Office of Enterprise Assessments Review of the Federal Oversight Process at the Idaho Site

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Acronyms

ADR	Alternative Dispute Resolution
AMWTP	Advanced Mixed Waste Treatment Project
ATR	Advanced Test Reactor
BEA	Battelle Energy Alliance, LLC
CAS	Contractor Assurance System
CFR	Code of Federal Regulations
CRAD	Criteria, Review, and Approach Document
CTA	Central Technical Authority
CWI	CH2M-WG Idaho, LLC
DOE	U.S. Department of Energy
DOMS	Deviations of Minor Significance
EA	Office of Enterprise Assessments
ECP	Employee Concerns Program
EM	Office of Environmental Management
EM-40	EM Office of Safety, Security, and Quality Programs
ES&H	Environment, Safety, and Health
FR	Facility Representative
FRA	Functions, Responsibilities, and Authorities
ICP	Idaho Cleanup Project
ID	DOE Idaho Operations Office
INL	Idaho National Laboratory
INR	Initial Notification Report
MFC	Materials and Fuels Complex
NE	Office of Nuclear Energy
NRC	Nuclear Regulatory Commission
NSP	ID Nuclear and Safety Performance Division
NSS	Nuclear Safety Specialist
OA	Operational Awareness
OD	Other Document
OFI	Opportunity for Improvement
OPAD	ID Operational Performance Assurance Director
ORPS	Occurrence Reporting and Processing System
PD	Process Description
QA	Quality Assurance
QER	Quarterly Evaluation Report
QSD	ID Quality and Safety Division
SME	Subject Matter Expert
SOPP	Standard Operating Policies and Procedures
SSO	Safety System Oversight
USQD	Unreviewed Safety Question Determination
WER	Weekly Evaluation Report
WI	Work Instruction
WIPP	Waste Isolation Pilot Plant

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EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) independent Office of Enterprise Assessments (EA) conducted an independent review to assess the process used by the Idaho Operations Office (ID) and the responsible DOE Headquarters line management offices to conduct Federal oversight of the Idaho Site. ID management requested this review. This review also provides data for an EA targeted review effort on feedback and improvement process throughout the DOE complex.

EA assessed how DOE line management of the Idaho Site has: (1) established and implemented an effective oversight program consistent with the requirements of DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*; and (2) maintained sufficient technical capability and knowledge of site and contractor activities to make informed decisions about hazards, risks, and resource allocation; provide direction to contractors; and evaluate contractor performance.

The implementation of the Idaho Site Federal oversight process has been effective in evaluating contractor assurance information and providing safety oversight of the facilities and projects. ID shows particular strength in the field activities of its staff. The facility representatives (FRs) are frequently in the field and thoroughly engaged in both the assessment and analysis of contractor performance. In addition, the safety system oversight engineers also maintain a regular presence at their assigned facilities and are well-coordinated with the FRs in providing oversight. However, EA identified that some process improvements could be made by clarifying some procedures, further developing integrated planning and scheduling, codifying best practices and staff interfaces, and enhancing review and assessment reports. EA also identified two best practices by ID, including voluntarily implementing a safety system oversight program for facilities under Office of Nuclear Energy line management and initiating a process for evaluating contractor performance that adapts elements of the Nuclear Regulatory Commission's successful oversight process for commercial power reactors.

The Headquarters Office of Environmental Management (EM) provides effective oversight and is engaged in the independent review of EM site activities. The Headquarters Office of Nuclear Energy maintains awareness and involvement in decision making at the Idaho Site; however, EA observed some opportunities to improve its implementation of DOE Order 226.1B.

Office of Enterprise Assessments Review of the Federal Oversight Process at the Idaho Site

1.0 PURPOSE

The U.S. Department of Energy (DOE) independent Office of Enterprise Assessments (EA), conducted an independent review to assess the process used by the Idaho Operations Office (ID) and the responsible DOE Headquarters line management offices to conduct federal oversight of the Idaho Site. The review was requested by ID management and will also provide data for the EA targeted review effort on feedback and improvement, as identified in the November 6, 2012, EA memorandum to DOE line management titled, *Independent Oversight of Nuclear Safety – Targeted Review Areas Starting in FY 2013*.

EA performed this review at the Idaho Site from January 26 to January 30, 2015, and conducted additional offsite document reviews and interviews with ID and Headquarters staff until March 4, 2015. This report discusses the scope, background, methodology, results, and conclusions of the review, as well as findings and opportunities for improvement (OFIs) identified during the review.

2.0 SCOPE

As described in DOE Policy 226.1, *Department of Energy Oversight Policy*, effective oversight of DOE federal and contractor operations is an integral part of DOE's responsibility as a self-regulating agency to provide assurance of its safety and security posture to its leadership, its workers, and the public. In accordance with DOE Policy 226.1B, the organizations responsible for DOE line management of the Idaho Site must establish and implement an effective oversight program consistent with the requirements of DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*. The policy also requires line management to maintain sufficient technical capability and knowledge of site and contractor activities to make informed decisions about hazards, risks, and resource allocation; provide direction to contractors; and evaluate contractor performance. In addition, feedback and improvement is a necessary function of integrated safety management that helps ensure the continued effectiveness and improvement of the established oversight program and support activities. As requested by ID management, and consistent with goals expressed in the November 6, 2012, targeted review memorandum, EA assessed the oversight process used at the Idaho Site.

3.0 BACKGROUND

The Independent Oversight Program comprises one element of DOE's multi-faceted approach to oversight as described in DOE Policy 226.1B. The Independent Oversight program is designed to enhance DOE safety and security programs by providing DOE and contractor managers, Congress, and other stakeholders with an independent assessment of the adequacy of DOE policy and requirements and the effectiveness of DOE and contractor line management performance in safety, security, and other critical functions as directed by the Secretary of Energy. DOE Order 227.1, *Independent Oversight Program*, defines this program, which EA is responsible for implementing.

The Idaho Site includes Idaho National Laboratory (INL), the Idaho Cleanup Project (ICP), and the Advanced Mixed Waste Treatment Project (AMWTP). ID provides direction and oversight for the design and operation of the Idaho Site nuclear facilities for the DOE Offices of Nuclear Energy (NE) and Environmental Management (EM). NE is responsible for INL facilities and general site operations, and EM is responsible for ICP and AMWTP facilities. These two Headquarters line management

organizations are responsible for oversight of the nuclear facilities and their activities. The ID Deputy Manager for Operations Support is ultimately responsible for oversight of the non-nuclear and Hazard Category 2 and 3 NE nuclear facilities, as defined by DOE-STD-1027, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*, and 10 CFR 830, *Nuclear Safety Management*, as well as day-to-day oversight of the Advanced Test Reactor (ATR), a Hazard Category 1 nuclear facility. The NE Chief of Nuclear Safety is the safety basis approval authority and startup authorization authority for the ATR, and under the ID Deputy Manager for ICP, oversight of the EM facilities is the responsibility of the Assistant Manager for Nuclear Safety and Performance. Currently, Battelle Energy Alliance, LLC (BEA); CH2M-WG Idaho, LLC (CWI); and Idaho Treatment Group, LLC are the primary contractors responsible for the management and operation of INL, ICP, and AMWTP facilities, respectively.

4.0 METHODOLOGY

The EA review of the Idaho Site Federal oversight process used selected objectives and criteria from criteria, review, and approach document (CRAD) 45-21, Rev. 1, *Feedback and Continuous Improvement Inspection Criteria and Approach – DOE Field Element*. The review included the following activities:

- Observation of ID oversight activities, including meetings to discuss the results of oversight activities and selected planned assessments and operational awareness activities during the EA team's onsite visit.
- Interviews with selected subject matter experts (SMEs), Facility Representatives (FRs), and other staff and management responsible for implementing the oversight program.
- Detailed review of documentation associated with the ID oversight program.

The criteria of the CRAD are derived from DOE Order 226.1B and are cited in italics before the applicable sections.

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 and personnel interviewed is provided in Appendix B. Appendix C provides a detailed list of observations and potential program documentation improvements for consideration pursuant to OFI-ID-02.

5.0 RESULTS

The results of the EA review are presented below and are based on the methodology and selected criteria discussed in Section 4.0 of this report.

5.1 Field Element Oversight

ID provides primary oversight of the Idaho Site and its facilities through two Deputy Managers, through the Deputy Manager for Operations Support for NE facilities, and the Deputy Manager for ICP for EM facilities.

5.1.1 Oversight Program

DOE field element line management has established and implemented oversight processes that evaluate contractor and DOE programs and management systems, including site assurance systems, for effectiveness of performance (including compliance with requirements). Such evaluations are based on

the results of operational awareness activities; assessments of facilities, operations, and programs; and assessments of the contractor's assurance system. The level and/or mix (i.e., rigor or frequency in a particular area) of oversight may be tailored based on considerations of hazards, the maturity and operational performance of the contractor's programs and management systems. [DOE Order 226.1B, 4b(1)]

Oversight processes are tailored according to the effectiveness of contractor assurance systems, the hazards at the site/activity, and the degree of risk, giving additional emphasis to potentially high consequence activities. [DOE Order 226.1B, 4b(5)]

Program Organization

For NE projects and facilities, oversight of safety is coordinated under the ID Deputy Manager for Operations Support. Three subordinate division directors work together to plan schedule and execute all safety oversight activities for NE projects and facilities: the Operational Performance Assurance Director (OPAD) manages the FR and safety system oversight (SSO) programs, the Quality & Safety Director manages SMEs, and the Environment and Sustainability Director manages the Environmental Compliance and Environmental Resource groups.

EM projects and facilities are managed by the Deputy Manager for ICP with three supporting assistant managers. The Nuclear and Safety Performance Division (NSP) contains the Safety Performance, Nuclear Safety, and FR teams that perform the preponderance of oversight.

Substantial cooperation takes place between ID oversight organizations. SME resources are shared by both the Quality and Safety Division (QSD), which covers NE facilities, and NSP, which is responsible for EM facilities. EA observed the industrial safety SME in the field at the Materials and Fuels Complex (MFC) who were following up on issues the FRs had identified. This is a common example of the cooperation between groups that adds value to the oversight being provided. A memorandum from the QSD Director and NSP Manager to the QSD and NSP staffs, dated July 8, 2014, describes the interaction between these organizations and, using a table, shows how resources are shared. This memorandum and the use of a common set of work instructions help normalize the staff interfaces, and cooperation between the QSD and NSP organizations appears to be effective and well-understood by the staff and leadership currently in place. However, these cooperative relationships are not assigned and defined in the ID functions, responsibilities, and authorities (FRA) document, and no work instruction (WI) or process description (PD) exists to codify or document these interactions. The important cooperation between the QSD and NSP could be subject to changing working relationships that result from staff turnover, attrition, and other factors. (See **OFI-ID-01**.)

Program Documentation

DOE field element line management has established and implemented effective oversight processes that evaluate the adequacy and effectiveness of contractor assurance systems and DOE oversight processes. DOE field element assurance system programs and processes are in accordance with the policy and key elements outlined in DOE Policy 226.1 B, Department of Energy Oversight Policy; DOE Order 226.1 B, Implementation of Department of Energy Oversight Policy, Attachment 2; quality assurance requirements (as stated in 10 CFR 830, Subpart A, DOE 0 414.1D Quality Assurance and/ or other applicable regulations); and applicable DOE directives.

Procedures

ID uses program documentation that is common to the oversight processes used both NE and EM facilities. EA reviewed this program documentation and interviewed each manager, as well as a thorough cross section of ID staff. Though program documentation is in place to guide many oversight responsibilities, some potentially useful areas are not addressed in key WI and PD documents. Nevertheless, interviews reflected a substantial awareness of and engagement in the oversight program and processes at all levels and in all organizations. The NE and EM implementation methods are not identical, but quarterly FR meetings with SME participation are intended to provide a forum for sharing best practices across ID organizations.

In evaluating the ID oversight process, EA reviewed a number of office procedures that implement the program. These are listed in Appendix B of this report and include PDs, WIs, and Other Documents (ODs). Some of the key procedures are:

- 03.PD.04, *Contract Oversight*
    - Details the observed process for oversight planning and evaluation of Idaho Site contractor performance.
    - Describes how the various oversight program elements are performed in implementing procedures and WIs.
    - Provides good detail and accurate descriptions.
- 01.WI.03.12, *Corrective and Preventative Action*
    - Describes the process for assignment, tracking and documenting completion of corrective and improvement actions in the Pegasus issues management system.
- 03.WI.04.01, *Oversight Planning and Scheduling*
    - Describes the process for deciding when, how, and by whom oversight of contract requirements is to be conducted, how the schedule is developed and approved, and how schedules are communicated to the contractors.
    - Provides good instructions that frame the general process; planners demonstrated an ability to develop the schedule in accordance with this WI.
- 03.WI.04.02, *Conduct of Oversight Activities*
    - Provides assessment implementation guidance and establishes the process for roll-up of oversight results into the Weekly, Monthly, and Quarterly Evaluation Reports (QER) for contract performance management.
    - ID conducted a self-assessment documented in REP-EM-3/12/2015-54257, *Management Self-Assessment of EM-ICP Oversight*, to assess the process for conducting oversight; improvement areas were identified.

In general, the procedures are complete and well-understood by the responsible staff. In many cases, such tools as flow diagrams, forms, and examples are used to communicate important processes. For example, 03.PD.04, *Contract Oversight*, contains an overview of the oversight process in a concise block diagram that has helped those implementing the process do so efficiently and without having to re-read the entire document for clarity. The implementing staff was generally consistent in applying the guidance provided

in these procedures. Additionally, these procedures are regularly updated and improved as needed. A number of office procedures either had been recently revised or were under review at the time of this EA assessment.

Despite the generally high quality of these documents, EA identified some opportunities to further improve their quality and provided the comments to ID (see Appendix C of this report). ID has informed EA that many of these items have been addressed since the onsite phase of this review has concluded. (See **OFI-ID-02**.)

Oversight Plan and Assessment Schedules

DOE field element line oversight program includes written plans and schedules for planned assessments, focus areas for operational oversight, and reviews of the contractor's self-assessment of processes and systems. [DOE Order 226.1B, 4b(2)]

ID prepares an oversight plan annually, as directed by 03.PD.04, *Contract Oversight*, and in accordance with 03.WI.04.01, *Oversight Planning and Scheduling.* EA reviewed examples of approved oversight plans for QSD. These documents included a description of the topical area, an outline of the oversight, a three-year schedule of assessments, a quarterly assignment schedule, and a risk analysis. The annual oversight plans, which provide a documented basis for oversight of given functional areas, included a broad array of operational awareness (OA) activities, both for oversight of key functional areas and for required periodic reviews. While explicit guidance for periodic required assessment was lacking, there was no evidence that any required assessments had been recently missed. For both the NE and EM facilities and projects, the ID oversight staff develops the oversight plan with contributions from the FRs, SMEs, SSO engineers, and management. In general, the assessment planning and scheduling process is used effectively to identify assessment needs and goals. However, the WI did not provide detailed instructions for completing the annual oversight plan; instead, the WI appears to assume that a plan has been completed, and then defines the expectations for executing the plan on a quarterly basis. (See **OFI-ID-02**.)

Program Implementation

DOE field element line management has established and implemented oversight processes that evaluate contractor and DOE programs and management systems, including site assurance systems, for effectiveness of performance (including compliance with requirements). Such evaluations are based on the results of operational awareness activities; assessments of facilities, operations, and programs; and assessments of the contractor's assurance system. The level and/or mix (i.e., rigor or frequency in a particular area) of oversight may be tailored based on considerations of hazards, the maturity and operational performance of the contractor's programs and management systems (DOE 0 226.1B 4b(1))

The DOE field element has an issues management process that is capable of categorizing findings based on risk and priority, ensuring relevant line management findings are effectively communicated to the contractors, and ensuring that problems are evaluated and corrected on a timely basis. For issues categorized as high significance findings, the issues management process ensures that:

- *A thorough analysis of the underlying causal factors is completed;*
- *Corrective actions that will address the cause(s) of the findings and prevent recurrence are identified and implemented;*
- *After completion of a corrective action or a set of corrective actions, the conduct of an effectiveness review using trained and qualified personnel that can verify the corrective action/corrective action plan has been effectively implemented to prevent recurrences;*

– *Documentation of the analysis process and results described in (a) and maintenance tracking to completion of plans and schedules for the corrective actions and effectiveness reviews described in (b) and (c) above, in a readily accessible system. [DOE Order 226.1B, 4b(4)]*

The oversight process is primarily implemented by procedure 03.WI.04.02, *Conduct of Oversight Activities*. FRs, SMEs, and SSO engineers implement the oversight plans and schedules. EA's review of completed reports, schedules, and interviews with ID personnel demonstrated active oversight implementation and a reasonable completion percentage. To help assess how ID has implemented the assessment and OA components of its oversight process, EA observed assessment and OA activities performed by FR and SSO staff at the ATR and MFC facilities. Insights gained from observing these activities and the implementation of 03.WI.04.02, *Conduct of Oversight Activities*, are discussed below.

Periodic and Self-Assessments

The requirements and processes for conducting self- and independent assessments of ID programs and processes are contained in 01.WI.03.01, *Self-Assessment and Independent Assessment*. A schedule reflecting these planned assessments for each of the three contractors is published quarterly. The procedure refers to 03.WI.04.04, *Identification of Oversight Elements*, which was canceled; no other instruction or guidance for identifying periodic required assessments exists. Step 2 of 01.WI.03.01 requires the development of a three-year planning and annual execution schedule, which should contain all periodic assessment requirements. EA noted no obvious omission of required periodic assessments, and when interviewed, ID personnel were aware of the periodic requirements. The procedure does not discuss the process for determining assessment needs based on risk, and it assigns managers the responsibility to "Specify assessment scope, criteria, requirements, guidelines, schedule, and special format requirements" without providing a standard or reference. Also, the process steps do not indicate who approves assessment plans. (See **OFI-ID-03**.)

Recent self-assessments of the SSO and FR programs were comprehensive, criteria based, and of sufficient scope and depth. The 2012 and 2014 self-assessments of the FR program were performed consistent with the prescribed two-year periodic schedule. Both reviews were comprehensive in covering all five review criteria, and both identified meaningful opportunities to improve the high-performing program. In 2012, one finding was identified in that: "FR.3-F-1 Contrary to DOE Order 232.2, ID FRs do not always complete reviews of final ORPS reports within the prescribed timeframe. (repeat issue)." This was identified as a repeat finding but was not reviewed in the subsequent report, and the effectiveness of corrective actions was not established. (See **OFI-ID-04**.)

The Deputy Manager for Operations and Deputy Manager for ICP share responsibilities for program self-assessments, with assessment team leadership often rotating and the team composition including personnel from both ID components. However, ID has not performed a self-assessment of the overall ID oversight process. Although many ID divisions perform self-assessments, ID quality assurance (QA) audits self-identified that not all divisions have schedules or conduct self-assessments. In general, the self-assessment planning and implementation were adequate.

Facility Representative Program

The responsibilities and requirements for managing and implementing the FR program are described in ID management procedure 03.OD.03, *Facility Representative Program*, Rev. 4, April 8, 2014. ID's current staffing analysis supports 17 FRs, 10 for NE and 7 for EM. At the time of this assessment, staffing for NE was one FR short of the fully qualified FR complement of ten, because of a recent promotional transfer to another site. EA interviewed the available FRs and accompanied some of them on their daily walkthroughs. All FRs are fully qualified, and several have multiple qualifications.

Continuing training is provided on a quarterly basis. The FRs use the contractors' issues management systems, plan-of-the-week reports, daily reports, and plan-of-the-day meetings to identify activities they need to observe, demonstrating their active engagement in oversight of facility operations and activities. During this EA review, the FRs selected an ATR operator qualification examination to observe.

The current DOE Order 226.1B oversight methodology implemented by the ID FRs was developed by a senior FR as an adaptation of the U.S. Nuclear Regulatory Commission (NRC) Reactor Oversight Process (ROP) model, NUREG-1649, *Reactor Oversight Process*. FRs record and analyze all the oversight activities they perform on a weekly basis, and then roll up their weekly records and analyses into monthly and quarterly evaluation reports based on established review areas and criteria. This evaluation and reporting process is captured in 03.WI.04.02, *Conduct of Oversight Activities*, and its appendices. The Weekly Evaluation Report (WER) process and its implementation is an effective mechanism for communicating oversight activities and results.

The "Federal Perspective" section of the WER is particularly helpful in providing a means for the FRs to highlight concerns or discuss perspectives or observations that may not have generated formal contractor corrective actions. The WERs are discussed during weekly operations calls that includes NE, and are rolled up into an FR monthly report. The FR WERs that EA reviewed included such issues as the inconsistent wearing of hard hats during a hoisting and rigging evolution and radiological issues. A disposition for each issue is discussed – e.g., reportable event, not reportable, deviations of minor significance (DOMS), or direct communication to contractor management. Additionally, operational events are promptly communicated to ID management through Initial Notification Reports (INRs), per WI 03.OP.02, *ID Event Notification and Reporting*, most of which are prepared by the FRs. The INRs also serve to inform independent assessors and stakeholders external to Idaho Site, and this process has proven very valuable for prompt notification and awareness of events.

DOMS are issues identified by the oversight program that are lower-grade deviations from requirements but are not programmatic or systemic, such as a one-time procedure deviation that is corrected on the spot. The WERs describe the DOMS with other more significant categories of issues, some of which follow the process for direct transmittal to the contractor. The FRs have developed an issues and events spreadsheet for tracking and trending issues and DOMS. Since DOMS are not currently entered into Pegasus as issues, this provides a method to trend these low-level issues. Planned enhancements to Pegasus are designed to permit trending of DOMS.

Per 03.WI.04.02, *Conduct of Oversight Activities*, FRs share responsibility for evaluating the contractor assurance systems (CASs) for operations; however, this role is not explicitly addressed in 03.OD.03, *Facility Representative Program*. An FR supervisor explained that ID kept this document generic and aligned with the applicable standard, DOE-STD-1063-2010, *Facility Representatives*. The FRs' obligations to monitor/evaluate CAS and to perform trending and analysis are invoked through the FR Performance Agreements. Nevertheless, documenting this duty in 03.OD.03 would help maintain consistency over time and would provide an opportunity to discuss and enhance best practices for this duty. (See **OFI-ID-05**.) To help carry out this responsibility, the FRs have developed a spreadsheet tool, which both the OPAD and NSP organizations use at some level, to grade the contractors' CASs based on four performance metrics: self-assessment, issues management, corrective action, and event response. ID SMEs also use this tool to contribute input in their given areas of expertise. Idaho Site contractors have varying levels of CAS maturity, and ID does not require all contributors to the CAS oversight process to use this spreadsheet tool. Nevertheless, the tool is effective in helping provide a basis for the overall CAS grades, and it might also have broader use in improving the overall consistency of oversight.

The FRs and other ID oversight personnel demonstrated a high level of awareness of the CAS that has resulted in effective oversight and evaluation of contractor CAS performance. In reviewing the content of

the QERs and the input from which they are developed, it is clear that the FRs, as the primary contributor of CAS evaluation data, are providing robust insights and are evaluating CAS effectiveness in a reasonably well-structured, consistent, and competent manner. For example, the QER for CWI in the fourth quarter of 2014 discusses radiation control implementation, including minor operational deviations, performance indicators, and improvement-focused activities, and concludes that radiation control is effective. The analysis documented by the QERs provides an excellent basis for tailoring oversight.

The FR for the Hot Fuel Examination Facility (HFEF) at MFC was knowledgeable of the assigned facilities and current conditions, including weather-related requirements. During a walkthrough, the FR noted concerns about the accumulation of combustible materials and appropriately followed up with facility management to resolve the issues. The FRs have been vital in identifying areas of concern, including support of a recent readiness determination for the planned Transient Reactor Test (TREAT) Facility reactor control rod inspection activity.

FR training records were complete and adequate, and the FRs demonstrated knowledge of DOE requirements and facility-specific knowledge of assigned facilities. As noted above in the discussion of assessment and OA activities, the nuclear facility FRs are active in monitoring facility work activities and conditions. Because of their detailed facility knowledge and maintenance of operational awareness, the FRs have proven to be a cornerstone of the oversight process at the Idaho Site. The EA team reviewed many examples of FRs identifying key work planning and operational issues, and then following up to ensure that corrective actions are developed and completed. Overall, the FRs are competently implementing their oversight responsibilities and providing robust input to support effective management of the contractors.

Safety System Oversight Program

ID has established and implemented processes and procedures to implement the SSO program in accordance with Appendix D of DOE Order 426.1, *Federal Technical Capability*. The roles, responsibilities, qualifications, and ID management's expectations of ID SSO engineers are adequately defined in ID Management Procedure 09.OD.07, *Safety System Oversight Program.* Implementation of the SSO program is supported through a suite of additional ID assessment procedures and WIs, which are discussed in the "*Assessment and Operational Awareness Activities*" section above. A triennial assessment of the SSO program against the criteria of DOE Order 426.1, Change 1, *Federal Technical Capability*, Appendix D, in May 2013 identified two observations and one finding relative to SSO engineer/Nuclear Safety Specialist (NSS) performance plans. The SSO program at ID is fully implemented for both EM and NE facilities, even though Section 3.d of DOE Order 426.1 exempts NE from SSO requirements because NE does not perform functions related to the safe operation of defense nuclear facilities. EA considers ID's full implementation of the SSO program for both NE and EM facilities to be a best practice.

The SSO engineers are appropriately trained and qualified in accordance with 02.OD.01, *Idaho Operations Office Technical Qualification Program.* A Site Specific Qualification Standard for SSO engineers was developed and is required in addition to General Technical Base and Functional Area (technical specialty) qualification standards. Many of the SSO engineers are qualified as both NSSs and SSO engineers. ID assigns SSO engineers responsibility for given facilities and requires that they maintain a presence at those facilities in the field. The SSO engineers typically cover all safety systems for the facilities assigned, regardless of his/her individual expertise. Other DOE sites have favored having SSO engineers qualified in specific engineering disciplines perform assessments in areas of their technical competency site-wide, regardless of the facility. SME support is available to SSO engineers at ID, but it is not clear how consistently SMEs are engaged in individual SSO reviews. However, having the SSO engineers assigned to specific facilities and regularly in the field does enable them to routinely

interact with the FRs and facility personnel.

ID SSO engineers perform scheduled independent assessments of system performance, equipment configuration, and material condition of assigned systems and safety management programs. The SSO supervisors schedule and locally maintain SSO assessments. EA's review of a selection of assessment reports indicated that some reports confirmed and, in some cases, provided initial identification of significant concerns. However, although some reports provided a good picture of the safety system status and evidence of a thorough review, a few of the ICP SSO surveillance reports did not reflect the criteria for the assessment, and a report for MFC did not explicitly address all identified criteria. Report quality, is further discussed below under the *Reporting* section.

SSO engineers also provide technical support to FRs and conduct OA reviews, including system walkdowns and program/document reviews of corrective actions, maintenance, surveillance, design change packages, modification packages, and safety basis revisions. Results of OA activities (primarily issues) are documented in accordance with 03.WI.04.02, *Conduct of Oversight Activities*, and are included in the WERs as appropriate. Relatively few OA results in the WERs were attributed to SSO engineers, but examples of insightful input relative to engineering/procurement and temporary modification control provided relevant and useful input to ID management and to contractor evaluation. For example, the 2014-12-01 ATR WER reports the SSO engineer's confirmation of correct implementation of the temporary modification process after a prior finding in this area. SSO engineers routinely access the contractors' issues management systems and assess the cognizant system engineer (CSE) program to ensure the operability, reliability, material condition, and performance of assigned systems. SSO engineers also routinely evaluate unreviewed safety question determinations (USQDs). System reviews are formally identified and captured in the oversight schedule on a quarterly basis.

The ID groups responsible for implementing the SSO programs for both EM and NE facilities perform an annual assessment of USQDs. SSO engineers and FRs are also typically involved in real-time evaluation of non-routine USQDs, and any identified issues are reported in the WER and transmitted to the contractor when warranted. The annual assessment of USQDs is captured in the DOE oversight schedule; however, this practice is not documented in, or guided by, 03.WI.01.04, *Safety Basis Review and Approval*. Although annual review of USQDs is not explicitly required, this annual assessment may be an effective way to maintain awareness of an activity (i.e., the USQD process) vital to maintaining the quality of safety bases. (See **OFI-ID-06**.)

Reporting

DOE line management has in place effective processes for communicating oversight results and other issues in a timely manner up the line management chain, and to the contractor as appropriate, sufficient to allow senior managers to make informed decisions. (DOE Order 226.1B, 4d)

EA reviewed a variety of assessment reports for both NE and EM facilities, ranging from self-assessments to corrective action closure verification. Issues identified by FRs during routine operational awareness activities are captured by INRs that are developed by the FR, recorded in Pegasus, and communicated directly to the affected contractor facility manager. Reports with actionable issues are transmitted electronically to the contractors through Pegasus. In general, the reports provide good insights on the adequacy of safety management program implementation, as well as good feedback to the contractor. However, EA identified the following common observations:

- Some reports identify process and performance deficiencies but do not always document them as issues – findings (including DOMS), concerns, or even observations – and do not characterize them sufficiently to clarify why they are not considered to be issues. For example, an assessment

of corrective action closure (REP-EM-11/16/2013-47739) found multiple incidents of inadequate closure documentation and noted that resumption of facility operations was delayed for two weeks, but did not explain why this corrective action system failure was not identified as an issue.

- Report formatting often did not follow the "typical" format provided in 03.WI.04.02, *Conduct of Oversight Activities*, Appendix C, or DOE Guide 414.1-1. Some reports also contained unclear descriptions of scope, results, and conclusions and did not identify the criteria used, who performed the review, and/or whether it was performed by a team. For example, an SSO report (REP-OS-12/18/2013-20116) contained substantially more discussion of criteria and approach than discussion of results. Another assessment of the same topic contained no criteria and significant discussion of results (REP-OS-12/23/2014-87212).
- Reports did not always identify CAS program documents and requirements as either applicable, adequate, or inadequate, and did not always determine whether performance was or was not in compliance with the contractor's own program requirements. Assessment reports were not always sufficient to allow an independent reader to easily understand the conclusions. In some cases, both ID and contractor assessments following up on issue closure found inadequate closure and missing evidence, but identified no additional follow-on action. For example, one report cites the absence of a fact-finding meeting and speculates that a management review may have taken place, but does not reach a conclusion that an acceptable event review was performed. Another assessment evaluated the contractor's management of two "findings" from a previous ID for-cause review and identified weaknesses in causal factor selection, apparent cause analyses, recurrence controls, and documentation of objective evidence for closure, but the report concluded that the programs were effectively implemented and identified no issues.

Although the Pegasus issues management system provides some formality to the reporting process, the governing procedure lacks action steps which would direct team members to review and sign reports. Also, it does not include requirements for the report to identify team members and for management review and approval of reports.

ID is rewriting the Pegasus program and developing a User Guide to facilitate inputting information and documenting issues. The new version of Pegasus is designed to automatically generate reports in a pre-defined and consistent format. Although these improvements should help, further enhancements would be beneficial in improving the quality of oversight activity reports. (See **OFI-ID-07**.)

The work instruction 03.WI.04.02, *Conduct of Oversight Activities*, Appendix D, guides the development of QERs. It identifies Strategic Performance Areas (nuclear safety, occupational safety, environmental protection, and facility operations), and Cross Cutting Areas (integrated safety management system/safety culture, activity level work planning and control, and contractor assurance system). EA reviewed approximately 30 OA activity/issue reports, 40 daily oversight activity reports issued by nuclear facility FRs, 10 Monthly Status/Trend Reports, and 12 QERs developed for the Deputy Manager for Operational Support. These reports formally document and communicate to senior management a summary of facility activities and operational oversight results. As discussed above for the SSO and FR programs, the evaluation process provides analysis of oversight results for senior ID management.

To supplement the detailed analysis of results and help management discern what areas need additional oversight and which need less, the oversight information is summarized for management in the form of a quarterly dashboard. Per 03.WI.04.02, *Conduct of Oversight Activities*, Appendix D, Attachment 3, four Performance Ratings are identified; i.e., blue, green, yellow, and red for "highly effective," "effective," "marginally effective," and "ineffective," respectively, and a "stop light" chart is used to present the ratings. Attachment 3 of the work instruction provides criteria for each of these ratings. While the criteria used for rating the quarterly dashboard elements are still being enhanced, the QER development process provides a good analysis of oversight performed, contractor performance, and facility status, and

the reports have been useful in communicating broad oversight results to stakeholders both internally and externally. Similar methods have been used successfully for more than a decade to evaluate the results of commercial nuclear safety oversight, e.g., NRC Reactor Oversight Process. EA considers the development and further refinement of this process at the Idaho Site to be a best practice.

5.1.2 Employee Concerns and Differing Professional Opinion Programs

Establishment of effective Employee Concerns and Differing Professional Opinion Programs supports the DOE's safety strategy by encouraging each worker to challenge situations that do not seem right and by supporting a questioning work environment. The Secretary of Energy's December 5, 2011 Memorandum on *Nuclear Safety at the Department of Energy* included, "DOE strives to provide an open culture that not only embraces, but also actively seeks out evidence of potential problems so that any problems can be corrected promptly."

ID has in place an adequate employee concerns program described in 02.OD.04, *Idaho Operations Office Employee Concerns Program Procedure*, Rev. 0, dated December 31, 2014. Program self-assessments have been performed as required and have identified and corrected minor issues. However, the clarity of the procedure and the performance of the case reviews could be improved. (See **Appendix C** and **OFI-ID-02**.)

EA reviewed records substantiating the use of the employee concerns program (ECP) to resolve concerns for both contractor and DOE personnel. Some records reflected a thorough and well documented evaluation of the concerns, while a few others were unclear as to final disposition. For example, ID sent one report to the Waste Isolation Pilot Plant (WIPP) for corrective action, but it was not clear what problem was to be addressed because ID had not fully substantiated the concerns. In addition, a 2013 ID Manager chartered self-assessment of the ID Safety Conscious Work Environment (SCWE) was conducted in July 2013 and resulted in a corrective action plan, which stated that "The procedure for the Employee Concerns Program will be revised to include a clear progression of ways to bring concerns (safety, health, legal ethical, Differing Professional Opinion Program) to management." ID had not completed or entered this action into Pegasus at the time of this EA review, but has since informed EA that this item has been corrected.

ID's process for resolving differing technical opinions is established in 01.OP.05, *Differing Technical Opinion*, Rev. 5, dated September 16, 2013. However, this document does not accurately reference the overriding process described in DOE Order 442.2, *Differing Professional Opinions on Technical Issues Involving Environment, Safety and Health Technical Concerns*, dated July 29, 2011. ID has since informed EA that this item has been corrected.

5.2 Headquarters Line Management Oversight

DOE field element line oversight program Includes DOE Headquarters line organizations' conduct of oversight processes that are focused primarily on their DOE Field Elements, including reviewing contractor activities to the extent necessary to evaluate the implementation and effectiveness of the Field Element's oversight of its contractors. [DOE Order 226.1B, 4b(3)]

Requirements for Headquarters oversight are found in DOE Order 226.1B, Section 4.b.(3) (See citation in Section 4.0, *Methodology*, above.):

Oversight processes established by field and/or Headquarters elements should include the following three elements to meet the above requirement and expectations of ISM:

- Evaluation Processes (that include evaluation of CAS effectiveness by independently evaluating contractor performance and field element oversight using written plans and criteria as required),
- Issues/Corrective Action Management Program,
- Performance Measures and Communications.

EA interviewed the responsible management of NE and EM Headquarters organizations and reviewed documentation supporting implementation of their respective oversight responsibilities.

NE and EM share responsibility for the Idaho Site (roughly 2/3 NE and 1/3 EM). In conjunction with the headquarters office, ID has developed and maintained an ownership matrix for technical/functional areas where oversight responsibilities for EM and NE activities overlap: *Delineation of Roles and Responsibilities between the Nuclear and Safety Performance Organization and the Quality and Safety Division* (OS-QSD-15-005), latest revision dated January 8, 2015.

The Headquarters division of functions, roles and authorities between the two program offices has not been defined by their respective FRAs. DOE Order 450.2, *Integrated Safety Management, Requirements*, Section 4.h. states, "FRA documents for program offices that direct operations at locations where more than one DOE program office have work conducted must contain applicable memoranda of understanding (MOU) that define the allocation of safety management functions and responsibilities among the program offices." No such MOU exists in or is referenced by the NE or EM FRA documents. (See **OFI-HQ-01**.)

5.2.1 Nuclear Energy

The NE FRA dated February 2015 meets the expectations of DOE Orders 226.1B, *Implementation of Department of Energy Oversight Policy*, and 450.2, *Integrated Safety Management, Requirements*. As noted, the nuclear safety oversight provided by NE Headquarters consists largely of OA activities, such as conference call briefings, meetings, site visits consisting of tours and meetings, and follow-up on events. NE provided information to detail the extent of involvement and interaction of the Chief of Nuclear Safety (CNS) with ID staff and management. In addition, NE retains startup review and approval authority for the ATR, a Hazard Category 1 facility, demonstrating NE cognizance of high-consequence and high-hazard nuclear operations at ATR. However, outside of ATR safety basis/startup approval, NE has not documented any planned, criteria-based, oversight of field element effectiveness. (See **OFI-NE-01**.)

5.2.2 Environmental Management

Within EM, Safety, Security, and Quality Programs (EM-40) conducts field oversight activities. Within EM-40, the Office of Operational Safety has a reasonably well defined and staffed oversight function that performs about six planned, formal assessments at EM sites each year and approximately the same number of reactive assessments and site visits. Other divisions under EM-40 include the Office of Safety Management, the Office of Standards and Quality Assurance, and the Office of Safeguards, Security, and Emergency Preparedness. EM-40 uses metrics to evaluate sites based in part on an EM memorandum requiring special reporting to Headquarters. Procedures and processes are in place to guide implementation of DOE Order 226.1, including Standing Operating Policies and Procedures (SOPP)-49, *Environmental Management Headquarters Safety Oversight Process*, Rev 1, November 15, 2008; and *Assessment Procedure*, May 7, 2007. The latter procedure is good tool for conducting site assessments, but the SOPP does not reflect the current DOE order or discuss how oversight with limited resources is effectively planned, how issues are managed with the [CATS] replacement issues management system, and how lessons learned from WIPP oversight inform revisions to the process. The procedures are being updated to reflect current directives and organizational names, but the framework for oversight and its current implementation meet the expectations of DOE Order 226.1B.

5.3 Communication of Contractor Performance Expectations

DOE line management has established and communicated performance expectations to contractors through formal contract mechanisms. Such expectations (e.g., safety performance measures and commitments) are established on an annual basis, or as otherwise required or determined appropriate by the field element. (DOE Order 226.1B, 4c)

ID communicates performance requirements quarterly by posting and annually with fee determination to the three ID contractors. The process is described in 03.WI.04.11, *Evaluation of ICP Contractor Environmental, Safety, and Health (ES&H*), and includes development and review of the Quarterly Performance Review, Safety Performance Rating Charts, QERs, and information on fee determination recommendations. The contracting officer takes appropriate actions to communicate ES&H issues for correction. Issues that are identified during oversight are communicated through Pegasus by the "direct transmit" method. Issues of lesser significance are relayed during daily routine interaction between ID oversight personnel and contractor management. Events are communicated as specified by the INR, which results in follow-up, and may be formally reported in ORPS (as discussed above in connection with the Facility Representative Program). EA found these communication systems to be effective and timely.

6.0 CONCLUSIONS

The Federal oversight process as implemented at the Idaho Site is adequate in evaluating contractor assurance information and providing safety oversight of the facilities and projects at the Idaho Site. ID shows particular strength in the implementation of its processes through the field activities of its staff. However, it can improve how that process is documented by clarifying some procedures, further developing integrated planning and scheduling, codifying best practices and staff interfaces, and enhancing review and assessment reports. EA also identified a number of opportunities to further enhance the oversight process and its implementation. In addition, EA identified two best practices by ID, including voluntarily implementing an SSO program for facilities under Office of Nuclear Energy line management and initiating a process for evaluating contractor performance that adapts elements of the Nuclear Regulatory Commission's successful oversight process for commercial power reactors.

EM provides effective oversight and is engaged in the independent review of site activities. NE maintains awareness of and involvement in decision making at the Idaho Site; however, EA observed several opportunities for NE to improve its formal implementation of DOE Order 226.1B.

7.0 FINDINGS

As defined in DOE Order 227.1, *Independent Oversight Program*, "findings" indicate significant deficiencies or safety issues 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 may identify aspects of a program that do not meet the intent of DOE policy or Federal regulation. Corrective action plans must be developed and implemented 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. There were determined to be no Findings for this review.

8.0 OPPORTUNITIES FOR IMPROVEMENT

EA identified the following OFIs. These potential enhancements are not intended to be prescriptive or mandatory. Rather, they are offered to the site to be reviewed and evaluated by the responsible line management organizations and accepted, rejected, or modified as appropriate, in accordance with site-specific program objectives and priorities.

OFI-ID-01: Consider incorporating the subject matter contained in the July 8, 2014, memorandum, *Delineation of Roles and Responsibilities between the Nuclear and Safety Performance Organization and the Quality and Safety Division (OS-QSD-14-050)*, into the appropriate work instruction or ID FRA.

OFI-ID-02: Consider enhancement to ID oversight process implementing documents, as identified in Appendix C.

OFI-ID-03: Consider revising 01.WI.03.01, *Self-Assessment and Independent Assessment*, to address identification of required periodic assessments, the use of risk criteria, and assessment plan approval.

OFI-ID-04: Consider establishing the expectation to review prior findings in each assessment scope.

OFI-ID-05: Consider documenting the FR responsibility for contributing to CAS evaluation in 03.OD.03, Facility Representative Program, and including a discussion of best practices.

OFI-ID-06: Consider including the practice of an annual USQD audit in the appropriate work instruction.

OFI-ID-07: Consider developing a writers' guide, quality review process, and other process enhancements to help improve content, quality, and issue categorization in assessment reports. Specific actions to consider include:

- Establish a simple writers' guide for report generation and standard formatting and content requirements.
- Strengthen 03.WI.04.02, *Conduct of Oversight Activities*, Appendix C, by describing the expected content of report sections and require citation of assessment criteria and bases/sources including contractor program documents and requirements and documentation of the evaluation of compliance with same.
- Modify PEGASUS to require management review and approval of assessment reports.
- Establish a quality review process for all types of oversight reporting (including surveillances, reviews, and assessments) that evaluates and grades samples of reports from all organizations to established and meaningful qualitative criteria, and provides feedback to report preparers (team leaders and individual members) and management. For consistency, assign a single, qualified individual to analyze the collected data to evaluate performance trends and identify problem areas needing attention.

OFI-NE-EM-01: A memorandum of understanding defining the allocation of safety management functions and responsibilities should be established between EM and NE at the Idaho Site, in accordance with DOE Order 450.2, *Integrated Safety Management*.

OFI-NE-01: NE should consider formalizing some of its Headquarters oversight activities to include planned and scheduled assessments of contractor assurance systems and the field element oversight thereof. Including such assessment activities in the NE Headquarters oversight process would enhance the effectiveness of NE's oversight of Idaho Site activities and would more closely align with the intent of DOE Order 226.1B.

9.0 ITEMS FOR FOLLOW-UP

None.

Appendix A
Supplemental Information

Dates of Review

Onsite Review:	January 26-30, 2015
Offsite Review:	February 2 – March 4, 2015

Office of Enterprise Assessments 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

Quality Review Board

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Michael A. Kilpatrick

Office of Enterprise Assessments Site Lead for the Idaho Site

Aleem E. Boatright

Office of Enterprise Assessments Reviewers

Aleem Boatright – Lead
Eric Swanson
Terry Olberding
Robert Compton

Appendix B
Documents Reviewed and Interviews

Documents Reviewed

- 01.OD.01, Functions, Responsibilities, and Authorities, Revision 10, December 15, 2014
- 01.PD.01, IDMS Document Control Process, Revision 11, 12/23/2014
- 01.WI.10.01, Document Revision Form (DRF) Process, Revision 5, December 23, 2014
- 01.OD.02, Quality Assurance Manual, Revision 10, September 12, 2013
- 01.OD.03, Integrated Safety Management System, Revision 2, July 8, 2014
- 01.PD.03, ID Continual Improvement Process, Revision 13, October 9, 2014
- 01.WI.03.01, Self-Assessment and Independent Assessment, Revision 9, September 16, 2013
- 01.WI.03.03, Internal Audit, Revision 15, February 12, 2015
- 01.WI.03.05, ID Lessons Learned, Revision 4, January 23, 2013
- 01.WI.03.10, Process Improvement, Revision 7, October 14, 2014
- 01.WI.03.12, Corrective and Preventative Action, Revision 12, April 29, 2014
- 01.OP.05, Differing Technical Opinion, Revision 5, September 16, 2013
- 02.OD.01, Idaho Operations Office Technical Qualification Program,
- 02.OD.04, Idaho Operations Office Employee Concerns Program Procedure, Revision 0, December 31, 2014
- 03.PD.01, Contractor Document Review and Comment/Approval/Certification Process, Revision 8, December 3, 2014
- 03.OP.02, ID Event Notification and Reporting, Revision 9, February 5, 2014
- 03.OD.03, Facility Representative Program, Revision 4, April 8, 2014
- 03.PD.04, Contract Oversight, Revision 11, June 3, 2014
- 03.WI.01.12, Conduct of Operations, Revision 2, January 9, 2013
- 03.WI.01.04, Safety Basis Review and Approval
- 03.WI.04.01, Oversight Planning and Scheduling, Revision 4, July 19, 2012
- 03.WI.04.12, ID Coordination of DOE Enforcement Activities (Nuclear Safety, Worker Safety and Health, Security, and Occupational Radiation Protection), Revision 4, March 13, 2015
- 03.WI.04.02, Conduct of Oversight Activities, Revision 15, August 20, 2014
- 03.WI.04.05, Risk Determination, Revision 2, July 30, 2007
- 03.WI.04.10, Verification of Readiness to Startup or Restart Nuclear Facilities, Revision 11, January 26, 2015
- 03.WI.04.11, Evaluation of ICP Contractor Environmental, Safety, and Health (ES&H), Revision 4, December 5, 2012
- 09.OD.07, Safety System Oversight Program, Revision 7, September 19, 2012
- Idaho Operations Office Annual Workforce Analysis and Staffing Plan Report, December 31, 2014
- 2015 Safety System Oversight Staffing Analysis Idaho/Idaho Cleanup Project/Nuclear and Safety Performance, December 31, 2014
- REP-OS-7/31/2014-97641 (AST-OS-7/31/2014-39652) Assessment: Facility Representative (FR) Program - Self-Assessment Objective 2 & 3 July 31, 2014
- REP-EM-11/20/2012-40344 (AST-EM-11/20/2012-11897) Assessment: 2012 Facility Representative Program Self-Assessment November 20, 2012
- Office of Environmental Management Organization Chart (Web version), March 16, 2015
- SOPP-49, Environmental Management Headquarters Safety Oversight Process, Rev. 1, November 15, 2008

- [EM-40], Assessment Procedure, May 7, 2007
- Mission and Functions for Office of Environmental Management, November 2, 2012
- ID Organization Chart, January 2015
- ID Functional Organization Chart for Safety Oversight Programs, January 6, 2015
- REP-ID-5/14/2013-43216, Safety System Oversight Program Self-Assessment, May 14, 2013
- REP-EM-11/20/2012-40344, 2012 Facility Representative Program Self-Assessment, November 20, 2012
- REP-EM-3/25/2014-393, SSO surveillance of AMWTP Criticality Incident Detection and Alarm System, March 25, 2014 (plus six additional SSO surveillances)
- REP-OS-11/5/2012-85063, Quality Assurance Surveillance of ICP Corrective Action, November 5, 2012
- Action Plan for the Recommendations From the 2013 Self-Assessment of the DOE Idaho Operations Office Safety Conscious Work Environment (SCWE), undated, 2014
- Weekly Evaluation Report (numerous dates QSD/MFC/INTEC/ATR/AMWTP/REC/SMC/RWMC)
- Quarterly Evaluation Report (2014 QERs for BEA/ITG/CWI)
- Facility Representative Program Self-Assessment reports dated: September 2005, December 2007, November 2012, July 2014
- Department of Energy, Idaho Operations Office Quarterly Facility Representative Program Performance Indicator Report, 1st through 4th FY Quarters, 2014
- OS-OPAD-FRP-14-022, Department of Energy, Idaho Operations Office, Fiscal Year 2015 Facility Representative Staffing Analysis, December 22, 2014
- OS-QSD-14-050, Department of Energy, Idaho Operations Office, Delineation of Roles and Responsibilities between the Nuclear and Safety Performance Organization and the Quality and Safety Division, July 8, 2014
- AMWTP 1st Quarter FY15 Oversight Schedule
- AMWTP 2nd Quarter FY15 Oversight Schedule
- ICP 1st Quarter FY15 Oversight Schedule
- ICP 2nd Quarter FY15 Oversight Schedule
- INL 1st Quarter FY15 Oversight Schedule
- INL 2nd Quarter FY15 Oversight Schedule
- Other 1st Quarter FY15 Oversight Schedule
- Other 2nd Quarter FY15 Oversight Schedule
- 2015 SSO Assessment Schedule ID/EM Facilities
- Industrial Safety Oversight Plan Fiscal Years 15 through 17, October 20, 2014
- FY10 ID Planned Oversight Activities of the INL Operational Support Organization
- Integrated Operations Review of the Integrated Waste Treatment Unit Review Plan, Revision 2, December 5, 2014
- Integrated Operations Review Of the Integrated Waste Treatment Unit Final Report, December 2014
- REP-OS-12/1/2014-33576, Operational Awareness Report for Materials and Fuels Complex (MFC), December 1, 2014
- DOE Office of Nuclear Energy Oversight Policy and Function, Responsibility, and Authorities Document, Revision 6, January 2015
- 14-ISFSI-AU-001, Quality Assurance Audit Report of the Idaho Operations Office Independent Spent Fuel Storage Installations Quality Assurance Program, April 17, 2014
- Initial Notification Reports (Recent for INTEC and AMWTP)
- OS-QSD-15-005 Delineation of Roles and Responsibilities between the Nuclear and Safety Performance Organization and the Quality and Safety Division, January 8, 2015

- Readiness Assessment for the Integrated Waste Treatment Unit Facility, Sodium Bearing Waste Treatment Project at the Idaho Nuclear Technology and Engineering Center, Final Report March 2014
- AS-CMD-AMWTP/ITG-15-0 17, Approval of Advanced Mixed Waste Treatment Project Contractor Assurance Program Description, PD-Q&SI-0 1, Revision 3 dated November 18, 2014, January 21,2015
- AS-CMD-ICP/CWI-15-030, Approval of CH2M*WG Idaho, LLC Integrated Safety Management System and Contractor Assurance System Description Documents, December 1, 2014
- AS-CMD-INL-15-001, Department of Energy Approval of the Contractor Assurance System, Program Description Document, PDD-171 Revision, October 1, 2014

Interviews

- Idaho Site Manager
- Idaho Site Deputy Manager for Operational Support
- Idaho Site Deputy Manager for Idaho Cleanup Project
- NE Deputy Assistant Secretary for Nuclear Facility Operations
- NE Director of Office of Facilities Management
- NE Chief of Nuclear Safety
- NE Office of Facilities Management Nuclear Engineer
- NE Office of Facilities Management Safety Engineer
- EM Director of Office of Safety Management (phone)
- EM Director of Office of Operational Safety (acting)
- EM Office of Operational Safety, Safety and Occupational Health Manager
- Operational Performance Assurance Director
- Assistant Manager for Nuclear Safety and Performance
- Assistant Manager for Facility and Material Disposition
- Quality & Safety Director
- Environment and Sustainability Director
- Facility Representative Supervisor NE Facilities
- Facility Representative Supervisor EM Facilities
- Nuclear Safety Program Supervisor NE Facilities
- Nuclear Safety Team Supervisor
- Industrial Safety and Health SME Supervisor
- Safety Performance Team Supervisor
- Technical Safety Supervisor
- Environmental Resource Supervisor
- NE Facility Representatives (5)
- EM Facility Representatives (6)
- NE Facility SSO engineers (3)
- EM Facility SSO engineers (1)
- Industrial Safety SME
- Technical Safety SME
- Safety Performance Team SMEs (2)
- Environmental Compliance SME

Appendix C
Potential Process Documentation Improvements

Per OFI-ID-02, consider evaluating the suggested changes to the following documents to improve the quality of documentation that helps implement the ID oversight process:

03.PD.04, *Contract Oversight*:

- In the Description section, the following statement is made, "Additionally, oversight performance and results must be accomplished giving consideration for the impact of observations on mission accomplishment." Consider elaborating on how to consider the impact of observations on mission.

- There were opportunities to improve the definitions of the following terms used in the 03.PD.04:
  - *Assessment* and *Audit* - these terms are defined by using the other term. Consider clarifying the difference between these two terms.
  - *Functional Element* - refers to 03.WI.04.01, *Oversight Planning and Scheduling*, for a full list of functional elements, but this WI does not include a list of functional elements (it refers to a "List of Oversight Topical Areas" but this document is not useful for oversight planning). Consider including a list of functional elements in 03.PD.04.
  - *Shadow Assessment* - includes detailed evaluation elements that were not implemented by another procedure or work instruction. Consider a broader use of this term in other office procedures.
  - *Validation* - defined as, "A formal technical *verification*. A process performed by ID to determine whether corrective actions plan can be reasonably expected to correct an issue if appropriately executed. A formal *verification* of conformance to requirements. Validation is also a term that represents the ID determination that resources applied to baseline scope and costs are reasonable. [italics added]" Although the PD references contract requirements (i.e., DOE Order 414.1), it does not define validation as the process that confirms an item meets specified requirements. Similarly, 01.OD.02, *Quality Assurance Manual*, does not describe validation. Consider implementing the DOE Guide 226.1-2A, *Line Management Oversight of Department of Energy Nuclear Facilities*, definition of *Validation*, which considers it to be synonymous with effectiveness review.
  - *Verification* - defined as, **"**A field inspection conducted by ID to determine whether an action has been fully and effectively implemented or that actions or items conform to requirements." Consider clarifying this definition to specify whether or not this term has applicability outside the context of corrective actions.
  - By using one to define the other, and by expanding definitions in one case to *contract validation* and restricting another to *corrective action*, the definitions of *Verification* and *Validation* are confusing; consider revising both to be complementary.

- Consider adding the responsibilities of the FR, SSO engineer, and SME to the oversight process description.

- The NE Safety Management Functions, Responsibilities, and Authorities (FRA) document discusses safety delegations and the Central Technical Authority (CTA) responsibilities.

Consider expanding the discussion to address the CTA's role in the oversight and assessment process.

- An interview with EM FRs and review of a documented assessment report indicated frustration with the ICP contractor's CAS process that does not require cause analysis or a sufficient level of rigor to correct causes of less than the most significant issues. Process description 03.PD.04 does not implement a review process or criteria supporting the DOE Contracting Officer's approval for contractor CAS descriptions. Procedure 03.PD.01, *Contractor Document Review and Comment/Approval/Certification Process*, dated December 3, 2014, has been used for review and approval of CAS description documents, but does not contain review or acceptance criteria. A revision to this document is planned. Consider developing a separate procedure for review and approval of contractor CAS description documents similar to the procedure used to review and approve QA documents, 03.WI.01.02, *How to Review and Approve Contractor QA Plans.*

01.WI.03.12, *Corrective and Preventative Action*:

- Per Step 2, Findings and conditions adverse to quality do not require causal analysis. However, 01.OD.02, *Quality Assurance Manual*, states in Section 2.7, CORRECTIVE ACTION, [***Emphasis*** added]:

  > *"Conditions adverse to quality shall be promptly reported to the cognizant organization and corrected as soon as practicable. Cognizant managers shall evaluate conditions adverse to quality to determine the impact of the deviation on completed work,* ***the root cause****, and the corrective action(s) required. In the case of a significant condition adverse to quality, the cause of the condition shall be determined and corrective action taken to preclude recurrence. The identification, cause, and corrective action for significant conditions adverse to quality shall be documented and reported to appropriate levels of management. Completion of corrective actions shall be verified."*

  Consider evaluating whether the need for causal analysis is consistently expressed across the various office procedures.

- The requirement of DOE Order 232.2 for addressing generic implications (or extent of condition) of events and causes is not carried over into the corrective action process described in 03.PD.04, *Contract Oversight*. A guide for this purpose was listed in 01.WI.03.12, Revision 12, but removed in the latest revision. Consider retaining the guide listed in Revision 12 of 01.WI.03.12.

- ID self-identified that 01.WI.03.12 and other procedures that were reviewed had out-of-date references and is currently in the process of updating many of these documents. However, the ID office procedure revision process was not detailed in any particular ID procedure. Consider addressing this issue by revising 01.PD.01, *IDMS Document Control Process,* or 01.WI.01.01, *Document Revision Form (DRF) Process.*

- An annotation in 01.WI.03.12, Revision 3, states "In step 6a added effectiveness review," which is now in step 9 and required for Concerns and Findings. The current ID procedures contain no guidance for how to perform the follow-on effectiveness reviews. Consider adding a reference to the applicable guidance or developing such guidance as necessary.

- The WI does not refer to a methodology or process for performing cause determination or cause analysis. Consider adding a reference to the applicable methodology or developing a process as necessary.

03.WI.04.01, *Oversight Planning and Scheduling*:

- Consider providing guidance for maintaining the list of required periodic assessments in Pegasus.

- Risk determination methodology is referenced in the procedure but, based on interviews, is not consistently used to tailor assessment plans. A suggested process exists for determining risk, but the use of risk is informal in most cases (as allowed by the procedure) and results mainly in determining the level of formality of assessment rather than identifying focus areas of oversight. Consider clarifying the expectations for when and how to use risk to tailor assessment plans.

- Consider integrating assessment activities (e.g., Headquarters elements, third-party, SME, SSO, self and independent assessments, etc.) into one comprehensive schedule. Doing so would help manage the full scope of oversight and provide a better understanding of oversight effort and focus for ID and external (EM and NE) management.

- Consider formalizing instructions for developing the annual oversight plan to make the process more efficient, consistent, and to incorporate best practices.

02.OD.04, *Idaho Operations Office Employee Concerns Program Procedure*:

- The Senior Executive is a title not identified elsewhere. If the Senior Executive is the ID Manager, consider stating as such. Using a different identifier may add confusion.

- Section 5.2, *Preliminary Concern Evaluation Process*, may appear to imply that reporting an issue to the Price-Anderson Amendments Act (PAAA) database is more important than dealing with an immediately dangerous situation. Also, this is where the procedure should hand off to Alternative Dispute Resolution (ADR), union, etc., and not initiate the ECP process. Consider adjusting the document to clarify.

- Consider clearly identifying the differing professional opinion program as a resolution path.

- Step 5.6.3 can be confusing, as it seems to make the use of ADR optional. Consider clarifying the language.

- Consider clarifying why use of ADR skips Section 5.7, *Investigation Closeout.* ADR is discussed in the Order as an alternative to ECP before entering the process.

- Consider clarifying Section 5.6, *Retaining Concerns*, to be titled "Processing Concerns."

- Consider clarifying training identified on the cover page (required reading without confirmation of learning) to be consistent with the skills needed, as stated in Section 5.10, "(e.g., training on the identification and classification of health and safety issues, how to investigate workplace and administrative issues, and dispute resolution techniques)."

10.OD.01, *Functions, Responsibilities, and Authorities*:

- Describes the functions assigned and delegated to the site more clearly for NE than for EM. NE oversight of contractor performance and compliance is clearly assigned to the Deputy Manager for Operations Support. The Deputy Manager for ICP performs EM oversight, but this responsibility is not explicitly stated in the FRA.
- The FRA says the ICP is to ensure compliance with requirements but does not describe CAS oversight responsibilities. A section of the ID FRA describes the NE oversight policy, but the discussion pertaining to EM has no comparable description.
- Consider updating the EM section of the ID FRA to better describe the EM responsibilities for CAS oversight.