacific Northwest Site Office**

The SC Headquarters organization has delegated SBAA to the PNSO Manager. EA verified that the PNSO Manager has current STSM qualification and successfully completed NELT. The delegation memorandum clearly specifies boundaries and limitations for the delegation.

PNSO-GUID-05, *Functions, Responsibilities, and Authorities Document*, adequately addresses the SBAA delegation to the site office. No facilities within the purview of PNSO exceed the Evaluation Guideline.

Review of safety basis submittals by the field office is governed by PNSO-PCDR-37, *PNSO Nuclear Facility Safety Program*, which invokes SC Headquarters Facility Safety and Operations Procedure 1, *Reviewing and Approving Nuclear Facility Safety Basis*. This SCMS procedure provides adequate guidance to ensure that the assigned individual or team has qualifications appropriate to the subject matter of the submittal. DOE-STD-1104-2014 contains guidance in this area, and that standard is included as a reference at the end of the procedure.

### **5.1.3 Conclusions for the Office of Science**

SC's SBAA delegations provide adequate detail for the authorities delegated. Delegations were appropriately made to individuals who meet the minimum qualifications specified in DOE Order 450.2. SC's self-assessment of delegations earlier this year was effective in identifying issues in several areas. Interviews and documentation reviews indicated that the delegation process is actively managed. The FRA documents for the Headquarters organization and site offices adequately address delegated SBAA authorities, following the FRA update by ASO in November.

A biennial review of SBAA delegations was performed by the CTA as required by the Order. The CTA staff has not regularly performed annual reviews of the delegation process, also as required by the Order, however the biennial review had sufficient breadth of scope to address this requirement in 2015.

Interviews indicated that site office capabilities are generally adequate, given the availability of supplemental resources from the Chicago and Oak Ridge Integrated Support Centers. However, the Headquarters organization had not formally reviewed the qualifications and technical capability of the field office staffs, as required by the DOE order, to verify their capacity to review safety basis submittals prior to making SBAA delegations. Additionally, SC does not have adequate measures in place to track delegate qualification and ensure timely re-qualification.

## **5.2 Office of Nuclear Energy**

### **5.2.1 Office of Nuclear Energy Headquarters Review**

NE currently has hazard category 1, 2, and 3 nuclear facilities at the Idaho National Laboratory. SBAA for nuclear facilities at this site has been delegated to the individuals identified by position in the site-specific discussion below.

The NE *Standard Operating Procedure for Delegation of Safety Authorities* provides protocols for preparing letters of delegation and conducting periodic self-assessments of the delegations. It specifies a delegation development process that includes consideration of candidates by a Delegation of Authority Review Board, ensuring concurrence by two senior officials as required by the order. In most areas, it adequately implements the nuclear safety delegation criteria in DOE Order 450.2, Appendix A, establishing appropriate qualification requirements for delegates and including supplemental requirements on the availability of “sufficient and technically qualified staff and funding” in the field office. The procedure states that reviews shall be conducted periodically, but at least once every two years, to verify and evaluate safety authority delegations and ensure compliance with the provisions of DOE Order 450.2. Appendix A, paragraph 2.c(1)(b) of the order specifically requires that the review be documented. NE was not able to provide copies of previous reviews performed to meet this requirement, although the revision log of this procedure contained an entry for Revision 2, dated May 28, 2013, stating that the revision included “Minor revision to correct a finding from a self-assessment of the NE delegation process.” (See **OFI-NE-01**.)

EA found that the NE SBAA delegation memoranda were appropriately written and addressed by name to the most senior level program officer (or deputy) at the field office. The delegations adequately define the delegated nuclear safety responsibilities and typically address the period of validity by explicitly stating that the delegation will continue until rescinded, amended or superseded in writing. Also, each delegation appropriately states whether or not the authority may be further delegated. The NE SBAA Delegation of Authority Review Board performs a documented review for each potential delegation against the applicable criteria specified in the order.

The NE *Safety Management Functions, Responsibilities, and Authorities (FRA) Document* adequately describes authorities for key individuals within the Headquarters organization and authorities delegated to the field offices for safety basis approval. DOE Order 450.2 requires delegating officials to remain fully accountable for the outcome of actions associated with the delegated functions. Attachments include a responsibilities and authorities matrix and the current delegation memoranda.

DOE-STD-1104-2014 prohibits delegation of SBAA in circumstances when there is no viable control strategy in a nuclear facility to prevent or mitigate the offsite dose consequence of one or more accident scenarios from exceeding the Evaluation Guideline. NE does not delegate SBAA for any nuclear facility where the estimated radiological consequences of an accident exceed the Evaluation Guideline. NE does

not operate any nuclear facility where the estimated mitigated radiological consequences of an accident exceed the Evaluation Guideline. EA noted that delegation memoranda at some other facilities reviewed included an additional constraint that addressed the possibility of a planned or unanticipated change, such as the loss of a mitigating system or barrier, that could result in conditions where the Evaluation Guideline might be exceeded. (See **OFI-NE-02.**)

In addition to the biennial review of delegations discussed above, DOE Order 450.2 also requires the CTA support staff to review the delegation process annually to evaluate whether it is adequate and functioning properly, and to identify any concerns to the CTA. A review was performed in 2015. Prior to that, the most recent such review occurred in early 2013 and was not adequately documented as noted in the first paragraph of this section. Interviews indicated that this may have resulted from misinterpretation of Order requirements, which include annual reviews of the delegation process and biennial reviews of actual delegations. (See **OFI-NE-03.**)

## **5.2.2 Office of Nuclear Energy Site Review**

### **Idaho Operations Office**

ID oversees one hazard category 1 facility and several hazard category 2 and 3 facilities. The Headquarters CNS organization retains SBAA for the category 1 facility. SBAA for the category 2 and 3 facilities has been delegated to the ID Manager, and from that individual to the Deputy Manager for Operations Support. EA verified that these individuals have current STSM qualification and have completed NELT. In an interview with EA, the ID delegate affirmed that ID has sufficient qualified staff and/or access to qualified staff to perform safety basis submittal reviews.

EA found that ID FRA document 01.OD.01, *Functions, Responsibilities, and Authorities*, adequately describes the delegation process from DOE Order 450.2. Responsibilities in the safety basis area are adequately defined. However, the table in Section 7 of that document provides less detail in defining the delegated responsibilities of the Deputy Manager for Operations Support and the Deputy Manager for the Idaho Cleanup Project (ICP) (see Section 5.3.2 below) than provided in the safety basis review procedure discussed below. (See **OFI-ID-01.**)

The ID procedure governing review of safety basis submittals is 03.WI.01.04, *Safety Basis Review and Approval*. With regard to the qualifications of personnel assigned to review safety basis submittals, it states that the review team leader shall “Select a review team to include technical disciplines consistent with the nature (hazards types, controls, accidents, etc.) of the safety basis document.” It further directs that personnel from other offices and/or support service contractors may be used to supplement the review. A checklist is also provided to assist this process. These provisions are adequate to ensure that safety basis submittals are reviewed by appropriately qualified personnel.

ID procedure 02.OD.01, *ID Technical Qualification Program*, establishes requirements for qualification of ID personnel, including those with delegated SBAA, and ensures that requalification is accomplished in a timely manner.

## **5.2.3 Conclusions for the Office of Nuclear Energy**

NE’s SBAA delegations provide adequate detail for the authorities delegated. Delegations were appropriately made to individuals who meet the minimum qualifications specified in DOE Order 450.2. The Headquarters and ID FRA documents adequately address delegated SBAA. The safety basis review procedure specifies appropriate measures to ensure review team qualification, and the ID TQP procedure adequately addresses both the qualification and requalification processes.

The CTA staff has only partially met requirements for annual reviews of the delegation process as required by DOE Order 450.2, due to misinterpretation of Order requirements, however, the delegation process is well documented and the use of a formal review board is indicative of a rigorous process. The order also requires biennial reviews of the actual delegations. NE has performed these reviews, as indicated by the delegation procedure revision log, but the biennial reviews were not otherwise documented.

Interviews indicated that field office capabilities are generally adequate. The Headquarters organization formally reviewed the qualifications and technical capability of both the delegates and field office staff members, as required by the DOE order, to verify their capacity to review safety basis submittals prior to making SBAA delegations.

### **5.3 Office of Environmental Management**

#### **5.3.1 Office of Environmental Management Headquarters Review**

EM currently has hazard category 2 and/or 3 nuclear facilities at eight DOE sites (see Table 1). SBAA for nuclear facilities at the EM sites has been delegated to the individuals identified by position in the site-specific discussions below.

EM Procedure SOPP #44, *Environmental Management Process for Delegation of Safety Authorities*, provides direction for letters of delegation and biennial review of the delegations. It refers to the nuclear safety delegation criteria in DOE Order 450.2 and specifies a delegation development process that implements the requirements from the order.

In reviewing implementation of SOPP #44, EA examined documentation provided by EM, including current delegation letters. EM re-issues letters of delegation to all affected individuals annually. At the end of each calendar year, EM asks each field office to provide information on the experience and expertise of each candidate for delegation and the technical capabilities/qualifications of the DOE field office staff. EM then uses that information as the basis for issuing delegations for the following year. EA found that this approach adequately addresses the order requirements for validation of staff qualification to perform delegated safety basis reviews. The EM annual renewal process constitutes a best practice, in that it ensures compliance with DOE order requirements in a manner that also ensures frequent evaluation of resources and ready identification of qualification expiration issues.

EA identified one issue in a recent SBAA delegation to an individual at CBFO. Due to turnover at the office manager level, the delegation was made to an individual below the deputy manager level in the field office organization. The order allows such delegation but requires concurrence by the CTA for the program office (SOPP #44 repeats this requirement twice). The delegation letter to that individual specified appropriate compensatory measures and limits on the delegated authority but did not document CTA concurrence. (See **OFI-EM-01**.)

EA identified no issues in SBAA delegations for the other EM sites. Each was appropriately written and addressed by name to the most senior level program officer (or deputy) at each of the field offices noted in Section 2. The delegations adequately define the delegated nuclear safety responsibilities and typically address the period of validity based on the EM annual renewal process described above. Also, each delegation appropriately states whether or not the authority may be further delegated.

The *Office of Environmental Management Safety Management Functions, Responsibilities, and Authorities (FRA) Document* adequately describes organizational responsibility for managing the SBAA delegation process. However, it does not list the specific delegated authorities as directed by the order, but instead refers to the EM portal, where copies of delegation letters are maintained.

DOE-STD-1104-2014 prohibits delegation of SBAA in circumstances when there is no viable control strategy in a nuclear facility to prevent or mitigate the offsite dose consequence of one or more accident scenarios from exceeding the Evaluation Guideline. EM does not operate any nuclear facility where the estimated radiological consequences of an accident exceed the Evaluation Guideline. EM SOPP #44 is silent in this area, as are the delegation memoranda. An inherent weakness in this approach is that it does not address the possibility of a planned or unanticipated change, such as the loss of a mitigating system or barrier, that could result in conditions where the Evaluation Guideline might be exceeded. (See **OFI-EM-02**.)

DOE Order 450.2 requires the CTA support staff to review the delegation process annually to evaluate whether it is adequate and functioning properly and to identify any concerns to the CTA. DOE Order 450.2 also requires a periodic review (at least every two years) of the delegated authorities, and verification that the capability and capacity to execute the responsibilities and authorities still exist. The CTA support staff uses an annual group-wide strategic planning meeting and process to review processes and identify needed improvements. EA concluded that this process and the aforementioned EM practice of annually renewing all SBAA delegations accomplish the annual and biennial review functions mandated by the order.

### **5.3.2 Office of Environmental Management Site Review**

#### **EM Oak Ridge Field Office**

The EM Headquarters organization has delegated SBAA to the OREM Manager. EA verified the qualification requirements for that individual. The delegation memorandum clearly specifies boundaries and limitations for the delegation. As permitted by the Headquarters delegation, the OREM Manager has further delegated SBAA to the deputy manager during short periods of unavailability. That individual also has the required qualifications.

OREM-OM-PL-02, *Functions, Responsibilities, Authorities, and Accountabilities*, is the OREM FRA document. It notes that the Engineering, Safety, and Quality Division Director may have safety approval authority “when delegated from the Deputy OREM Manager.” This was written into the FRA document during a period when the field office manager was not qualified for SBAA delegation; for that period, the deputy manager had been delegated SBAA with approval to further delegate to the engineering division director. EA did not identify any such current delegation, but noted that DOE Order 450.2 and DOE-STD-1104 do not permit SBAA delegation below the deputy manager level without concurrence from the program office CTA. (See **OFI-OREM-01**.) OREM-OM-PL-02 also does not adequately describe the delegated SBAA for the officials noted above, who are listed generically in the FRA as the “Office of the Manager.” Instead of providing a detailed description by position for that authority, the FRA document groups the office manager and deputy with a larger group that includes an executive officer, portfolio Federal project directors, functional division directors, and a group lead, without detailing or otherwise limiting the applicability of SBAA.<sup>1</sup>

The OREM safety basis submittal review procedure, OREM-ESH-IP-02, *Safety Basis Document Review*, states that the SBAA provides review of safety basis documents in accordance with DOE-STD-1104. However, the procedure contains only limited guidance for selecting review team members. Typically, safety basis submittals are reviewed by one or more of three specialists available to OREM through a support services contract. The contract specifies credential requirements equivalent to those that would apply through the Federal TQP. Interviews with senior management indicated that resources have, at times, been difficult to obtain in specific subject matter areas; radiation protection is currently one such area. The SC Oak Ridge Integrated Support Center also provides supplemental resources where available. Interviews with field office personnel indicated only limited use of internal resources for safety

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<sup>1</sup> This is considered a deficiency as defined in DOE Order 227.1A

basis reviews. (See **OFI-OREM-02.**)

Based on the interviews and examination of TQP documentation, EA concluded that OREM has an adequate process in place to maintain personnel qualifications and ensure requalification when necessary.

### **Office of River Protection**

The EM Headquarters organization has delegated SBAA to the ORP Manager, who has further delegated SBAA to the Deputy Manager. Both of these individuals have current STSM qualification and have completed NELT.

EA found that MGT-PM-PL-02, *Safety Management Functions, Responsibilities, and Authorities for the U.S. Department of Energy Office of River Protection*, adequately addresses delegated SBAA.

TRS-ENG-IP-01, *Waste Treatment and Immobilization Plant Safety Basis Management*, and TRS-ENG-IP-04, *Hanford Tank Farms Safety Basis Management*, govern the safety basis submittal review and approval process for the Waste Treatment and Immobilization Plant and the Tank Farms, respectively. Both procedures contain guidance and a simple discipline checklist for the review team leader's use in selecting review team members. They do not address the use of external or supplemental resources, but the guidance is adequate to support the selection of qualified individuals to review safety basis submittals.

ORP's TQP manager is responsible for tracking and monitoring personnel qualifications and ensuring requalification as appropriate.

### **Richland Operations Office**

The EM Headquarters organization has delegated SBAA to the RL Manager and Deputy Manager. The RL Manager's STSM qualification expired in July 2015, but a memorandum dated July 8, 2015, extended that qualification for six months to provide a timeframe for renewal. DOE Order 426.1, *Federal Technical Capability*, allows such extensions. No compensatory measures were identified for the extension. EA verified the remaining qualification requirements for both individuals. The delegation memorandum clearly specifies boundaries and limitations for the delegations.

The RL *Functions, Responsibilities and Authorities Manual* adequately addresses the SBAA delegation.

DOE-RL-RIMS-S&H-SDR&A, *Safety Documentation Review and Approval*, governs the review of safety basis submittals by RL. This procedure addresses the step-by-step process for safety basis submittal review but does not establish requirements or guidance to ensure that the assigned individual or team has qualifications appropriate to the subject matter of the submittal. (See **OFI-RL-01.**)

RL uses a spreadsheet, *RL-TQP Progress Tracking (Federal Technical Capabilities)- 2QFY15*, to track the status of the qualification process for participants in the TQP, including dates when re-qualification is necessary. This process is not defined in a procedure. The lack of a formalized approach may have contributed to the expiration of the RL Manager's STSM qualification noted above. (See **OFI-RL-02.**)

### **EM Idaho Cleanup Project**

In addition to its responsibilities for NE, ID oversees the ICP for EM. SBAA for the hazard category 2 and 3 ICP facilities has been delegated to the Deputy Manager for ICP within ID. EA verified that this individual has current STSM qualification and has completed NELT. Earlier this year, this individual's STSM qualification expired. EM Headquarters appropriately responded with compensatory measures, requiring an additional concurrence signature until his requalification was completed.



The FRA document for ICP is the same one that ID uses for NE facilities. EA found that this document, 01.OD.01, *Functions, Responsibilities, and Authorities*, adequately describes the delegation process from DOE Order 450.2. Responsibilities in the safety basis area are adequately defined. However, as noted in Section 5.2.2 of this report, the table in Section 7 of the FRA document provides less detail in defining the second-tier delegated responsibilities for the ICP than provided in the safety basis review procedure discussed below. (See **OFI-ID-01**.)

The Deputy Manager for ICP also uses the ID procedure governing review of safety basis submittals, 03.WI.01.04, *Safety Basis Review and Approval*. With regard to the qualifications of personnel assigned to review safety basis submittals, it states that the review team leader shall “Select a review team to include technical disciplines consistent with the nature (hazards types, controls, accidents, etc.) of the safety basis document.” It further directs that personnel from other offices and/or support service contractors may be used to supplement the review. A checklist is provided to assist this process. These provisions are adequate to ensure that safety basis submittals are reviewed by appropriately qualified personnel.

ID procedure 02.OD.01, *ID Technical Qualification Program*, establishes requirements for qualification of ID personnel, including those with delegated SBAA, and ensures that requalification is accomplished in a timely manner.

### **EM Los Alamos Field Office**

SBAA for EM facilities at Los Alamos National Laboratory (LANL) resided with the NA-LA Manager at the time of this review and is addressed in Section 5.4 of this report.

### **Portsmouth/Paducah Project Office**

The EM Headquarters organization has delegated SBAA to the PPPO Manager, based on a documented request from that site validating the qualifications of that individual and asserting that adequate technically qualified staff resources are available to perform safety basis reviews. SBAA was delegated via memorandum on January 22, 2015, citing specific authorities as required by the order. The PPPO Manager further delegated those authorities to the Deputy Manager, as allowed by the order and his delegation memorandum. EA verified that both individuals have current STSM qualification and have completed NELT.

PPPO FRAs are documented in Appendix D of PPPO-2649582, *Management Plan*, which adequately addresses specific responsibilities related to review and approval of safety basis documentation.

PPPO-M-420.1-4, *Safety Basis Document Review Procedure*, describes the responsibilities and the process for conducting reviews of safety basis documents for the Paducah and Portsmouth sites. The review team leader for safety document reviews at either Paducah or Portsmouth is typically the PPPO Nuclear Safety Oversight Lead. PPPO-M-420.1-4 states that the lead reviewer “Evaluates the scope of the review effort to determine if additional resources are required and if a review plan is warranted.” It does not state or require that the review be performed by individual(s) with the appropriate technical qualifications based on the content of the submittal. (See **OFI-PPPO-01**.)

PPPO-M-426.1, *DOE-PPPO Technical Qualification Program Plan*, adequately defines the roles, responsibilities, and performance requirements for qualification of technical personnel and drives the requalification process.

### **Savannah River Operations Office**

The EM Headquarters organization has delegated SBAA to the DOE-SR Manager, who was recently appointed to that position and does not have current STSM qualification, but has successfully completed NELT. The delegation memorandum specifically requires additional concurrence signatures on safety basis correspondence by individuals having the appropriate qualifications, as compensatory measures until the STSM qualification process is complete. The DOE-SR Manager has the authority to further delegate SBAA to the Deputy Manager during absences.

SRIP 400, Chapter 421.1, *Nuclear Safety Oversight*, governs DOE-SR's review of safety basis submittals. EA found that this procedure includes extensive guidance on the areas to be examined during a review, but it does not include any requirements or guidance on the qualifications of the review team members. It does contain general requirements to refer to DOE-STD-1104-2009 for guidance in forming review teams and to conduct the review in accordance with the guidance in that standard. (See **OFI-DOE-SR-01**.)

EA found that SRM 300.1.1B, Chapter 1, *Functions, Responsibilities, and Authorities Procedure*, explicitly describes the delegated SBAA for the DOE-SR Manager and clearly presents and defines responsibilities.

SRM 300.1.1B, Chapter 6, *Technical Qualification Program*, adequately establishes and maintains the qualification program for technical personnel. A responsible manager is assigned for the program, and a training liaison is responsible for tracking requalification activities.

### **West Valley Demonstration Project**

The SBAA delegation to the WVDP Director occurred in two parts: EM Headquarters directly delegated the designated safety authority for nuclear safety management rules and DOE directives; and the authority for safety management programs was delegated first from EM to the Director of the Environmental Management Consolidated Business Center (EMCBC), and then from that individual to the WVDP Director.

The WVDP procedure for conducting safety basis reviews is QP-490-01, *Technical Document Reviews*. This procedure provides adequate guidance to ensure that appropriately qualified individuals are assigned to perform reviews of safety basis submittals, including the use of outside resources when required. Active implementation of this requirement was evident early in 2015, when the project office sought fire protection expertise from the EM Headquarters organization to support review of a safety basis update submittal with fire protection-related content.

EMCBC document PD-411-01, *EMCBC Functions, Responsibilities, and Authorities (FRA)*, contains environment, safety, and health FRAs necessary for implementing integrated safety management for EMCBC and "Small Site" activities, including WVDP. This FRA document specifies that the WVDP Director is responsible for establishing and approving the safety and authorization basis in accordance with 10 CFR Part 830 for hazard category 3, and below category 3, nuclear facilities. QP-111-01, *Mission and Function Statement*, is specific to WVDP, but does not address delegated SBAA.

PD-364-01, *DOE-WVDP Technical Qualifications Program Description*, defines the requirements and responsibilities for establishing and maintaining a technically competent workforce at WVDP and provides the minimum site-specific qualification standard required for each designated TQP position, including the STSM.

The procedure for tracking SBAA qualifications to ensure that they remain up to date is QP-364-01, *Implementation of the Technical Qualifications Program*. This procedure specifies that the project director must maintain STSM qualification and that STSM requalification must be conducted every five years.

## Carlsbad Field Office

The EM Headquarters organization had previously delegated SBAA to the CBFO Manager and Deputy Manager, however, those delegations became invalid when the individuals in those positions left CBFO. The newly named CBFO Manager has not yet received a delegation. In the interim, SBAA has been delegated to the CBFO Assistant Manager for Operations Oversight, who has a current STSM qualification and has completed NELT. The SBAA delegation letter specifies appropriate limitations on the delegated authority, requiring Headquarters concurrence on restart approval and documented safety analysis changes.

DOE/CBFO 02-3441, *Safety Management Functions, Responsibilities, and Authorities Manual*, contains a CBFO organization chart and briefly discusses the functions of each group within CBFO. The list of safety basis delegations in Attachment 3 of that document is outdated, based on the turnover of personnel noted above, and the text does not discuss the safety basis approval process or delineate responsibility in that area. (See **OFI-CBFO-01**.)

CBFO uses management procedure MP 4.11, *Safety Basis Review Procedure*, to review safety basis submittals. MP 4.11 contains detailed guidance in several sections (and attachments) requiring the selection of appropriately qualified individuals to review safety basis submittals. This guidance was more comprehensive than was found in reviews at the other DOE nuclear facility sites, and constitutes a best practice.

DOE/CBFO 02-3219, *Technical Qualification Program Plan*, establishes comprehensive guidance for identifying TQP participants, the qualification process, and tracking and monitoring status. The training program coordinator is responsible for initiating the requalification process as appropriate.

### 5.3.3 Conclusions for the Office of Environmental Management

EM's SBAA delegations provide adequate detail for the authorities delegated. Delegations were made to individuals. All EM individuals with delegated SBAA meet the minimum qualifications specified in DOE Order 450.2, or appropriate compensatory measures were identified. The EM delegation process differs from the other program offices and NNSA in that delegations are made annually in January and expire the following January. Each new delegation requires affirmation from the field office that the delegates are appropriately qualified and that sufficient, technically qualified staff members are available to perform the reviews. EA found this process to be a best practice because it:

- Accomplishes the staffing review required by the order to support the delegation
- Accomplishes the annual and biennial review requirements of the order
- Substantially limits the potential for expired qualifications on the part of delegates.

EA found that the EM field offices generally have adequate measures in place to track delegate qualification to ensure timely re-qualification. The TQP process is defined in a procedure and adequately implemented except at RL, which uses a spreadsheet.

The Headquarters FRA document provides no detail on delegated SBAA but references the delegation letters. Field office FRA documents are generally adequate except at CBFO, where the FRA does not discuss delegated SBAA, and at OREM, where the FRA contains inaccurate information that could be misinterpreted to result in a noncompliance with the order.

EA's examination of field office procedures for reviewing safety basis submittals yielded mixed results. The OREM, RL, PPPO, and DOE-SR procedures contain little or no guidance on selecting review team

members with the appropriate qualifications to perform the review. Conversely, EA found the CBFO procedure to be very strong in this area, representing a best practice in its treatment of this topic.

## 5.4 National Nuclear Security Administration

### 5.4.1 National Nuclear Security Administration Headquarters Review

NNSA currently has hazard category 2 and/or 3 nuclear facilities at seven DOE sites (see Table 1). SBAA for nuclear facilities at these sites has been delegated to the individuals identified by position in the site-specific discussions below.

NNSA Supplemental Directive SD 450.2, *Functions, Responsibilities, and Authorities (FRA) Document for Safety Management*, addresses the delegation process from an administrative authority aspect, assigning responsibility for the delegation process. The latest revision included a CTA responsibility which had previously been part of NNSA Manual 411.1-1C, *Safety Management Functions, Responsibilities and Authorities Manual*: “Periodically reviews and assesses whether NNSA sites are maintaining adequate numbers of technically competent personnel necessary to fulfill nuclear safety requirements.” The NNSA FRA document adequately addresses delegated responsibilities related to SBAA and, with the provision added above, directly addresses the NNSA field offices’ capability to accomplish their delegated responsibilities.

NNSA Business Operating Procedure BOP-07.01, *Delegations of Nuclear Safety Authority*, provides direction for letters of delegation and biennial review of the delegations. It refers to the nuclear safety delegation criteria in DOE Order 450.2 and specifies a delegation development process that implements the order requirements. In reviewing implementation of BOP-07.01, EA examined documentation provided by NNSA, including current delegation letters.

EA noted one issue in the NA-LA delegation. LANL has multiple hazard category 2 or 3 facilities, including four that analysis has shown could produce a release with dose rates exceeding the Evaluation Guideline under specific postulated conditions (Technical Area-55; Weapons Engineering Tritium Facility; Waste Characterization, Reduction, and Repackaging Facility; and Area G). DOE-STD-1104-2014, Section 3.2, states that SBAA for these facilities may not be delegated. NNSA BOP-07.01, Section 5(a), also prohibits a delegation for facilities exceeding the Evaluation Guideline. However, the SBAA delegation memorandum to the NA-LA director does not exclude these facilities.<sup>2</sup> NNSA personnel reported to EA that the NA-LA delegation was issued before there was a requirement to restrict safety basis approval authority for facilities that could exceed the Evaluation Guideline and that alternative management controls are in place to prevent the exercise of those authorities for those type of facilities at LANL. NNSA also reported that since the restriction was put in place, all new or revised safety analyses for accident scenarios for these facilities have been approved at the NNSA Secretarial Officer level.

Some delegation memoranda issued by NNSA exclude approval authority for justifications for continued operation (JCOs) and documented safety analysis changes that might result in consequences exceeding the Evaluation Guideline. These exclusions are noteworthy in that they identify an important consideration for field offices: Both proposed design evolutions and unanticipated events that might cause loss of mitigating features could introduce new potential hazards or impact the predictions of offsite dose consequences from existing hazards. However, this exclusion in some NNSA letters of delegation was not included in the memoranda for all NNSA sites. (See **OFI-NNSA-01**.)

EA identified no issues in SBAA delegations at the other NNSA sites. All were appropriately written and addressed by name to the most senior level program officer (or deputy) at each of the site offices. The delegations adequately define the delegated nuclear safety responsibilities and typically address the period

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<sup>2</sup> This is considered a deficiency as defined in DOE Order 227.1A.

of validity by stating that the delegation will remain valid while that individual retains his/her current position. Also, each delegation appropriately states whether or not the authority may be further delegated. DOE Order 450.2 requires the CTA support staff to review the delegation process annually to evaluate whether it is adequate and functioning properly, and to identify any concerns to the CTA. The CTA staff has not performed annual reviews of the delegation process. DOE Order 450.2 also requires a review, by an Under Secretary or secretarial office, of the delegated authorities at least every two years, and verification that the capability and capacity to execute the responsibilities and authorities still exist. BOP-07.01, Appendix 1, states that “The Chief of Defense Nuclear Safety shall perform reviews every two years of Field Offices and Headquarters elements having delegated nuclear safety authorities to verify those individuals and their organizations have maintained the necessary capability to carry out assigned delegated safety authorities.” NNSA has performed biennial reviews of the field offices to demonstrate the adequacy of the site capabilities to support the safety basis review process. A Chief of Defense Nuclear Safety biennial review in 2011 provided thorough reviews of nuclear safety in the functional areas supporting facility safety, including startup/restart, integrated safety management, and safety basis. However, in 2013, NNSA chose to accomplish this function by having each field office perform a self-assessment of its delegations, an approach that is not consistent with the Order or with BOP-07.01.<sup>3</sup>

#### **5.4.2 National Nuclear Security Administration Site Review**

##### **Livermore Field Office**

At LFO, NNSA has delegated SBAA to two managers: the Senior Technical Safety Advisor and the Technical Deputy for Programs and Business. Both are direct reports to the LFO Manager. EA verified that both individuals have completed NELT, have current STSM qualification, and are cognizant of the status of the current SBAA delegation. Review of the LFO staffing plan indicated that sufficient qualified staffing is in place to review most safety basis submittals, including six individuals with STSM qualifications and three nuclear safety specialists. Resources are available from the NNSA Albuquerque Complex in specialized areas as necessary. The delegation memoranda for the individuals noted above clearly specify the boundaries and limitations of the delegation.

WI 421, *Review and Approval of Nuclear Safety Basis Documents*, adequately describes LFO’s process for performing safety basis document reviews, specifying that the team assembled to review a safety basis submittal will include personnel with the appropriate qualifications to perform an adequate review.

The FRA document, M 414.1, *National Nuclear Security Administration Livermore Field Office Integrated Management System Manual*, adequately addresses SBAA delegation authorities. LFO does not oversee any facility with dose consequences having the potential to exceed the Evaluation Guideline.

LFO Manual 426.1, *Livermore Site Office Technical Qualification Program*, establishes requirements for the qualification process, including tracking and ensuring requalification when necessary.

##### **NNSA Los Alamos Field Office**

The only individual in NA-LA with delegated SBAA is the NA-LA Manager. At the time of this review, NNSA had delegated to the NA-LA Manager the SBAA for all nuclear facilities at LANL, including those transferred to EM. EA verified that the NA-LA Manager had completed NELT and had current STSM qualification. In interviews, both the NA-LA Manager and the nuclear safety team supervisor asserted that the field office has (or has access to) qualified personnel suitable for the review of safety basis submittals as needed, specifically from the NNSA Albuquerque Complex. EA noted that the delegation memorandum had not yet been updated to exclude the LANL facilities with the potential to exceed the Evaluation Guideline, as discussed above in Section 5.4.1. Interviews indicated that safety

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<sup>3</sup> This is considered a deficiency as defined in DOE Order 227.1A.

basis submittals for these facilities are normally reviewed and dispositioned on site as permitted by the delegation memorandum, although EA noted that knowledgeable NNSA Headquarters personnel normally participate in these considerations and that NA-LA regularly sends submittals affecting dose calculations to NNSA Headquarters for review. NNSA reports that regardless of the terms of the delegation memorandum, all revisions to safety analyses of accident scenarios for facilities with the potential to exceed the Evaluation Guide have been approved at the Secretarial Office level.

An individual within NA-LA is assigned to track the status of these and other TQP participants to ensure that their qualifications remain current.

EA's review of the NA-LA procedure governing review of safety basis submittals, MP 01.03. R.2, *Nuclear Facility Safety Basis Document Review & Approval*, identified one comment. DOE Order 450.2 asserts that "Delegations must only be made where the candidate's organization possesses, or has access to, sufficient staff (for example, a Service Center) with the necessary qualifications, experience, and expertise to support the candidate for the authorities to be delegated." Section 5.1.3 of MP 01.03 assigns responsibility to the safety basis review team lead for determining what personnel resources are needed but makes no statement and establishes no requirement that the team shall have the qualifications and technical skills necessary to review a given submittal (e.g., a fire protection engineer to review a submittal containing fire hazard analysis changes). MP-01.01, R.4, *Nuclear Safety Team Program*, is silent on this issue. (See **OFI-NALA-01**.)

PLAN 00.14, *Integrated Management System Description Including Los Alamos Field Office Functions, Responsibilities, and Authorities (FRAs)*, addresses NA-LA FRAs in comprehensive detail, describing explicit functions for each senior level position and each organizational group. It notes that the Manager is responsible for SBAA but does not mention that as a potentially delegated responsibility for the Deputy Manager. It provides guidance for the delegation process but does not actually list or describe delegated authorities. Overall, the FRA descriptions pertaining to review and approval of safety basis submittals are adequate.

### **Nevada Field Office**

At NFO, NNSA has delegated SBAA to the NFO Manager. The delegation memorandum clearly specifies the boundaries and limitations of the delegation consistent with NNSA Policy BOP-10.002, *Delegations of Nuclear Safety Authority*. NFO does not oversee any facility with dose consequences having the potential to exceed the Evaluation Guideline.

The FRA document, NFO O 111.x, *Functions, Responsibilities, and Authorities*, does not adequately address SBAA delegation authorities or identify the delegated authorities. A table in Appendix C of that document indicates that safety basis responsibility belongs to the Assistant Manager for Safety and Security; however, that individual is not the SBAA delegate. Appendix A, Section 5, refers to a limited-access Internet portal where delegations are posted. It further states that active delegations are incorporated by reference in the FRA document but does not provide those references.<sup>4</sup>

The safety basis review procedure, NSO O 421.X1D, *Nuclear Facility Safety Management*, states that contractor-submitted safety basis documents are evaluated in accordance with DOE-STD-1104-2009. It also provides adequate guidance to ensure that safety basis submittal reviews are performed by appropriately qualified individuals, including personnel with subject matter expertise pertinent to the topics covered in the submittal.

NSO O 426.1, *Technical Qualification Program Plan*, establishes thorough requirements for the personnel qualification process and assigns responsibility for tracking qualifications once achieved to

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<sup>4</sup> This is considered a deficiency as defined in DOE Order 227.1A.

ensure requalification when necessary.

### **NNSA Production Office**

At NPO, NNSA has delegated SBAA to two individuals: the Deputy Manager and the Senior Technical Safety Advisor. Both are direct reports to the NPO Manager. EA verified that both individuals have completed NELT, have current STSM qualification and are cognizant of the status of the current SBAA delegation. The NPO organization chart and the NPO safety basis personnel indicated that sufficient resources are available through existing NPO staff at Y-12 and Pantex with supplemental support personnel as needed from the NNSA Office of the Associate Administrator for Safety, Infrastructure and Operations, NA-50, to adequately staff safety basis review teams.

NPO-3.1.3.4, *Safety Basis Program*, and NPO-G-3.1.3.4, *Safety Basis Document Format and Content Guide*, describe NPO's process for performing safety basis document reviews. However, they do not address the DOE Order 450.2 requirement to ensure that the resource(s) assigned to review a safety basis submittal have appropriate qualifications to perform the review adequately. DOE-STD-1104-2014 has relevant requirements in this area but is invoked only to define the approval bases. (See **OFI-NPO-01**.)

The delegation memoranda for the individuals noted above clearly specify the boundaries and limitations of the delegation. CTA concurrence was documented for the Senior Technical Safety Advisor delegation.

The FRA document, NPO-2.2.2.1, *Functions, Responsibilities, and Authority Manual (FRAM)*, adequately addresses SBAA delegation authorities and is actually somewhat more restrictive than the current delegation memoranda.

NPO document NPO-2.2.3.1, *Technical Qualification and Training Program*, governs the qualification process. The NPO training system tracks and ensures requalification when necessary.

### **Sandia Field Office**

At SFO, NNSA has delegated SBAA to the Deputy Manager. The delegation memorandum preceded the deputy manager's completion of NELT, so compensatory measures were put in place that required additional approval by other individuals who had completed NELT and had current STSM qualification. The Deputy Manager recently completed NELT, and SFO has formally requested that the compensatory measures be discontinued. SFO does not oversee any facilities with dose consequences having the potential to exceed the Evaluation Guideline.

The delegation memorandum for the Deputy Manager also noted that SFO staff resources were a concern in the areas of nuclear safety specialist staffing and expertise in fire protection engineering. The conclusion reached by SFO at that time was that SFO had access to adequate resources from the NNSA Albuquerque Complex to support safety basis reviews.

SFO operating procedure 1301.01, *Safety Basis*, invokes DOE-STD-1104 requirements and guidance for reviews of safety design basis documents. DOE-STD-1104 contains guidance on selecting review team members with qualifications appropriate to the subject matter to be reviewed. Procedure 1301.01 also requires the assistant manager for engineering's concurrence on review plans and final recommendations. These measures provide adequate assurance that safety basis reviews will be conducted by individuals with qualifications appropriate to the content of the submittal.

EA reviewed 0802.1, *Functions, Responsibilities and Authorities (FRA) for Safety Management at the Sandia Field Office*, and 0802.01.01, *FRA Matrix Spreadsheet*. The first document is an explanatory cover note for the second, which is an Excel spreadsheet. The content of the spreadsheet is abbreviated

and is insufficient to adequately describe the delegated SBAA scope or identify the individual with delegated SBAA.<sup>5</sup>

SFO-0603.03, *Technical Qualifications Program*, governs the TQP program at SFO. It adequately addresses the qualification process but does not assign responsibility for tracking requalification to ensure that qualifications are not allowed to expire once earned.

### **Savannah River Field Office**

At SRFO, NNSA has delegated SBAA to the SRFO Manager, who has current STSM qualification and has successfully completed NELT. The delegation memorandum specifically excludes situations with dose consequences having the potential to exceed the Evaluation Guideline.

SRFO uses site-specific procedure SV-PRO-030, *SRFO Nuclear Safety Oversight*, to govern the process for reviewing safety basis submittals. EA found that it provides adequate guidance to both the Federal project director and the safety basis review team leader to ensure that the selected reviewers have appropriate technical qualifications to perform the review based on the content of the submittal. The site staff is supplemented as needed from the NNSA Albuquerque Complex or onsite resources.

SV-MAN-002, *SRFO Safety Management Functions, Responsibilities, and Authorities Manual*, explicitly describes the delegated SBAA for the SRFO Manager and clearly presents and defines responsibilities.

SV-PRO-015, *Technical Qualification Training Program*, adequately establishes and maintains the qualification program for technical personnel. A TQP manager is assigned responsibility for the program, which includes tracking requalification activities.

### **5.4.3 Conclusions for the National Nuclear Security Administration**

NNSA's SBAA delegations provide adequate detail for the authorities delegated. Delegations were made to individuals. While alternative measures were reported by NNSA to be in place, one deficiency was identified in the SBAA delegation to NA-LA, which oversees several facilities where the potential offsite dose consequences could exceed the Evaluation Guideline. The NA-LA delegation letter did not contain an exception for those facilities, as required by DOE-STD-1104-2014. It was observed that NNSA delegation letters for some facilities that do not exceed the Evaluation Guideline contain a pre-emptive exclusion for JCOs and safety basis changes that might result in dose consequences exceeding the Guideline. Although use of this exclusion was noteworthy, it was not included in all NNSA delegation letters.

DOE Order 450.2 requires annual reviews of the delegation process by the CTA staff, but EA found no documented evidence of such reviews. The order also requires biennial reviews of actual delegations. The most recent NNSA biennial review was accomplished by directing the field offices to perform a self-assessment in this area. This approach does not meet the requirements of NNSA BOP-07.01 or the DOE order.

Interviews indicated that field office capabilities were generally adequate, based on the availability of supplemental resources from NNSA Headquarters or the NNSA Albuquerque Complex. NNSA Headquarters and field office FRA documents adequately describe delegated authorities, with the exceptions of those for NFO and SFO.

Procedures for reviewing safety basis submittals are adequate at most field offices. However, the NA-LA and NPO procedures do not contain guidance to ensure that individuals or teams that review submittals

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<sup>5</sup> This is considered a deficiency as defined in DOE Order 227.1A.



have qualifications appropriate to the content of the submittal. TQP procedures are generally adequate.

## **6.0 FINDINGS**

Findings are deficiencies that warrant a high level of attention from management. If left uncorrected, findings could adversely affect the DOE mission, the environment, the safety or health of workers and the public, or national security. Findings define the specific nature of the deficiency, whether it is localized or indicative of a systemic problem, and identify which organization is responsible for corrective actions. Findings may identify aspects of a program that do not meet the intent of DOE policy or Federal regulation. DOE line management and/or contractor organizations must develop and implement corrective action plans for EA appraisal findings. Cognizant DOE managers must use site- and program-specific issues management processes and systems developed in accordance with DOE Order 227.1 to manage these corrective action plans and track them to completion. The results section of this report also identifies deficiencies including isolated non-compliances that did not meet the criteria for a finding. Site processes should be consulted in response to these deficiencies.

No findings were identified during this review.

## **7.0 OPPORTUNITIES FOR IMPROVEMENT**

Opportunities for improvement are suggestions offered in Independent Oversight appraisal reports that may assist cognizant managers in improving programs and operations. While they may identify potential solutions to findings and deficiencies identified in appraisal reports, they may also address other conditions observed during the appraisal process. Opportunities for improvement are provided only as recommendations for line management consideration; they do not require formal resolution by management through a corrective action process. These potential enhancements are not intended to be prescriptive or mandatory. Rather, they are suggestions offered by EA that may assist site management in implementing best practices or provide potential solutions to issues identified during the conduct of the review. In some cases, OFIs address areas where program or process improvements can be achieved through minimal effort.

### **Office of Science**

- OFI-SC-01** Consider revising SC Procedure 12 to address review and documentation of staff qualifications and technical adequacy in support of any potential SBAA delegation, including the application of compensatory measures where qualifications do not meet minimum requirements. Procedure 12 would also be strengthened by the inclusion of measures to ensure tracking and renewal of delegate qualifications.
- OFI-SC-02** Consider revising the delegation process to include a provision where appropriate in delegation memoranda that the program office retains approval authority for safety basis changes and justifications for continued operation that could result in dose consequences exceeding the Evaluation Guideline.
- OFI-SC-03** Consider revising SC Procedure 12 to require annual review of the delegation process as required by DOE Order 450.2.

### **Office of Nuclear Energy**

- OFI-NE-01** Consider revising the NE *Standard Operating Procedure for Delegation of*

*Safety Authorities* to require formal documentation and retention of reviews performed to meet the annual process review requirement of DOE Order 450.2.

**OFI-NE-02** Consider including a statement in delegation memoranda that the program office retains approval authority for safety basis changes and justifications for continued operation that could result in dose consequences exceeding the Evaluation Guideline.

**OFI-NE-03** Consider revising the NE *Standard Operating Procedure for Delegation of Safety Authorities* to require annual review of the delegation process as required by DOE Order 450.2.

**OFI-ID-01** Consider revising 01.OD.01, *Functions, Responsibilities, and Authorities*, to note that delegated authorities for the Deputy Manager for Operations Support and the Deputy Manager for the ICP are limited to the NE scope and the EM scope, respectively.

### **Office of Environmental Management**

**OFI-EM-01** Consider documenting CTA concurrence with the SBAA delegation for CBFO issued September 29, 2015.

**OFI-EM-02** Consider including a statement in delegation memoranda that the program office retains approval authority for safety basis changes and justifications for continued operation that could result in dose consequences exceeding the Evaluation Guideline.

**OFI-OREM-01** Consider revising OREM-OM-PL-02, *Functions, Responsibilities, Authorities, and Accountabilities*, Section 2.5, to delete “safety approval authority” as a potential Engineering, Safety, and Quality Division Director function.

**OFI-OREM-02** Consider revising OREM-ESH-IP-02, *Safety Basis Document Review*, to include guidance ensuring that the assigned safety basis review individual or team has qualifications appropriate to the subject matter of the safety basis submittal to be reviewed.

**OFI-RL-01** Consider revising DOE-RL-RIMS-S&H-SDR&A, *Safety Documentation Review and Approval*, to include guidance ensuring that the assigned safety basis review individual or team has qualifications appropriate to the subject matter of the safety basis submittal to be reviewed.

**OFI-RL-02** Consider developing a formal tracking system with assigned responsibilities to track technical qualifications, expiration dates, and renewal status.

**OFI-PPPO-01** Consider revising PPPO-M-420.1-4, *Safety Basis Document Review Procedure*, to include guidance ensuring that the assigned safety basis review individual or team has qualifications appropriate to the subject matter of the safety basis submittal to be reviewed.

**OFI-DOE-SR-01** Consider revising SRIP 400, Chapter 421.1, to include guidance ensuring that the assigned safety basis review individual or team has qualifications appropriate to the subject matter of the safety basis submittal to be reviewed.

**OFI-CBFO-01** Consider revising DOE/CBFO 02-3441, *Safety Management Functions, Responsibilities, and Authorities Manual*, to update the delegation information and to provide additional discussion of safety basis review and approval responsibilities within the CBFO organization.

**National Nuclear Security Administration**

**OFI-NNSA-01** Consider using the exclusion regarding potential exceedances of the Evaluation Guideline in the LFO delegation memorandum to Nicole Nelson-Jean dated July 28, 2014, in future delegation memoranda for other NNSA facilities.

**OFI-NALA-01** Consider revising MP 01.03. R.2, *Nuclear Facility Safety Basis Document Review & Approval*, to include guidance ensuring that the safety basis review team is structured to include individuals with qualifications appropriate to the subject matter of the safety basis submittal to be reviewed.

**OFI-NPO-01** Consider revising NPO-3.1.3.4, *Safety Basis Program*, and NPO-G-3.1.3.4, *Safety Basis Document Format and Content Guide*, to include guidance ensuring that the assigned safety basis review individual or team has qualifications appropriate to the subject matter of the safety basis submittal to be reviewed.

## **Appendix A Supplemental Information**

### **Dates of Review**

Due to the broad scope of this review and the number of sites involved, the review process took place over several months and was completed on November 24, 2015.

### **Office of Enterprise Assessments (EA) Management**

Glenn S. Podonsky, Director, Office of Enterprise Assessments  
William A. Eckroade, Deputy Director, Office of Enterprise Assessments  
Thomas R. Staker, Director, Office of Environment, Safety and Health Assessments  
William E. Miller, Director, Office of Nuclear Safety and Environmental Assessments  
Patricia Williams, Director, Office of Worker Safety and Health Assessments  
Gerald M. McAteer, Director, Office of Emergency Management Assessments

### **Quality Review Board**

William A. Eckroade  
Karen L. Boardman  
John S. Boulden III  
Thomas R. Staker  
William E. Miller  
Patricia Williams  
Gerald M. McAteer  
Michael A. Kilpatrick

### **EA Reviewers**

Charles Allen - Lead  
Aleem Boatright  
Ron Bostic  
Jimmy Dyke  
Robert Farrell  
William Macon  
Timothy Mengers  
William Miller  
Rosemary Reeves  
Shivaji Seth  
Jeff Snook

## **Appendix B**

### **Key Documents Reviewed and Interviews**

#### **Documents Reviewed**

##### ASO

Memorandum, Joseph A. McBrearty to Joanna M. Livegood, 7/21/14, *Delegations of Authority for Office of Science Operations and Safety, Property Management, and Safeguards and Security Functions, Authorities, and Responsibilities Document*, Revision 2, 10/5/15

##### CBFO

MP 4.11, *Safety Basis Review Procedure*, Revision 5, 11/10/14  
DOE/CBFO 02-3219, *Technical Qualification Program Plan*, Revision 6, 8/2013  
DOE/CBFO 02-3441, *Safety Management Functions, Responsibilities, and Authorities Manual*, Revision 4, 6/12/15  
Memorandum from James Hutton to John W. Mouser, *Delegation of Safety Authorities*, dated 9/29/15

##### Environmental Management Headquarters

*Safety Management Functions, Responsibilities, and Authorities (FRA) Document*, July 2013  
SOPP #44, *Environmental Management Process for Delegation of Safety Authorities*, Revision 2, 7/9/12

##### OREM

OREM-OM-PL-02, *Functions, Responsibilities, Authorities, and Accountabilities*, 12/1/14  
OREM-ESH-IP-02, *Safety Basis Document Review*, Revision 4, 12/31/14  
Memorandum from J. Hutton to S. Cange dated 1/22/15, *Delegation of Safety Authorities*

##### ID

Memorandum from Peter B. Lyons to Richard B. Provencher, *Delegation of Safety Authorities*, dated 1/14/13  
Memorandum from Richard B. Provencher to Robert D. Boston, *Delegation of Safety Authorities (OS-QSD-13-003)*, dated 1/17/13  
Memorandum from Mark Whitney to John P. Zimmerman, *Compensatory Measures for Your Safety Authorities Delegation*, dated 5/12/15  
01.OD.01, *Functions, Responsibilities, and Authorities*, Revision 10, 12/15/14  
03.WI.01.04, *Safety Basis Review and Approval*, Revision 11, 11/13/14  
02.OD.01, *ID Technical Qualification Program*, Revision 5, 5/14/13

##### NA-LA

MP-01.01, Revision 4, *Nuclear Safety Team Program*  
MP 01.03, Revision 2, *Nuclear Facility Safety Basis Document Review & Approval*  
Memorandum to Kimberly Davis Lebak from James J. McConnell dated February 7, 2014, *Approval of Nuclear Safety Delegations for the Los Alamos Field Office*  
PLAN 00.14, *Integrated Management System Description Including Los Alamos Field Office Functions, Responsibilities, and Authorities (FRAs)*, Revision 2, 2/26/15

##### LFO

WI 421, *Review and Approval of Nuclear Safety Basis Documents*, Revision 7, 5/14/2014  
M 414.1 *National Nuclear Security Administration Livermore Field Office Integrated Management System Manual*  
NNSA Policy Letter BOP-10.002, *Delegations of Nuclear Safety Authority*  
Annual Workforce Analysis and Staffing Plan Report, December 2014

SBAA STSM Continuing Training Completion Certificates, 2013  
Memorandum to Nicole Nelson-Jean from James J. McConnell dated July 28, 2014, *Approval of Nuclear Safety Delegations for the Livermore Field Office*  
Memorandum to Livermore Site Office Manager from Donald L. Cook dated January 10, 2011, *Approval of Nuclear Safety Delegations for the Livermore Field Office*  
M 426.1 *Livermore Site Office Technical Qualification Program*

#### Nuclear Energy Headquarters

*Standard Operating Procedure for Delegation of Safety Authorities*, Revision 2, May 2013  
*Safety Management Functions, Responsibilities, and Authorities (FRA) Document*, Revision 6, January 2015

#### NFO

NFO O 111.x, *Functions, Responsibilities, and Authorities*, Revision 0, 6/19/14  
NSO O 421.X1D, *Nuclear Facility Safety Management*, Change 1, 2/23/11  
NSO O 426.1A, *Technical Qualification Program Plan*, Change 1, 4/20/11  
Memorandum from Donald L. Cook to the Nevada Site Office Manager, dated 3/28/12, *Approval of Nuclear Safety Delegations for Mr. Steven Lawrence, Deputy Manager, Nevada Site Office*

#### NNSA Headquarters

Business Operating Procedure BOP-07.01, *Delegations of Nuclear Safety Authority*, 10/28/2014  
Supplemental Directive SD 450.2, *Functions, Responsibilities, and Authorities (FRA) Document for Safety Management*, Admin Change 1, 1/27/15

#### NPO Production Office

NPO-2.2.2.1, *Functions, Responsibilities, and Authority Manual (FRAM)*, Revision 1, 9/9/2014  
NPO-3.1.3.4, *Safety Basis Program*, Revision 1, 7/28/2014  
NPO-G-3.1.3.4, *Safety Basis Document Format and Content Guide*, Revision 1, 7/28/2014  
NPO-2.2.3.1, *Technical Qualification and Training Program*, Revision 0, 6/17/2013  
Memorandum for Teresa Robbins, *Request for Delegation of Nuclear safety Authority*, 5/7/2015  
Memorandum for Kenneth Ivey, *Approval of Nuclear Safety Delegations for the NPO*, 12/19/2014

#### Office of Science Headquarters

*SC FRAM Delegated Authorities Table*, Revision 2, 1/10/12  
*Office of Science (SC) Environment, Safety, and Health (ES&H) Functions, Responsibilities, and Authorities (FRA) Document*, Revision 2, 1/10/12  
SC Procedure 12, *Facilitating Office of Science Delegations of Nuclear Safety*, 8/1/ 2014  
Facility Safety and Operations Procedure 1, *Reviewing and Approving Nuclear Facility Safety Basis Documentation*, 8/14/15

#### ORP

MGT-PM-PL-02, *Safety Management Functions, Responsibilities, and Authorities for the U.S. Department of Energy Office of River Protection*, Revision 11, 10/16/15  
TRS-ENG-IP-01, *Waste Treatment and Immobilization Plant Safety Basis Management*, Revision 7, 3/31/15  
TRS-ENG-IP-04, *Hanford Tank Farms Safety Basis Management*, Revision 5, 4/14/15  
Memorandum from James Hutton to Kevin Smith dated 1/22/15  
Memorandum from Kevin Smith to J. A. Dowell dated 5/29/15

#### OSO

OSO-FRA-110, *Functions, Responsibilities, and Authorities Document*, Revision 0, 3/3/14

*Delegations of Authority for Johnny O. Moore, from Joseph A. McBrearty, dated 7/2/15*  
WP 420, *Review and Approval of Nuclear Facility Authorization Basis documents, Revision 2, 7/29/14*

#### PNSO

PNSO-GUID-05, Revision 3, *Functions, Responsibilities, and Authorities Document*  
PNSO-PCDR-37, *PNSO Nuclear Facility Safety Program, 5/2012*  
Memorandum to Roger E. Snyder from Joseph A. McBrearty dated 7/6/15, *Delegations of Authority for Office of Science Operations and Safety, Property Management, and Safeguards and Security*

#### PPPO

PPPO-2649582, *Management Plan, Revision 3, February 2015*  
PPPO-M-420.1-4, *Safety Basis Document Review Procedure, Revision 0, 12/13/11*  
PPPO-M-426.1, *DOE-PPPO Technical Qualification Program Plan,*  
Memorandum from J. Hutton to W. E. Murphie, “Delegation of Safety Authorities,” dated 1/22/15.  
Memorandum PPPO-01-2401342-14, W. E. Murphie to R. E. Edwards, III, “Delegation of Safety Authorities,” dated 6/26/14

#### RL

DOE-RL-RIMS-S&H-SDR&A, *Safety Documentation Review and Approval Procedure, June 2014*  
*Functions, Responsibilities and Authorities Manual, September 2014, including Appendix B,*  
*Delegations of Authority and Memoranda of Agreement (MOA), RL/RIM-2002-01, Revision 11*  
Memorandum, 7/8/2015, *Senior Technical Safety Manager Re-qualification, Frey to Charboneau*  
*Self-Assessment of the Federal Technical Capability Program and Technical Qualification Program,*  
MA-14-AMSE-RL-001, October 2014.  
Memorandum, James Hutton to Stacy Charboneau, January 8, 2015, *Delegations of Authority*  
Richland Operations Office Memorandum, February 11, 2015, *Delegations of Authority, to Doug Shoop*

#### SFO

Memorandum to Jeffrey P. Harrell from Don F. Nichols, dated 8/5/2015, *Request for Delegation of Nuclear Safety Authority*  
Operating Procedure 1301.01, *Safety Basis, Revision 6, 2/11/15*  
SFO-0802.1, *Functions, Responsibilities and Authorities (FRA) for Safety Management at the Sandia Field Office, December 2014, Revision 0*  
SFO-0802.01.01, *FRA Matrix Spreadsheet*  
SFO-0603.03, *Technical Qualifications Program, Revision 5, 7/11/13*

#### DOE-SR

SRIP 400 Chapter 421.1, *Nuclear Safety Oversight, Revision 7, 10/28/14*  
SRM 300.1.1B, Chapter 6, *Technical Qualification Program, Revision 3, 7/9/12*  
Memorandum from Mark Whitney to Jack Craig, *Delegation of Safety Authorities, dated 7/15/15*  
SRM 300.1.1B, Chapter 1, *Functions, Responsibilities, and Authorities Procedure, Revision 7*

#### SRFO

SV-PRO-030, *SRFO Nuclear Safety Oversight, Revision 7, 11/30/14*  
Memorandum from James J. McConnell to Douglas Dearolph dated 5/18/15, *Approval of Deviation of Requirement for Biennial Review of Nuclear Safety Delegations for the National Nuclear Security Administration Savannah River Field Office*  
SV-MAN-002, *SRFO Safety Management Functions, Responsibilities, and Authorities Manual, Revision 8, 12/18/14*  
SV-PRO-015, *Technical Qualification Training Program, Revision 5, 10/31/14*

#### WVDP Site Office

Memorandum (363647), T. J. Jackson to B. C. Bower, "Delegation of Safety Authorities," dated June 19, 2014

Memorandum (EMCBC-00108-15), R. E. Holland to J. A. Hutton, "Request for Delegation of Safety Authorities for Calendar Year 2015," dated Nov 13, 2014

Memorandum (364923), J. A. Hutton to J. M. Sattler, "Delegation of Safety Authorities," dated January 15, 2015

Memorandum (364922), J. A. Hutton to B. C. Bower, "Delegation of Safety Authorities," dated January 15, 2015

Memorandum (364937), B. C. Bower to J. M. Sattler, "Request for Delegation of Safety Authorities for Calendar Year 2015," dated January 20, 2015

Memorandum (EMCBC-00108-15), J. M. Sattler to B. C. Bower, "Delegation of Safety Authorities for Calendar Year 2015," dated January 29, 2015

QP-490-01, *Technical Document Reviews*, Revision 3, 4/24/14

PD-411-01, *EMCBC Functions, Responsibilities, and Authorities (FRA)*

PD-364-01, *Technical Qualifications Program Description*

QP-111-01, Revision 9, *Mission and Function Statement*

QP-361-01, Revision 3, *Implementation of Training*

QP-364-01, Revision 0, *Implementation of the Technical Qualifications Program*

#### **Positions Interviewed**

ASO Deputy Manager

CBFO Assistant Manager for Operations

OREM Site Manager

OREM Deputy Site Manager

OREM Safety Basis Reviewers

OREM Support Contract Managers

OREM Subject Matter Experts for safety management programs

ID Field Office Deputy Manager

NA-LA Field Office Director

NA-LA Nuclear Safety Team Supervisor

LFO Senior Technical Safety Advisor

LFO Technical Deputy for Programs and Business

NE Chief of Nuclear Safety/CTA

NFO Field Office Deputy Manager

NPO Deputy Manager

NPO Senior Scientific Technical Advisor

NPO Deputy Manager for Nuclear Engineering

NPO Safety Basis Subject Matter Expert

NPO Training Subject Matter Expert

ORP Field Office Manager

ORP Assistant Manager for Technical and Regulatory Support

ORP Manager of Nuclear Safety

ORP Technical Qualification Program Manager

OSO Field Office Deputy Manager

PNSO Field Office Manager

PPPO Field Office Manager

PPPO Field Office Deputy Manager

PPPO Nuclear Safety Oversight Lead/Safety Basis Review Team Leader

PPPO Site Lead (at Paducah and Portsmouth)



PPPO Facility Representatives (at Paducah and Portsmouth)  
PPPO Quality Assurance Manager  
RL Field Office Deputy Manager  
RL Assistant Manager for Safety and Environment  
RL Nuclear Safety Division Director  
SC Deputy Director for Field Operations  
SFO Field Office Deputy Manager  
WVDP Director  
WVDP Team Leader, Safety and Site Programs Team  
WVDP Subject Matter Expert, Nuclear and Radiation Safety