

**IDAHO NATIONAL ENGINEERING AND
ENVIRONMENTAL LABORATORY**

**INTEGRATED SAFETY MANAGEMENT SYSTEM
PHASE I VERIFICATION**

**FINAL REPORT
Volume II**

April 1999

U.S. Department of Energy
Washington, D.C.

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

FUNCTIONAL AREA: BBC	OBJECTIVE 1 DATE: April 13, 1999
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OBJECTIVE: DOE and contractor procedures ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated. (CE I-2, CE I-6, CE I-7, CE I-9)

Criteria

1. DOE guidance for translating mission into work includes delineating its plan of work. This means the scope, schedule, and funding allocations for each fiscal year.
2. DOE guidance for setting expectations for the contractor is established through contracts and regulations. These contracts and regulations provide guidance on expected performance, set goals and priorities, and allocate resources.
3. DOE roles and responsibilities are clearly delineated to ensure a satisfactory level of safety, accountability, and authority to define the scope of work.
4. DOE procedures ensure that the contractor adequately prioritizes work so that, when the ISMS is implemented, mission and safety expectations are met within available budget and resources. DOE procedures require that performance objectives and related goals and priorities are reviewed and approved.
5. Contractor procedures translate mission expectations from DOE into tasks that permit identification of resource requirements, relative prioritization, and performance measures that are established consistent with DOE requirements.
6. DOE and contractor procedures provide for DOE approval of proposed tasks and prioritization. Work planning procedures provide for feedback and continuous improvement.
7. DOE and contractor procedures provide for change control of approved tasks, prioritization, and identification of resources.
8. Contractor procedures provide for flowdown of DEAR 970.5204-2, Integration of Environment, Safety and Health into Work Planning and Execution, requirements into subcontracts involving complex or hazardous work.

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

Approach

Record Review: Review the FRAM/FRA and DOE implementing procedures. Determine if there is adequate guidance for DOE involvement in the clear definition of the scope of work. Determine if the mechanisms for translation of the missions and policies from higher authority are appropriate, if a mechanism for assigning priorities has been established, and if performance objectives are reviewed and approved. Determine if the roles and responsibilities for DOE personnel are adequate to support the corporate/site mission. Verify that DOE line management and staff personnel roles, responsibilities, and authorities are appropriate to support ISMS. Review personnel position descriptions, selection criteria, training programs and training records to determine if the staff competency is adequate. Review mission prioritization procedures to determine if tailoring of resources is appropriate. Verify that procedures contain adequate standards selection, hazard controls, and work authorization processes to support work planning and scope definition. Review the Request for Proposals text for the upcoming contract award for appropriate transition of the described ISMS to the new contractor.

Review the LMITCO Long Range Strategic Plan, LMITCO Company WBS, the M&O and SMC Contracts, and the LMITCO Performance Evaluation and Measurement Plan for the identification of mission requirements, relative prioritization, and performance and incentive fee structure that the contractor utilizes as part of the work scope and budget planning process. Review the flow diagram for Business, Budgets, and Contracts procedure.

Review PDD-17, Program Description Document for Manual 5, Project Cost and Schedule, for a description of the direct funding planning and budget process.

Review procedure MCP-3546, Management of Budget Formulation Process, MCP-2872, Work for Others, MCP-24, Funding Determination, the DOE and LMITCO Budget Call letters, MCP-3506, EM Prioritization, PDD-17, Project Cost and Schedule Controls Program Description for processes pertaining to funding request, establishing budget priorities, and identifying/analyzing hazards of direct funding. Review MCP-14 for a description of assessing the cost and schedule control levels.

Review the LMITCO Planning Preparation Requirements Document for guidance in developing contractor execution year plans. Review MCP-23, Planning and Managing Projects with Level I Cost and Schedule Controls for planning and managing small projects (under \$25K and less than 8 weeks). Review MCP-3543, Planning and Managing Projects with Level II Cost and Schedule Controls for planning, identifying and analyzing hazards, allocating resources, approval of contractor plans, and change control criteria for medium risk

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

projects. Review MCP-3544, Planning Projects with Level III Costs and Schedule Controls and MCP-3545, Authorizing, Monitoring, Reporting, and Change Control for Level III Projects for planning, identifying and analyzing hazards, allocating resources, approval of contractor plans, and change control for high risk projects.

Review STD-14, The Standard for Project Management in EM Programs, and MCP-3416, EM Program Baseline Development, Management, and Reporting for planning, identifying and analyzing hazards, allocating resources, approval of contractor plans, and change control criteria for EM Projects. Review MCP-2668, Financial Planning, Administration and Control of Indirect Activities/Work, for planning, establishing rates, prioritization, and change control of indirect rates.

Review MCP-592 for criteria on how safety requirements are included in subcontracts. Select several subcontracts and review for appropriate flowdown of the ISM DEAR clauses.

Review charters for LMITCO Program Review Board (PRB) and Executive Steering Group (ESG) for involvement of LMITCO Senior Management in the planning and monitoring of direct and indirect funded work.

Select mission tasks from the LMITCO Work Breakdown Structure (Review MCP-12) and track the tasks through the process to evaluate how the above criteria are met. Review past year planning for current year authorized work as well as future year planning. Select several current years authorizations and track change control.

Interviews: Interview DOE line managers responsible for Headquarters directed mission accomplishment and DOE personnel responsible for management of the budget process. Interview the DOE ES&H manager to determine how the process for integration of safety into mission tasks is accomplished. Interview the LMITCO Program Controls Director and selected department managers regarding the LMITCO planning and budget process for direct funded work. Interview the Director, Financial Operations regarding the indirect funded work. Interview Program and Site Area Directors responsible for Headquarters directed mission accomplishment. Interview the ES&H Director to determine how the process for integration of safety into mission tasks is accomplished. Interview selected Program Managers and Site Area Directors to determine their understanding and implementation of the defined process for translation of mission into work authorization. Interview selected Site Area ES&H managers to determine how safety is incorporated into the budget plans and authorization. Interview the Procurement Director and selected department managers regarding subcontract flowdown requirements.

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

Observations: If possible, observe actual budgetary discussions within and between DOE and LMITCO. Possible recommended meetings include: ESG meeting, PRB meeting, EM Directors meeting, Denson Monthly Cost and Schedule Review, EM and Program Change Control Boards.

Record Review:

- Functions, Responsibilities, and Authorities Manual (FRAM), 2/8/99
- Request for Proposal (RFP) DE-RP07-99ID13727 Exec. Summary, C-3, C-26, 1/22/99
- Long Range Strategic Plan, 10/99
- LMITCO Company WBS, 3/15/99
- LMITCO FY 1999 Performance Evaluation and Measurement Plan, 3/25/99
- LMITCO FY 1999 Performance Evaluation and Measurement Plan, 12/9/98
- Flow Diagram for Business, Budget, and Contracts Procedure
- PDD-17, Program Description Document for Manual 5, Project Cost and Schedule, 3/17/99
- MCP-3546, Management of Budget Formulation Process, 3/15/99
- MCP-2872, Work for Others, 8/96
- MCP-24, Funding Determination, 8/96
- FY 2000 DOE Budget Call Letter, 1/15/98
- FY 2000 LMITCO Field Budget Call, 2/17/98
- FY 2001 DOE Budget Call Letter
- FY 2001 LMITCO Field Budget Call, 1/27/99
- MCP-3506, EM Prioritization, 3/15/99
- PDD-17, Project Cost and Schedule Controls Program Description for Processes Pertaining to Funding Requests, 3/17/99
- MCP-14, Graded Approach to Defining Project Control, 3/15/99
- MCP-23, Planning and Managing Projects with Grade I Cost and Schedule Control, 3/15/99
- MCP-3543, Planning and Managing Projects with Grade II Cost and Schedule Control, 3/15/99
- MCP-3544, Planning and Managing Projects with Grade III Cost and Schedule Control, 3/15/99
- MCP-3545, Authorizing, Monitoring, Reporting, and Change Control for Grade III Projects, 3/15/99
- STD-14, Project Management in EM Programs, 3/15/99
- MCP-3416, EM Program Baseline Development, Management, and Reporting, 3/17/99
- MCP-2668, Financial Planning, Administration, and Control of Indirect Activities/Work, 3/15/99

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

- MCP-592, Acquisition for Goods and Services, 3/97
 - Examples: ISMS Flow-down to Subcontractors
- CTR-24, Program Review Board (PRB) Charter, 3/97
- CTR-15, Executive Steering Group (ESG) Charter, 3/97
- BBC ISMS Phase I Review Presentation, 3/15/99
- LMITCO Business Management Organization Charts, 2/26/99
- DOE-LMITCO Contract DEAR ISM Clause, 2/10/98
- DOE-LMITCO Contract List A, 2/11/99
- DOE-LMITCO Contract List B, 11/2/98
- MCP-2447, Requirement Management, 5/18/98
- PRD-182, Project Cost and Schedule Controls, 3/22/99
- LST-29, Project Cost and Schedule Definition, Rev. 1
- MCP-13, Funds Authorization, 1/30/98
- MCP-4, Contractor Performance Based Business Management Process, Rev. 1
- LMITCO Planning Preparation Requirements Document, 5/14/98
- PDD-19, Integrated Requirement Management Program, 4/30/99
- MCP-3571, Independent Hazard Review, 3/1/99
- MCP-33, Personnel Qualification and Certification, 3/17/99

Interviews Conducted:

- DOE ID Director of ISM Implementation
- DOE ID Deputy Director of ISM Implementation
- DOE ID Director for Indirect Budgets
- IRC Site Area Director
- Director of Procurement
- Manager Issue Management System
- Requirements Management Coordinator
- EM Prioritization
 - Program EM Integrator
 - Director of Program Controls
 - DOE-ID Deputy Assistant Manager Program Execution
 - DOE-ID EM Budget Services Division Director
- Core ES&H Infrastructure Initiative/Process
 - Deputy Director S&H
 - DOE ID Deputy Assistant Manager ES&H Performance and Assurance
 - Program Controls Representative

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

- Disposition of ES&H
 - Deputy Manager for Program Controls
 - VP ESH&QA
 - DOE ID Deputy CFO
 - Director of Finance Operations Indirect Budgets
- RWMC Project Team
 - Deputy Manager Technical Support ER
 - Buried Waste/Landfill Restoration ER
 - Project Control WAG 7
 - DOE ID Manager WAG 7
 - Director ER Programs
 - Project Control WAG-7
 - DOE ID Budget Analysis
- ATR Project Team
 - TRA SAD & ATR Program Manager
 - DOE ID Area Director & Program Manager ATR
 - TRA ESH&QA Manager
 - TRA Direct Budget Lead Program Controls
- ESH&QA Project Team
 - Director S&H
 - Director QA
 - Director Independent Oversight & Training
 - VP ESH&QA
- DOE-ID Acting Assistant Manager for ES&H

Observations:

- None

Discussion of Results:

In order to determine that DOE and contractor procedures ensure missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated, the Business, Budget, and Contract (BBC) sub-team reviewed a variety of documents, including DOE-ID Function, Responsibilities, and Authorities Manual (FRAM), DOE and LMITCO procedures, flow diagram for business, budget, and contract, correspondence, and the request for proposal for the upcoming contract. The sub-team conducted a series of team and individual

ISMS ASSESSMENT FORM

Business, Budget, and Contracts

interviews with senior DOE-ID and LMITCO Managers. Two of these interviews were selected to represent a sample of projects across the site (Radioactive Waste Management Complex (RWMC) Remediation and Advanced Test Reactor (ATR) operation).

Mission requirements and guidance are received from DOE-HQ. The field programmatic missions are translated into work expectations and priorities by DOE-ID and transmitted to the contractor via correspondence. DOE-ID provides the guidance and requirements to LMITCO via written correspondence, which establishes the work expectations and priorities by which LMITCO develops its budget request. The Work Breakdown Structure Managers (WBS) prepare their proposals using the Field Work Proposal (FWP) and/or the Field Task Proposal (FTP) as their submittal documents. During the preparation of the FWP and the FTP, LMITCO personnel work closely with their DOE-ID counterparts to identify program direction, assumptions, scope, milestones, performance objectives and technical approach for their proposal documents. LMITCO requires its WBS manager to obtain his DOE-ID counterparts support on any new initiatives.

The WBS Managers prepare their budget using a documented process found in MCP-3546 (Management of Budget Formulation Process), MCP-2872 (Work for Others) and using MCP-24 (Funding Determination) to ensure that the proper type of funding is requested. During the budget formulation, an ES&H budget development checklist (form 136.43) and the technical/budget validation checklist (form 136.44) are completed. The WBS Manager is required to ensure that any items that were identified from the checklists are addressed in the budget request proposal and appropriate resources have been included in the proposed budget to adequately fund all activities. A Program Controls Representative (PCR) assists the WBS Manager in the development and pricing of the budget request proposal documents. The Site Area Director (SAD) reviews the budget request proposals to ensure that facility requirements have been properly considered. An Independent Validation Review Team reviews 20% of the budget request proposals each year to evaluate the supporting documentation for the activity, validate the resources requested, test the estimates developed, and verify the reasonableness of the scope requirements.

PDD-1005 holds the Site Operations Director (SOD) responsible for coordination of resources to support program management as well as the implementation of ISM. The SOD accomplishes these responsibilities through the Site Area Directors (SADs) who report to him on operations. The SADs also are responsible for ensuring adequate resources are brought to bear for ES&H and report organizationally to the program Vice President for program scope, cost and schedule. The Project Cost and Schedule Controls System (PCASC), as described in PDD-17, Project Cost & Schedule Controls Description, also gives the SADs responsibilities for financial management at their facilities. PPD-1005 holds the Area ESH&QA managers responsible to the SADs for

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

verifying that adequate resources are available to adequately support the work. Planning projects with Grade III cost and schedule controls (MCP-3544) provides the formal mechanism for the SAD to approve PEPs. This procedure also addresses the review and resolution of resource requirements at the work package level between programmatic managers and operational SADs during the execution and planning period. These same mechanisms are not formally addressed in MCP-3543 (Grade II). According to the LMITCO BBC POC, this omission was an administrative oversight during the preparation of the PCASC procedures and a revision is in preparation to correct it.

The site steering committee roles and responsibilities as well as site programs and processes documented in sections 5 & 6 of PDD-1005 also reflect the Department's and stakeholders priorities and commitments. Many of the senior management teams are structured to address resource issues and balanced priorities, the most significant being the Executive Steering Group (ESG). Site programs such as the Facility Excellence Program, ISM, VPP, Conduct of Operations, and Conduct of Maintenance, clearly reflect an organization that has aligned itself with DOE and stakeholder priorities. The management structure as described in PDD 1005 is an emerging strength. (BBC1-2)

Throughout the process, coordination between the WBS Manager and his DOE-ID counterpart ensures that the budget request proposal meets DOE-ID objectives and missions. Few DOE-ID procedures and processes are available to provide direction and clarification to ID line management and staff during the budget process. The ID work planning, prioritization, budgeting and change control processes could be better integrated with the INEEL ISMS through some level of documented procedures or ID directives. (BBC1-1)

A WBS Manager uses a graded approach process (MCP-23) to determine the appropriate level of scope, cost, and schedule controls for projects. This permits adjustment of the amount of complexity of planning and reporting to maximize project control effectiveness to respond to changing requirements and priorities. After analysis is performed, and a determination of the level of management and controls required for the project, the manager uses MCP-23 (Planning and Managing Projects with Grade I Cost and Schedule Control), MCP-3543 (Planning and Managing Projects with Grade II Cost and Schedule Control), MCP-3544 (Planning Projects with Grade III Cost and Schedule Controls), and MCP-3545 (Authorizing, Monitoring, Reporting, and Change Control for Projects with Grade III Cost and Schedule Control). These processes provide the WBS Managers with the tools needed to manage their projects and monitor project work performed against the scope, schedule, and cost baseline and manage changes to the project baseline.

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

In order to complete a scope of work, DOE-ID and LMITCO acquire the services of subcontractors. DOE-ID procedures, CFR, and MCP-592 (Acquisition of Goods and Services) address the procurement of goods and services and they effectively establish the flow-down of requirements needed to ensure subcontractor compliance with site requirements. This accomplished by the use of a requirement checklist and the required review of a safety engineer prior to submittal of a requisition to procurement.

The Test Reactor Area/Advanced Test Reactor (TRA/ATR) management team presented a planning and budgeting approach in which safety was particularly well integrated with program activities. The team believes that the key factor contributing to this success is that the Site Area Director is also the Program Director for the two principal programs on his site. Where feasible, this technique of assigning responsibilities could have the same beneficial effect if applied to other sites and programs. (BBC1-2)

The request for proposal for the new management and operating contractor contains requirements in several places to ensure continuation of ISM under the new contract.

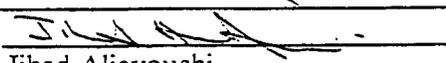
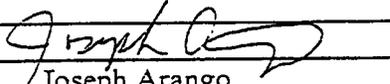
Conclusion: The objective has been met. Overall, the budget formulation process appears to be well understood and functioning throughout the approval chain. ID guidance and the contractor procedures ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated. The ID work planning, budgeting, prioritization and change control processes could be better integrated with the INEEL ISMS through some level of documented procedures or ID directives.

Issue(s):

- Procedures for ID involvement in the work planning, prioritization, budgeting, and change control processes are not documented. (BBC1-1)

Strength(s):

- The level of communication and coordination between the business management directorate staff and the line organizations that they service was effective. Line managers demonstrated excellent knowledge and made full use of the business management systems to plan, execute and evaluate their programs. (BBC1-2)

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ISMS ASSESSMENT FORM
Business, Budget, and Contracts

FUNCTIONAL AREA: BBC

OBJECTIVE 2

DATE: April 13, 1999

OBJECTIVE: DOE and contractor budgeting and resource assignment procedures include a process to ensure the application of balanced priorities. Resources are allocated to address safety, programmatic, and operational considerations. Protecting the public, workers, and environment is a priority whenever activities are planned and performed. (CE I-2, CE I-7)

Criteria

1. The prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.
2. Priorities include commitments and agreements to DOE as well as stakeholders.
3. Contractor procedures provide resources to adequately analyze hazards associated with the work being planned.
4. Contractor procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.
5. Resource allocations reflect the tailored hazard controls.
6. The incentive and performance fee structure promote balanced priorities.
7. DOE procedures for defining the scope of work ensure balanced priorities.

Approach

Records Review: Review the DOE procedures that identify mission requirements, balancing of resource allocations, and approval of contractor plans. Review the LMITCO Long Range Strategic Plan, LMITCO Company WBS, the M&O and SMC Contracts, and the LMITCO Performance Evaluation and Measurement Plan for identification of mission requirements, performance and incentive fee structure to demonstrate balanced priorities.

Review PDD-17, Program Description Document for Manual 5, Project Cost and Schedule, for a description of the direct funding planning and budget process.

Review procedure MCP-3546, Management of Budget Formulation Process, MCP-2872, Work for Others, MCP-24, Funding Determination, the DOE and LMITCO Budget Call

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

letters, MCP-3506, EM Prioritization, PDD-17, Project Cost and Schedule Controls Program Description for processes pertaining to funding request, establishing budget priorities, and identifying/analyzing hazards of direct funding. Review MCP-14 for a description of assessing the cost and schedule control levels.

Review the LMITCO Planning Preparation Requirements Document for guidance in developing contractor execution year plans. Review MCP-23, Planning and Managing Projects with Level I Cost and Schedule Controls for planning and managing small projects (under \$25K and less than 8 weeks). Review MCP-3543, Planning and Managing Projects with Level II Cost and Schedule Controls for planning, identifying and analyzing hazards, allocating resources, and approval of contractor plans for medium risk projects. Review MCP-3544, Planning Projects with Level III Costs and Schedule Controls and MCP-3545, Authorizing, Monitoring, Reporting, and Change Control for Level III Projects for planning, identifying and analyzing hazards, allocating resources, and approval of contractor for high risk projects.

Review STD-14, The Standard for Project Management in EM Programs, and MCP-3416, EM Program Baseline Development, Management, and Reporting for planning, identifying and analyzing hazards, allocating resources, and approval of contractor for EM Projects. Review MCP-2668, Financial Planning, Administration and Control of Indirect Activities/Work, for planning, establishing rates, and prioritization of indirect rates.

Review charters for LMITCO Program Review Board (PRB) and Executive Steering Group (ESG) for involvement of LMITCO Senior Management in the planning, balancing of priorities, and approval of direct and indirect funded work.

Select mission tasks from the LMITCO Work Breakdown Structure (Review MCP-12) and track the tasks through the process to determine if they adequately address the assignment of resources with balanced priorities. Review past year planning for current year authorized work as well as future year planning. Select several current year authorizations and review selected funded tasks at the individual facility level to verify balanced priorities.

Interviews: Interview DOE line managers responsible for Headquarters directed mission accomplishment and DOE personnel responsible for management of the budget process to determine their understanding of the priority for assigning resources. Interview the DOE ES&H manager to determine how priorities are established and ES&H resources are balanced. Interview the LMITCO Program Controls Director and selected department managers regarding the LMITCO planning and budget process for direct funded work. Interview the Director, Financial Operations regarding the indirect funded work. Interview Program and

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

Site Area Directors responsible for Headquarters directed mission accomplishment. Interview the ES&H Director to determine how the process for integration of safety into mission tasks is accomplished. Interview selected Program Managers and Site Area Directors to determine their understanding of the allocation of resources with appropriate priority. Interview selected Site Area ES&H managers to determine how safety is incorporated into the budget plans and authorization.

Observations: If possible, observe actual budgetary discussions within and between DOE and LMITCO. Possible recommended meetings include: ESG meeting, PRB meeting, EM Directors meeting, Denson Monthly Cost and Schedule Review, EM and Program Change Control Boards.

Record Review:

- Excerpts from DOE-LMITCO contract
- ISM DEAR Clauses
- Lists A and B
- Incentive fee provisions
- EM paths to closure
- INEEL Long Range Plan
- Functions, Responsibilities and Authorities Manual (FRAM)
- DOE FRAM implementing directives
- DOE ID Notices N 130.A, N 450.C
- DOE ID Executive Policy ID EP 97-1
- DOE ID Management Board Charter
- Manual 5 – Project Cost & Schedule Controls
- Manual – Lists A/B – Requirement Procedures
- DOE & LMITCO budget call letters for FY 2000, 2001
- DOE & LMITCO approval letters for indirect funding
- PRB Charter
- ESG Charter
- PDD 1005, Site Operations Manual
- PDD 19, Requirements Management
- PDD 17, Performance Management Control Systems
- Flow diagram for budget process
- Flow diagram for change control process
- MCP-3544, Planning Projects with Grade II Cost and Schedule Controls
- MCP-3543, Planning Projects with Grade II Cost and Schedule Controls

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

- STD-14, Project Management in EM Programs
- MCP-3506, EM Prioritization
- MCP-14, Graded Approach Analysis for Project Cost and Schedule Controls
- MCP-23, Planning and Managing Projects with Grade I Cost and Schedule Controls
- MCP-3546, Management and Budget Formulation Process
- MCP-2872, Work for Others
- MCP-24, Funds Determination
- MCP-3545, Authorizing, Monitoring, Reporting and Change Control for Grade III Projects
- MCP-3416, EM Program Baseline Development Management and Reporting
- MCP-2668, Financial Planning, Administration and Control of Indirect Activities/Work
- FY 1999 WAFs for selected interview areas
- MCP-3571, Independent Hazard Review
- LMITCO Planning Preparation Document, FY 1999
- Funding proposals submitted in FY 99
- LMITCO planning documentation and work authorization forms
- Change control actions forms and logs

Interviews Conducted:

- DOE ID Director of ISM Implementation
- DOE ID Deputy Director of ISM Implementation
- DOE ID Director for Indirect Budgets
- IRC Site Area Director
- Director of Procurement
- Manager Issue Management System
- Requirements Management Coordinator
- EM Prioritization
 - Program EM Integrator
 - Director of Program Controls
 - DOE-ID Deputy Assistant Manager Program Execution
 - DOE-ID EM Budget Services Division Director
- Core ES&H Infrastructure Initiative/Process
 - Deputy Director S&H
 - DOE ID Deputy Assistant Manager ES&H Performance and Assurance
 - Program Controls Representative
- Disposition of ES&H
 - Deputy Manager for Program Controls
 - VP ESH&QA

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

- DOE ID Deputy CFO
- Director of Finance Operations Indirect Budgets
- RWMC Project Team
 - Deputy Manager Technical Support ER
 - Buried Waste/Landfill Restoration ER
 - Project Control WAG 7
 - DOE ID Manager WAG 7
 - Director ER Programs
 - Project Control WAG-7
 - DOE ID Budget Analysis
- ATR Project Team
 - TRA SAD & ATR Program Manager
 - DOE ID Area Director & Program Manager ATR
 - TRA ESH&QA Manager
 - TRA Direct Budget Lead Program Controls
- ESH&QA Project Team
 - Director S&H
 - Director QA
 - Director Independent Oversight & Training
 - VP ESH&QA
 - DOE-ID Acting Assistant Manager for ES&H
- Award Fee & Incentive Fee Process
 - DOE ID Assistant Deputy Manager Contracts
 - DOE-ID Acting Director of Contracts
 - Program Contract Specialist
 - DOE-ID Assistant Deputy Manager for WFO & SMC Contracts
 - Program Controls Specialist

Observations:

- Business Management System Demonstration

Discussion of Results:

The incentives in the contract and commitments made to DOE and stakeholders reflected in the Project Execution Plans (PEPs) are consistent with priorities outlined in the Project Baseline Summaries (PBSs) and DOE's expectations outlined in Accelerating Cleanup: Paths to Closure. EM priorities are established through the use of MCP-3506, EM Prioritization Process. Compliance agreements, stakeholder commitments, and essential environment and safety controls

ISMS ASSESSMENT FORM

Business, Budget, and Contracts

drive the priorities developed under the guidance of MCP-3506. The incentive fees also reflect the Department's expectations for balance between achieving its EM mission, ES&H excellence, business growth, and operations excellence. Five of the ten incentive fees are in the area of ES&H and account for approximately 45% of the incentive fee for operations. Also, a standard section of the CPAF specifically addresses ESH&QA.

The type of activities where incentives have been developed and placed in the contract are reflected in LMITCO's Long Range Plan which emphasizes its commitment to integrated safety management, research and development and operations integration, business growth, and its environmental mission. The long term goals and objectives are reflected in INEEL's Site Operations Manual (PDD-1005). The management structure and roles and responsibilities documented to carry out INEEL's mission in PDD-1005 clearly reflects these goals and commitments to ISM, ES&H excellence, (demonstrated through its commitment to VPP) and operational excellence.

PDD-1005 holds the Site Operations Director (SOD) responsible for coordination of resources to support program management as well as the implementation of ISM. The SOD accomplishes these responsibilities through the Site Area Directors (SADs) who report to him on operations. The SADs also are responsible for ensuring adequate resources are brought to bear for ES&H and report organizationally to the program Vice President for program scope, cost and schedule. The Project Cost and Schedule Controls System (PCASC), as described in PDD-17, Project Cost & Schedule Controls Description, also gives the SADs responsibilities for financial management at their facilities. PDD-1005 holds the Area ESH&QA managers responsible to the SADs for verifying that adequate resources are available to adequately support the work. Planning projects with Grade III cost and schedule controls (MCP-3544) provides the formal mechanism for the SAD to approve PEPs. This procedure also addresses the review and resolution of resource requirements at the work package level between programmatic managers and operational SADs during the execution and planning period. These same mechanisms are not formally addressed in MCP-3543 (Grade II). According to the LMITCO BBC POC, this omission was an administrative oversight during the preparation of the PCASC procedures and a revision is in preparation to correct it.

The site steering committee roles and responsibilities as well as site programs and processes documented in sections 5 & 6 of PDD-1005 also reflect the Department's and stakeholders priorities and commitments. Many of the senior management teams are structured to address resource issues and balanced priorities, the most significant being the Executive Steering Group (ESG). Site programs such as the Facility Excellence Program, ISM, VPP, Conduct of

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

Operations, and Conduct of Maintenance, clearly reflect an organization that has aligned itself with DOE and stakeholder priorities. The management structure as described in PDD 1005 is an emerging strength.

Program control and budget processes and procedures are in place to ensure the work scope for all projects and programs identifies the hazards and controls appropriate for the scope of work. The PCASC, PDD-17, establishes in a graded approach the level of rigor required when planning and building work proposal budgets. The PCASC not only provides the typical guidance on cost estimating, schedule and scope but also requires and provides guidance in addressing work authorization, change control, project risks, safety, environment, quality, and performance reporting. For work proposals that meet the definition of Grade II or Grade III cost and schedule controls (C&S), a PEP is prepared consistent with the requirements for that grade. The PEP defines the baseline for a project's scope of work and requires that risk to the public, worker, and the environment are assessed and documented. How the project is to comply with any applicable requirements for a safety basis as well as identifying the appropriate safety, quality control, and environmental requirements also have to be documented. The appendices in both documents for Grade II (MCP-3543) and Grade III (MCP-3544) controls serve as a guide in the preparation of the PEP. (BBC2-1)

The PCASC describes the project and organizational key responsibilities of managers, directors, control account managers, and work package managers for planning, authorizing, monitoring, and controlling work within the technical scope and budget. To assist program and project managers in fulfilling their responsibilities, a Program Controls Representative (PCR) is assigned. A strength in planning for ES&H tasks within work packages is the cost accounting system which provides project managers, SADs, and ESH&QA managers a method to analyze costs by ES&H disciplines on an annual, quarterly or monthly basis. (BBC2-1) Part of a PCR's function is to monitor costs for undercharging or overcharging of ES&H resources. This allows managers and SADs the flexibility to move resources to other projects or tasks that may need the resources. It is also an advantage for projects and work that are similar or have similar hazards. Planners and managers have a firmer basis for identifying resource needs and cost estimates in controlling specific hazards.

STD 14, Project Management in EM Programs, provides overall direction for planning projects and in the preparation of the PEP. MCP-3416, EM Program Baseline, provides further direction for documenting and managing change control. The processes and direction in both documents are integrated at the proposal level as well as in work execution and change control.

ISMS ASSESSMENT FORM

Business, Budget, and Contracts

Budget request proposals are prepared according to the directions given in MCP-3546, Management of Budget Formulation Process, and in MCP-2872, Work For Others, (WFO). The budget request process requires the use of checklists to ensure that the project manager understands and considers the type of potential ES&H hazards likely to be encountered in the work. These checklists are then reviewed and signed by a program ES&H professional.

Additional direction and change control practices are placed on the use of indirect budgets. MCP-2668, requires that a variance analysis is conducted monthly by an Indirect Account Manager. The Indirect Account Manager works with his line points of contact to conduct the analysis and also aid in any change control action. The Program Review Board is responsible for establishing the overhead charge rates. The PRB approves any increase in the company indirect rate that may be part of a change control action.

Indirect core ES&H functional activities are prioritized by ESH&QA Management by using a risk based matrix. This process allows the impacts to be assessed quantitatively for their ES&H risk reduction value. Impacts to environment, worker safety, public safety, compliance, mission, cost effectiveness and public confidence are evaluated and ranked. Once activities are assessed and ranked based on their risk reduction value, the cost of the functional activity, the funding source, type of funding, and responsible manager for the activity are identified. This is then ranked and as funding is provided, the higher ranked activities are funded. If full funding is not provided or funding is reduced, the process allows the facility ESH&QA managers to reprioritize ES&H resources within or across ES&H functions, and it can be used in determinations by management for targeting resources from activities with less risk reduction value. It also allows the facility ESH&QA managers the ability to view by functions all ES&H resources brought to bear at their facilities integrated across programs and projects. It provides a valuable tool to the SAD for checking the effectiveness of planning and budgeting for specific ES&H functions. INEEL has undertaken this initiative to identify and document core ES&H infrastructure activities to ensure they are properly categorized, planned, prioritized, funded, and monitored (ref. CAIP 3.21.4.3, 4.4, & 4.5). This is a joint effort between INEEL and DOE ID and an outgrowth of the corrective action plan to the July 28, 1998 carbon dioxide accident at building 648 at the TRA. However, DOE ID has not determined how this function will be integrated into the functions, roles and responsibilities of its organizations.

This process will fill a gap that exists in integrating institutional priorities with specific types of facility ES&H needs and priorities. This process will allow work level activities that have been prioritized by risk to be "binned" according to site, facility, institutional, and/or programmatic strategic issues. This will allow management the ability to view activities for any dependent relationships between activities or deficiencies as well as their impacts on achieving strategic goals. An additional benefit to integration is the ability it gives management at all levels to view

ISMS ASSESSMENT FORM

Business, Budget, and Contracts

direct and indirect activities by a range of risks to ES&H and programs. This allows managers to see what impacts budget reductions will have to core ES&H programs and activities.

Management can then target cuts to core activities with less risk value. At the same time the process retains the visibility of the activities not currently being funded on a prioritized list of ES&H needs. This activity is an emerging strength, but it has not been included in the ISM description document nor was the verification team briefed on the initiative status. It was mentioned briefly during the BBC presentation, and the team members of the initiative were interviewed. It is recommended that the ES&H Core Infrastructure process be incorporated into the Phase II activities. It is unclear how proactive and effective the ESG and the SOD will be in meeting their responsibilities for ensuring a proper level of core ES&H support across programs and facilities with out this process being formally institutionalized.

LMITCO utilizes the performance and incentive fee structure as part of the work and budget planning process. LMITCO Long Range Strategic Plan, mission requirements, and work prioritization are directly tied to the DOE-ID performance measures and priorities. The performance measures and incentive fee structure are negotiated between DOE-ID and LMITCO in order to have a clear understanding of the requirements and expectations. The process is established and being followed by both DOE-ID and LMITCO. However, an opportunity exists to better integrate the development of performance objectives, measures and commitments for ID review and approval as required by DEAR 970.5204-2 and described in PDD-1004 with the performance-based incentive fee structure. The package of four performance-based incentives applied to the ATR is particularly well thought out in terms of the ancillary benefits derived from placing a performance-based incentive on particular attribute. For example, placing an incentive on reducing total annual radiation dose also forces improved work planning and better facility housekeeping. The other three incentives similarly drive improvements in other areas without causing adverse effects elsewhere in the operation. With the stated goal to maximize incentives in the new contract, this type of coordinated incentive implementation provides a strong model.

DOE-ID has established policies, and high level authorities and responsibilities consistent with the Department's expectations for implementing ISM. The FRAM clearly outlines the functions, roles, responsibilities, and authorities, in sufficient detail for authorizing work and resolution of issues between programs at the senior management level. Other policies and notices on work authorization and ES&H management integration exist and reflect Department expectations. An Award Fee Handbook and draft guidance on performance-based incentives exist and are being used. However, no implementing procedures exist at the deputy level down in providing direction to staff to comply with those higher tier documents that ensure priorities are balanced. No formal coordination among program managers and staff over changes to scope or redirection of resources across programs and projects to ensure priorities are balanced between doing the work and ES&H occur.

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

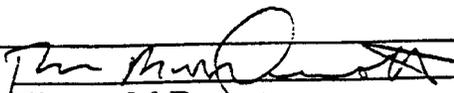
Conclusion: The objective has been met. The contractor has a mature program control process, which is particularly effective in providing direction and guidance to program managers, directors, planners, and ESH&QA managers for the development and work control of work packages and budgets. A significant enhancement and emerging strength is the site's management structure outlined in the Site Operations Manual, PDD 1005. This document has aligned INEEL management with a increased ability to successfully meet DOE and stakeholders expectations and requirements for achieving it's mission. Another emerging strength is the core ES&H infrastructure process. This process will allow management to vertically and horizontally integrate ES&H activities with strategic goals while maintaining a minimum level of safety regardless of funding limitations. Together, these strengths should allow INEEL to achieve operational excellence.

Issue(s):

- None

Strength(s):

- Business management systems are well established, mature and applied consistently throughout the company. Two of the strongest areas are cost accounting and the well-defined, graded approach for project cost and schedule controls. (BBC2-1)

Inspector:  Thomas McDermott	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Business, Budget, and Contracts

FUNCTIONAL AREA: BBC	OBJECTIVE 3 DATE: April 13, 1999
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OBJECTIVE: The contractor procedures and practices ensure that personnel who define the scope of work and allocate resources have competence that is commensurate with the assigned responsibilities. (CE I-8)

Criteria

1. Contractor procedures ensure that the personnel including line management who define, prioritize, and approve the scope of work and allocate resources have competence that is commensurate with the assigned responsibilities.
2. Personnel who actually participate in definition of the scope of work and allocate resources demonstrate competence to prioritize and approve work with tailored hazard controls.

Approach

Record Review: Review organizational documentation to determine the personnel positions with responsibility associated with this objective. Review the position description for those positions. Review the personnel records that identify the individual qualifications that meet the elements of the position descriptions. Review any training or qualification material including corporate/site manuals that support gaining or verifying competence to fill the positions.

Interviews: Interview selected individuals and managers whose responsibilities fall within this objective.

Observations: None.

Record Review:

- LMITCO selected position descriptions and associated records of experience, training and other pertinent qualifications for key personnel in both organizations involved in the BBC area.
- Personnel Position Descriptions (PD) (Critical Positions)
- CTR-24, Program Review Board (PRB) Charter, 3/97
- CTR-15, Executive Steering Group (ESG) Charter, 3/97
- LMITCO Business Management Organization Charts, 2/26/99
- MCP-33, Personnel Qualification and Certification, 3/17/99

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

- PDD-17, Project Cost and Schedule Controls Program Description for Processes Pertaining to Funding Requests, 3/17/99

Interviews Conducted:

- DOE ID Director of ISM Implementation
- DOE ID Assistant Manager for Program Execution
- DOE ID Deputy Director of ISM Implementation
- DOE ID Director for Indirect Budget
- RWMC Site Area Director
- IRC Site Area Director
- Director of Procurement
- Manager Issue Management System
- Requirements Management Coordinator
- EM Prioritization
 - Program EM Integrator
 - Director of Program Controls
 - DOE-ID Deputy Assistant Manager Program Execution
 - DOE-ID EM Budget Services Division Director
- Core ES&H Infrastructure Initiative/Process
 - Deputy Director S&H
 - DOE ID Deputy Assistant Manager ES&H Performance and Assurance
 - Program Controls Representative
- Disposition of ES&H
 - Deputy Manager for Program Controls
 - VP ESH&QA
 - DOE ID Deputy CFO
 - Director of Finance Operations Indirect Budgets
- RWMC Project Team
 - Deputy Manager Technical Support ER
 - Buried Waste/Landfill Restoration ER
 - Project Control WAG 7
 - DOE ID Manager WAG 7
 - Director ER Programs
 - Project Control WAG-7
 - DOE ID Budget Analysis
- ATR Project Team
 - TRA SAD & ATR Program Manager
 - DOE ID Area Director & Program Manager ATR

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

- TRA ESH&QA Manager
- TRA Direct Budget Lead Program Controls
- ESH&QA Project Team
 - Director S&H
 - Director QA
 - Director Independent Oversight & Training
 - VP ESH&QA
 - DOE-ID Acting Assistant Manager for ES&H
- Award Fee & Incentive Fee Process
 - DOE ID Assistant Deputy Manager Contracts
 - DOE-ID Acting Director of Contracts
 - Program Contract Specialist
 - DOE-ID Assistant Deputy Manager for WFO & SMC Contracts
 - Program Controls Specialist

Observations:

- Executive Steering Group Meeting

Discussion of Results:

Presentations at the Executive Steering Group meeting demonstrated that line management, in this instance a Site Area Director, was knowledgeable of the budgeting and cost accounting procedures and systems and that he integrated environment, safety and health activities into the programs for which he was also responsible.

Although not all of the position descriptions and other documents reviewed were completely current, there was more than sufficient documentation to adequately evaluate the roles, responsibilities, authorities and qualifications of key personnel and many others which the BBC sub-team interviewed. There were no significant discrepancies between assigned roles, responsibilities and authorities and the experience, training and education of the incumbents. The roles, responsibilities and authorities of both business management support personnel and of line management responsible to define, estimate, budget, prioritize and oversee or direct work were appropriate.

Through interviews the sub-team determined that there is a high level of competence and project management experience in both the business management support function and in those line managers directly responsible for the scoping, estimating, prioritization and execution of work.

ISMS ASSESSMENT FORM
Business, Budget, and Contracts

Conclusion: The objective has been met. The process described in PDD-1004, Section 5.3 and Appendix F, is adequate to ensure that competence in project management and business areas is maintained within the organization.

Issue(s):

- None

Strength(s):

- None

Inspector: <u>William M. Hartman</u> William M. Hartman	Team Leader: <u>Joseph Arango</u> Joseph Arango
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ISMS ASSESSMENT FORM
Department of Energy (DOE)

FUNCTIONAL AREA: DOE	OBJECTIVE 1 DATE: April 13, 1999
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OBJECTIVE: DOE has established processes that interface efficiently and effectively with the contractor's organization to ensure that work is performed safely. (CE I-7, CE I-8, CE I-9)

Criteria

1. DOE line management responsibility for safety¹ includes responsibility to ensure that work is performed within the approved controls.
2. DOE has established clear roles and responsibilities to ensure a satisfactory level of safety for defined work and that work is performed within controls.
3. DOE procedures ensure that personnel who review or oversee the performance of work have competence commensurate with the responsibilities to which they are assigned.
4. DOE procedures ensure that priorities are balanced so that mission and safety expectations are met, including commitments and agreements to DOE, and that work is performed within controls.
5. DOE procedures require work readiness be properly verified and authorized before work commences.
6. DOE procedures provide for identification of applicable ES&H requirements and implementation into the Contract.
7. DOE contract technical direction and Integrated Safety Management System implementation reflect appropriate emphasis on environmental protection, including implementation of elements of an ISO 14001 Environmental Management System and integration with ISMS implementation activities, and implementation of the National Environmental Policy Act (NEPA).
8. DOE contract technical direction and Integrated Safety Management System implementation reflect appropriate emphasis on quality assurance.

¹ Whenever the term "safety" is used, it should be understood that it includes both safety and environment, where appropriate.

ISMS ASSESSMENT FORM

Department of Energy (DOE)

Approach

Record Review: Review the FRAM/FRA and DOE implementing procedures including the Quality Assurance Program (QAP) and authorization agreements. Determine if there is adequate guidance for DOE involvement in the clear definition of the scope of work and the authorization and oversight of work by DOE. Verify that those authorized to perform these functions have clear roles and responsibilities and that they are appropriate to support ISMS. Determine if the chain of command is clearly described. Verify that procedures contain adequate standards selection, hazard controls, and work authorization processes to support work planning and scope definition. Review personnel position descriptions, selection criteria, training programs and training records to determine if the staff competency is adequate. Verify that the Facility Representative (FR) program is tailored to match the work. Determine if oversight is balanced with risk and the priority of the mission being performed. Review DOE Contracting Officer guidance and technical direction letters for ISO 14001 and quality assurance; review DOE ID and LMITCO policy statements and project plans. Review provisions for factoring NEPA into planning.

Interviews: Interview ID ES&H manager to determine how priorities are established. Discuss work authorization and performance activities with ID and contractor personnel and determine how the process for integration of safety into mission tasks is accomplished and if there are adequate mechanisms to ensure that work is properly authorized at all levels. Determine if work safety is perceived as an integral part of work authorization methods and issue resolution. Discuss the systematic oversight of work with ID and contractor personnel. Determine if oversight is adequate or excessive. Discuss the FR program with the FRs and with contractor personnel to determine if it is effective.

Observations: If possible, observe actual interaction and/or oversight meetings between DOE and LMITCO. Possible meetings include ESG meeting, PR meeting, etc.

Record Review:

- ID Notice ID N 411.1, DOE Integrated Safety Management Functions, Responsibilities and Authorities, 02/08/99
- ID Notice ID N 251.1B, ID Directives System, 02/24/97
- ID Executive Policy ID EP 97-1, ES&H Management System Integration, 09/17/97
- Draft ID Manual ID M 000.0-0, OPE Operations Excellence Manual, 03/11/99
- ID Notice ID N 450.C, Authorization Agreements, 02/08/99
- Authorization Agreements for various nuclear facilities, including those at TAN, RWMC, PBF, and INTEC
- Draft OPE QPP, Quality Assurance Program Plan
- Letter, Green to Denson dated 3/25/99, LMITCO FY 1999 Performance Evaluation and Measurement Plan

ISMS ASSESSMENT FORM
Department of Energy (DOE)

- Letter, Garr to Jenkins dated 11/2/98, Updated List of Department of Energy Directives (Modification No. M088) Applicable to Contract DE-AC07-94ID13223 (OARM-P&AD(PM)-043-098)
- ID Notice ID N 450.A2, Environment, Safety, Health and Quality Assurance Oversight, 04/13/98
- ID Notice ID N 430. 1 A, Life Cycle Asset Management: ID Expectations, 2/24/97
- Project Management Plan for INEEL M&O Transition, Rev 0, undated
- Idaho Operations Office Self-Assessment Program, 04/09/99
- ID Notice ID N 420.A I, Safety Basis Review and Approval Process, 5/11/98

Interviews Conducted:

- LMITCO Requirements Management Coordinator
- ISMS Project Office Director
- Policy and Assurance Division staff member
- OPE Operational Safety Program Director
- Assistant Manager, ESH&QA Performance Assurance
- Acting Program Director, Environmental Programs & Settlement Agreement
- Team Lead, Scientific, Engineering & Technical Support Division, OA&RM
- Program Director, Program Planning & Evaluation, OPE
- OPE Facility Directors (3)
- Program Director, ES&H Oversight, OPE
- OPE Facility Engineers (3)
- Coordinator, Conduct of Operations and ORPS, OPE
- OPE Facility Representatives (3)
- Assistant Manager, OPE
- Deputy Assistant Manager, OPE
- Operational Excellence Lead, OPE
- Deputy Director, ISMS Project Office
- Deputy Assistant Manager, Office of Laboratory Development
- Director, Human Resources Division, CF&AO
- Technical Training Program Manager, Human Resources Division, CF&AO
- DOE-ID Operations Office Manager

Observations:

- Weekly meeting; OPE Assistant Manager and LMITCO Executive Vice President for Operations
- Bi-weekly Operational Excellence Meeting
- DOE ID Management Board Meeting

ISMS ASSESSMENT FORM
Department of Energy (DOE)

Discussion of Results:

Several years ago (approximately 1994) ID abolished its internal procedures dealing with interfacing with the contractor to ensure that work is performed safely. The direction at the time was to reduce interference with the contractor's work, with the expectation that the contractor was fully able to oversee his own work. Since that time ID has determined that it must more actively manage contract work, but the plans and procedures for doing so must be newly developed, as part of preparation for ISMS implementation at INEEL. A number of high level documents necessary for ISMS implementation at INEEL are in place, including: the ID FRAM; the Contract List A and List B; Executive Policies on environmental compliance; ES&H management system integration; and certain ID Notices that establish expectations of both ID and contractor operations. However, many of the ID implementing procedures and guidance documents necessary for ISMS implementation are currently under development and generally not available for review at this time (with some exceptions).

The ISMS Project Office provides the planning structure for overall ISMS development. The Office of Program Execution (OPE) has taken the lead within ID of ID's component of ISMS, and within OPE, Operations is most active. In particular, the Facility Directors, through the Operational Excellence program are most active in establishing the processes by which they will manage the interface with contractor operations. (DOE1-6) There has been an identification of the needed procedure development, and that is in progress. These procedures are a part of the structure whose framework is defined in the OPE Quality Program Plan. In this regard, in review of existing procedures, it is noted that the ID procedure on procedures (ID N 251.1B) has no process to assure that ID interpretations or more detailed guidance on DOE Orders is consistent with the Order intent according to the Office of Primary Interest responsible for the governing Order. (DOE1-1) Other management initiatives are a part of the Operational Excellence Program, including staffing planning, training, performance indicators, and environment. (DOE1-7)

In addition to having established processes in place for interfacing with the contractor's organization, it is also necessary that ID personnel be engaged in the ISMS in order that the interface is effective. It is understandable that OPE Operations is the part of the ID organization that has been the focus of ISMS development; the seriousness with which the effort has been undertaken results from the realization after the fatal accident during the summer of 1998 that a change in the way of doing business was needed; indeed, a significant portion of the actions being taken for ISMS are included in the Corrective Action Implementation Plan resulting from the investigations into that accident. But now, if ISMS is to be implemented on schedule and effectively, the balance of the ID organization, including the Programs part of OPE and the other Offices must become more engaged in the process. The OPE management realizes this, but has been consumed with putting into place the basic processes needed and has put off engaging the balance of the ID organization, except with regard to specific tasks.

ISMS ASSESSMENT FORM

Department of Energy (DOE)

An opportunity exists for Facility Directors to engage both the Operations side and the Program side in the process of Integrated Management (assuring that safety is integrated into Planning) for activities in their responsible areas on site. Such activities are planned for the INTEC, but it has not been recognized that this really involves ISMS and planned as such, or considered for the site in general. The focus has been so much on safety that the realization that ISMS is really a comprehensive management system that assures that safety, environment, and health issues are integrated is not always recognized.

Because the work to be done to put procedures in place and implement ISMS is so much and the time is so short, the time is now to do the strategic and detailed planning to accomplish it. This is also an opportunity to engage the rest of the ID personnel in the process, because much of what needs to be accomplished is in the realm of management systems. An important part of this is managing ISMS implementation during the transition to the new contractor. While ID has identified federal owners for ISM activities and has held status meetings structured on the ISM project WBS, a more formal definition of ID work activities is needed. There needs to be a ID strategic plan and a detailed project plan for accomplishing the tasks needed for ISMS implementation of ID functions. (DOE1-2) Many of these tasks are underway, but the overall planning and execution plan is needed to provide the rigor and discipline necessary to assure that the goals are complete and the schedule can be met. It may be necessary to prioritize the tasks in view of the limited resources and time available. It is important that ID regard these activities as an ID project; integration of the activities into the overall contractor/DOE ISM project and statusing the elements at joint project meetings, as planned, will facilitate integration. In this regard, DOE-ID has directed the implementation of an environmental management system based on the ISO 14001 standard, as a component of ISMS. (DOE1-8) Similarly, DOE-ID encouraged the VPP program as a component of ISMS. (DOE1-9)

DOE O 414.1 Quality Assurance, dated 11/24/98 is applicable to DOE departmental elements and requires development of a QAP within 90 days of the date of the Order. A QA program is a key framework document for the ISMS and is the vehicle by which procedures such as management and independent assessment programs are implemented. There exists draft DOE-ID and OPE Quality Program Plans, but they have not been approved. An ID QAP could be an opportunity to engage all of ID in ISMS. However, both the draft DOE-ID and the OPE QA plans seem to be entirely hardware oriented. They do not reflect the fact that many of the elements of the QA requirements apply to all work, in a graded fashion. Further, O 414.1 has not yet been incorporated into List B of the Contract, which would govern work in non-nuclear areas. Doing so would facilitate the updating of PDD-1, the Contractor's QA Program Description and allow better integration of the contractor's QA program with the configuration management (CM) program and with the quality program plans under NQA-1 and RW-0333P. (DOE1-3)

ISMS ASSESSMENT FORM
Department of Energy (DOE)

The OPE process for safety basis approvals assigns the task of safety basis document review and safety evaluation report development to Facility Engineers (delegated from Facility Directors). Facility Directors review and concur (for nuclear Category 1 and 2 facilities). The approval authority could benefit by having a senior safety panel (like an ASLB) to provide a management level scrub on the safety evaluation reports. The designated approval authorities have insufficient time available to perform this function. This same mechanism could also be useful in the review and approval process for Authorization Agreements. It is important in this regard also because Authorization Agreements in place now do not all reflect an upgraded safety basis (some SARs date back to the 1960s and 1970s) and some evaluation of the adequacy of them, and any compensatory measures that may be appropriate should be made. (DOE1-4)

An opportunity exists to enhance the training program at ID. The HR technical training coordinator depends on an EH training database for information, but this database is incomplete. It is likely that subject matter experts, both on the ID side and the contractor side and their DOE-HQ counterparts are aware of training resources in their areas of expertise that should be added to an ID database, for use throughout the Office. It is recommended that individual office training coordinators be identified and that they work with the HR technical training coordinator in this regard. Further, it is understood that the contractor is considering establishing an ISM training program that ID could possibly connect with to provide ID staff training. (DOE1-5)

Conclusion: The objective has been met. The DOE line management responsibilities for safety are defined through the FRAM and the position descriptions within OPE. There are procedures, and they are effective, for assuring DOE competence commensurate with responsibilities. There are ID processes that interface with the contractor's organization. However, the procedures for effectively implementing ISMS as described in criteria 4 through 7 of this CRAD are under development and do not exist in approved form and they have not yet been integrated into a QA program.

Issue(s):

- DOE ID Notice 25 1. 1 B, ID Directives System has no process identified to assure that ID interpretations of DOE Orders or the development of ID Notices that give further guidance regarding DOE Orders are consistent with those Orders in the judgement of the DOE HQ Office of Primary Interest responsible for the Order. (DOE1-1)
- There needs to be an ID strategic plan and a detailed project plan for accomplishing the tasks needed for ISMS implementation of ID functions. (DOE1-2)
- An ID quality assurance program (QAP) has not been developed and approved per DOE O 414.1, Quality Assurance. An ID QAP presents an opportunity to address ID procedures and assessment programs and to engage all of ID in ISMS. (DOE1-3)

ISMS ASSESSMENT FORM
Department of Energy (DOE)

- The ID approval authority for safety bases and Authorization Agreements (AA) could benefit from a senior safety panel to provide a management level review of the Safety Evaluation Reports and the AAs . (DOE1-4)
- There is an opportunity to enhance the ID training program through identification of individual office training coordinators who can work with HR in updating the ID training database. (DOE1-5)

Strength(s):

- Within OPE, the Operations plan for management of the contractor's execution of programs has been well thought out and the system of Facility Directors, Facility Engineers, and Facility Representatives, supported by Subject Matter Experts is effective. (DOE1-6)
- The Operational Excellence Program has been effective in driving many of the activities necessary for ISM implementation. (DOE1-7)
- INEEL EMS is modeled after ISO 14001 in response to direction by DOE and is an ISMS component. This will facilitate INEEL (and DOE) registration for ISO 14001. (DOE1-8)
- DOE ID encouragement of the VPP program and involvement with the unions on site has had a positive impact in getting the workers involved with ISM. (DOE1-9)

Inspector: <u>Richard W. Englehart - Larry Stirling</u> Richard W. Englehart/Larry Stirling	Team Leader: <u>Joseph Arango</u> Joseph Arango
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ISMS ASSESSMENT FORM
Department of Energy (DOE)

FUNCTIONAL AREA: DOE	OBJECTIVE 2 DATE: April 13, 1999
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OBJECTIVE: DOE has established processes that interface efficiently and effectively with the contractor's organization to provide feedback and continuous improvement. Feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted, and, if necessary, regulatory enforcement actions occur. (CE I-6, CE I-7, CE I-8, CE I-9)

Criteria

1. DOE procedures describe clear roles and responsibilities to provide feedback and continuous improvement.
2. DOE procedures ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.
3. DOE procedures ensure that feedback is provided and continuous improvement results in the identification of safety standards and requirements.
4. DOE procedures ensure that feedback is provided and continuous improvement results in the tailored hazard controls of the work being performed.
5. DOE procedures promote the continuous improvement and efficiency of operations. DOE priorities are balanced and corrective actions are developed, implemented, and tracked in order to profit from prior experience and the lessons learned.
6. DOE procedures provide line oversight of the contractor's self-assessment programs.

Approach

Record Review: Review the FRAM/FRA and DOE implementing procedures to determine how the feedback program functions. Verify that there is DOE line management involvement. Determine that the roles and responsibilities for these programs are clear. Review DOE training requirements and records to ensure that personnel are trained to perform feedback functions and participate in the continuous improvement process. Verify that balanced priorities and tailored approaches are used to conserve and maximize use of resources. Review the procedures for issue management and determine if this system enhances the improvement process. Review the procedures established to provide line oversight of the contractor's self-assessment programs. Review the process established to ensure lessons

ISMS ASSESSMENT FORM
Department of Energy (DOE)

learned are incorporated into the feedback system. Determine if the lessons learned between the federal safety offices and offices of similar functions are appropriately integrated and shared.

Interviews: Discuss the feedback and continuous improvement process with DOE personnel. Verify that safety is integrated into this process and that DOE efforts in this area are important to safety. Determine if process improvement includes efforts to reduce unnecessary safety requirements and improve efficiency. Evaluate the status of establishing line oversight of the contractor's self-assessment programs. Determine if personnel believe that safety activities are tailored to the risk and the priority of the work being performed.

Record Review:

- ID Notice ID N 411.1, DOE Integrated Safety Management Functions, Responsibilities and Authorities, 02/08/99
- ID Notice ID N 251.1B, ID Directives System, 02/24/97
- ID Executive Policy ID EP 97-1, ES&H Management System Integration, 09/17/97
- Draft ID Manual ID M 000.0-0, OPE Operations Excellence Manual, 03/11/99
- ID Notice ID N 450.C, Authorization Agreements, 02/08/99
- Authorization Agreements for various nuclear facilities, including those at TAN, RWMC, PBF, and INTEC
- Draft OPE QPP, Quality Assurance Program Plan, undated
- Letter, Green to Denson dated 3/25/99, LMITCO FY 1999 Performance Evaluation and Measurement Plan Change # 5 (CFO-PSD-WH-99-009)
- Letter, Garr to Jenkins dated 11/2/98, Updated List of Department of Energy Directives (Modification No. M088) Applicable to Contract DE-AC07-94ID13223 (OARM-P&AD (PM)-043-98)
- ID Notice ID N 450.A2, Environment, Safety, Health and Quality Assurance Oversight, 04/13/98
- ID Notice ID N 430.1A, Life Cycle Asset Management: ID Expectations, 2/24/97
- Project Management Plan for INEEL M&O Transition, Rev 0, undated
- Idaho Operations Office Self-Assessment Program, 04/09/99
- ID Notice ID N 420.A1, Safety Basis Review and Approval Process, 5/11/98
- The Porcelain Press edition of April 12, 1999

Interviews Conducted:

- LMITCO Requirements Management Coordinator

ISMS ASSESSMENT FORM
Department of Energy (DOE)

- ISMS Project Office Director
- Policy and Assurance Division staff member
- OPE Operational Safety Program Director
- Assistant Manager, ESH&QA Performance Assurance
- Acting Program Director, Environmental Programs & Settlement Agreement
- Team Lead, Scientific, Engineering & Technical Support Division, OA&RM
- Program Director, Program Planning & Evaluation, OPE
- OPE Facility Directors (3)
- Program Director, ES&H Oversight, OPE
- OPE Facility Engineers (3)
- Coordinator, Conduct of Operations and ORPS, OPE
- OPE Facility Representatives (3)
- Assistant Manager, OPE
- Deputy Assistant Manager, OPE
- Operational Excellence Lead, OPE
- Deputy Director, ISMS Project Office
- Deputy Assistant Manager, Office of Laboratory Development
- DOE-ID Operations Office Manager

Observations:

- Management Board Meeting
- Bi-weekly Operational Excellence Meeting
- Weekly meeting; OPE Assistant Manager and LMITCO Executive Vice President for Operations

Discussion of Results:

The contractor has developed a performance measures and trend analysis system. DOE ID Notice ID N 450.A2, Environment, Safety, Health and Quality Assurance Oversight dated 4/13/98 provides instructions for DOE ID personnel involved in ESH&QA oversight. DOE ID Notice ID 410.A deals with DOE ID Issues Management. A new manual, ID Manual 210.1-1, Performance Measure, Trend Analysis and Communication, has been proposed and accepted for development. (DOE2-2) This manual will address the ID process and responsibilities for current gaps in the system relating to data collection and trending analysis. Because the overall system depends heavily on the contractor's systems, it is critical that DOE ID oversight of the operations of the contractor's system be of high fidelity.

ISMS ASSESSMENT FORM
Department of Energy (DOE)

However, statistics cannot provide a complete picture of contractor operations. It has been observed that the performance indicators were on a positive trend when the fatal accident in July of last year occurred. A subjective evaluation is necessary to provide a management assessment of operations status, which also can reflect on the status of ISMS implementation. At present no formal process exists for that subjective assessment. (DOE2-1) Periodic meetings, for each site area, of the DOE ID Deputy Assistant Manager for Operations, the Facility Director, Facility Engineer, Facility Representative, and the ES&H Subject Matter Experts who are involved with the site area could provide DOE ID senior management with a qualitative assessment of the status of ISM for the site areas through discussions of how things are going, problems or issues observed, etc.

Conclusion: The objective has been met. The DOE ID FRAM is in place. Notice ID N 450.A2 provides instructions to personnel involved in oversight. A performance evaluation and measurement plan has been communicated with the contractor. The contractor has in place a system for performance measures and trend analysis that DOE ID uses for input data, but data are just being obtained for input to the system. Products under development include a DOE Self-Assessment program and a manual (IDM 210.1-1) whose purpose is to address the details of implementing data collection and trend analysis, and a revision to ID N 450.A, which will provide more detail on implementation, based on the criteria of this ISMS functional area.

Issue(s):

- Feedback and improvement processes that have been planned and are under development are largely objective and statistical in nature. A formalized method of providing a management level subjective evaluation of contractor performance is necessary because objective measures can be misleading and incomplete. (DOE2-1)

Strength(s):

- Many of the activities necessary for implementation of an effective feedback and improvement system dealing with contractor performance have been identified and work is proceeding on those activities. (DOE2-2)

Inspector: <u>Larry Stirling</u> <u>Richard Englehart</u>	Team Leader: <u>Joseph Arango</u>
Larry Stirling/Richard Englehart	Joseph Arango

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

FUNCTIONAL AREA: HAZ	OBJECTIVE 1 DATE: April 15, 1999
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OBJECTIVE: Hazards associated with the work are identified, analyzed, and categorized. (CE I-3, CE I-9)

Criteria

1. Contractor and DOE procedures require identification, analysis, and categorization of all hazards associated with the site. Contractor procedures for analysis of hazards reflect accepted rigor and methodology. The resulting hazards are utilized in selection of standards included in the contract as List A/List B and in Authorization Agreements or other safety authorization bases.
2. Contractor procedures require identification, analysis, and categorization of all hazards associated with site facilities or activities. Hazards that are considered include nuclear, chemical, industrial or others applicable to the work being considered with any hazards posed to workers, public or the environment. Contractor procedures for analysis of hazards reflect accepted rigor and methodology.

Approach

Record Review: Review the LMITCO procedures for identifying, analyzing, and categorizing hazards at the company/site level. Review plans and documents which describe how the use of these procedures are integrated to ensure that all site hazards are identified and controlled. Procedure review should include PRD-25, Activity Level Hazard Identification, Analysis, and Control, STD-101, Integrated Work Control Process, PRD-16, Overview of LMITCO Safety and Health Programs, PRD-186, Safety and Health Programs, PRD-1007, Work Control and Hazard Control, PRD-112, Criticality Safety Program Requirements Manual, PDD-22, Safety Analysis, PRD-113, Unreviewed Safety Questions, and PRD-164, Safety Analysis for Non-Nuclear Radiological, & Other Industrial Facilities. Review DOE procedures for authorizing operations to ensure that adequate provisions are included so that hazards are properly identified and analyzed. Determine that these procedures are adequate to address the hazards to workers, public and environment.

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

Review the procedures for integration of facility hazards and controls with activity safety and controls to ensure appropriate controls are institutionalized. Review procedures for integration of outdoor hazards, activity or naturally occurring hazards with site and area control set derivation. Conduct interviews where appropriate to understand related practice and intent.

Interviews: Interview corporate/site personnel responsible for identification, analysis, and categorization of hazards to assess their understanding of the procedures and the underlying principles and requirements. Interview contractor and ID personnel responsible for review and approval of hazard and control sets to understand how they ensure that processes and products are adequate to control or accept any related risks. Interview ID personnel responsible for the oversight of the hazards analyses processes to determine that an effective interface with the contractor has been established.

Record Review:

- PDD-22, Safety Analysis
- PDD-12, Engineering Design
- PDD-1005, Site Operations
- STD-1, Procedure Writing Standard
- PRD-16, Overview of LMITCO Safety and Health Programs
- PRD-186, Safety and Health Programs,
- PRD-1007, Work Control and Hazard Control
- PRD-112, Criticality Safety Program Requirements Manual
- MCP-540, Graded Approach and Quality Level Assignment
- MCP 2449, Nuclear Safety Analysis
- MCP-2450, Technical Safety Requirements
- MCP-2811, Engineering Change Control
- PRD-113, Unreviewed Safety Question
- MCP-123, Unreviewed Safety Question
- MCP-135, Creating, Modifying, and Canceling Procedures and Other DCMS Documents
- DOE-ID N 420.1A, Safety Basis Review and Approval Process
- MCP-2449, Nuclear Safety Analysis
- PRD-164, Safety Analysis for Non-Nuclear, Radiological, and Other Industrial Facilities
- MCP-2451, Safety Analysis for Non-Nuclear, Radiological, and Other Industrial Facilities
- MCP-2446, Controlling the LMITCO Nuclear Facilities and Nuclear Facilities Manager Lists
- PRD-199, Fire Protection
- MCP-579, Fire Hazard Analysis
- PRD-199, Fire Protection

ISMS ASSESSMENT FORM

Hazards Identification and Standard Selection (HAZ)

- PRD-5042, Facility Hazard Identification
- PRD-25, Activity Level Hazard Identification and Control
- STD-101, Integrated Work Control Process (under development)
- MCP-255, Preparation of Task Specific Health & Safety and Limited Scope Hazard Characterization Plans (HASP)
- MCP-3562, Hazard Identification, Analysis and Control for Operational Activities
- MCP-3447, Safe Work Permits
- MCP-153, Industrial Hygiene Exposure Assessments
- MCP-3450, Job Safety Analysis
- MCP-3562, Hazard Identification, Analysis & Control of Operational Activities
- MCP-3571, Independent Hazard Reviews
- MCP-2863, Construction Work Coordination Hazard Control
- PDD-1012, LMITCO Environmental Management System
- HAD-1, INEEL Research Center IRC Hazard Assessment
- MCP-3480, Environmental Instructions for facilities, processes and equipment (Draft, rev 1, 3/97)
- MCP-33, Personnel Qualification and Certification
- DOE-ID-10514 Comprehensive Facility and Land Use Plan
- List of Safety Basis Documents for Non-Nuclear, Radiological and Other Industrial Facilities

Interviews Conducted:

- Director of Technical Support for Nuclear Operations
- Chairman, LMITCO Safety Analysis Committee
- Manager of Emergency Preparedness
- Director, Environmental Restoration Program
- Director, Safety and Health
- Director, Occupational Medicine
- Deputy Director, Operational Training
- Program Manager, Environmental Management System
- Manager, ES&H, TRA
- Manager, ES&H, INTEC
- Manager, ES&H, INTEC
- Advisory Engineer, Hazards Data Base
- DOE-ID, Manager, Occupational Safety
- DOE-ID, National Environmental Policy Act Compliance Officer and alternate
- Environmental Management Compliance Manager, Environmental Management Organization
- DOE-ID Assistant Manager for OPE

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

- Cultural/Historic Resources Manger
- Director, Environmental Restoration Office, Environmental Management Organization
- Deputy Director, Environmental Restoration Office
- Manager Ground Water Restoration, Environmental Restoration Office
- Manager, Inactive Sites Office, Environmental Restoration Office
- Program Manager, Environmental Management Systems and Employee Awareness, Environmental Affairs Directorate
- NEPA Technical Advisor, Environmental Affairs Directorate
- Laboratory SAD
- Safety Analysis, EFCOG
- Facility Manager, IRC
- VP, ESH&QA
- DOE-ID Assistant Manager, ESH&QA
- DOE-ID Acting Director, Environmental Programs and Settlement Agreements
- Chief Engineer, AEDL

Observations:

- DOE-ID Operations Excellence Team Meeting
- Facility Directors Conference Call
- Idaho Occupational Safety and Health Council Meeting

Discussion of Results:

INEEL does not currently have, and is developing, a comprehensive list of facility and structure personnel safety hazards for all site facilities and areas by PRD 5042 (Facility Hazard Identification). The scope of this procedure does not include hazard categorization of identified facilities and hazards, and does not include environmental hazard identification. It does include all site structures and facilities within the INEEL (desert) and Idaho Falls sites. Emergency response planning evaluates major personnel safety hazards for this comprehensive site set. (HAZ1-5) The procedure for this ongoing activity, PRD-5042, indicates that this list is to be used in developing activity work control documents. Hazard identification procedure, PRD 5042, is not linked to facility hazard categorization procedures in a way that triggers a review of hazard categorization and analysis. (HAZ1-1) The focus of this issue is directed toward non-nuclear, radiological and other industrial facilities, in that the applicability of procedures for hazard categorization and analysis depends upon categorization, and the hazard analyses are not completed.

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

Other procedures address processes for facility hazard categorization and assessments. The procedure MCP-2449, Nuclear Safety Analysis, describes the processes for analysis of nuclear facilities, which it defines as being hazard category three or above per DOE Technical Standard 1027. The INEEL Safety Analysis Committee (SAC) integrates safety analysis standards, policy and procedures. The INEEL presently consists of thirty nuclear facilities and approximately forty radiological and other industrial facilities. The SAC develops appropriate methods for the hazard analysis of these facilities and ensures that consistent facility operating control sets are developed. (HAZ1-7)

Other procedures address non-nuclear, radiological and other industrial facility hazard analysis, including PDD-22, Safety Analysis, and PRD-164, Safety Analysis for Non-Nuclear, Radiological, and Other Industrial Facilities. It is noted that these procedures identify a category of facility called "Routinely Accepted by the Public" and appropriately define categorization criteria, which if met require no further hazard assessment. The determination that categorization criteria are met is in fact a hazard assessment, which meets ISMS expectations.

Facility hazard analysis is assigned to line management; site area directors and/or facility managers. Categorization is expected to drive the graded approach employed for assessment techniques, but the grading of technical approach is not proceduralized, and the person or position is not identified who should make such a grading judgement. There is a requirement for categorization of all facilities.

The selection of Hazard Analysis team members for safety analyses is not assigned to a specific person or position, but the identification of needed disciplines and needed competency is critical to assurance of appropriate rigor. (HAZ1-2) The graded approach inherent in hazard assessment processes also affects rigor, but is apparently selected on a case-by-case basis. There is no formal requirement for training of hazard analysis persons which provides clear assurance that competency matches responsibilities for the various technical approaches. This may be a minor problem with regard to professionals working full-time within their professions, but it could be more significant for personnel assigned hazard assessment responsibilities or review responsibilities not within the scope of their profession or position selection criteria. Absent procedural mechanisms, current practice has been discussed and appears to be selection of both technical process and team members by application of judgement. The person who selects personnel to participate in hazard assessment processes should be formally designated based upon confidence in the designee's technical judgement. The designee should use hazard categorization or hazard sets to determine the needed personnel qualifications, and should

ISMS ASSESSMENT FORM

Hazards Identification and Standard Selection (HAZ)

formally indicate that such a process was used to assure competency commensurate with responsibility for assigned work. It appears that something like this is happening, but the informality provides no assignment of role, responsibility, or accountability for that judgement.

Facility level environmental hazards data bases are not linked to facility personnel safety and health hazard data bases, and are not procedurally required to be included in systematic facility level safety and health hazard assessment processes. (HAZ-1-3) The Facility Hazards List, which is now being populated, currently contains about 4500 health or safety hazards only. The Hazards Identification and Mitigation (HIM) process, which is used for work planning, uses this list. Numerous environmental hazard data bases exist and could be integrated into the HIM process. These include the Tank Inventory, the SAA/TAA database, the Integrated Chemical Management System, the Asbestos database, the CERCLA site database, the Air Emissions Inventory, the Liquid Effluent Inventory, the Lead Inventory, the Integrated Waste Tracking Database, the Cultural Resources database, Floodplains and Wetlands Maps, the LMITCO Environmental Compliance Inventory, and the LMITCO Corporate Assessments of all INEEL facilities.

There is no procedure for periodically reviewing identified facility environmental hazards in order to update needed facility controls, such as engineering features or compensatory operating restrictions. It is noted that schedules for achieving environmental compliance stretch for up to 25 years. Potential exists for the conditions or status upon which those schedules were prioritized to change. Here it is noted that environmental regulations and directives establish a consensus expectation, which, if met, constitute adequate environmental safety. Full compliance would therefore meet expectations equivalent to ISMS. When full compliance is deferred for long periods, as is the apparent situation at INEEL, a formal process needs to be invoked to cause periodic reviews and screens of non-compliant conditions so that changing conditions can be identified which might alter the priorities for establishing compliance, or might identify interim controls or temporary measures pending compliance. Such reviews are proceduralized for safety and health hazard assessment and controls. There is some evidence that environmental compliance inspections may cause equivalent actions in some cases, but this is either not systematic, not proceduralized or just not described in PDD-1004 and PDD-1012. The selection of appropriate technical processes for hazard assessment and control development should consider mechanisms for identifying environmental safety controls. PDD-1004 and PDD-1012 do not adequately describe and integrate the derivation of appropriate environmental safety controls. (HAZ 1-4)

Planning activity-based work using STD-101, Integrated Work Control Process is likely to capture environmental hazards and controls because this process uses an approach that includes environmental aspects assessment. Invoking that process, however, depends in part upon

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

identifying the presence of environmental hazards, so STD-101 process effectiveness might be enhanced by integrating known environmental hazards into the facility hazards data base, which is then used to identify hazards which might interact with planned work. (HAZ1-6)

The activity ES&H process in STD-101 is not applied for all activity-based work, and is not applied to operations covered by operating procedures. The procedure for developing and modifying operating procedures invokes MCP-3562, Hazard Identification, Analysis & Control of Operational Activities, for safety and health considerations. The site is preparing, but has not completed, a procedure which may facilitate operations and augment both STD-101 and other activity safety procedures for environmental safety, Draft MCP-3480, Environmental Instructions for Facilities, Processes and Equipment. This compendium of environmental safety practices and requirements should be identified in PDD-1004 when completed.

Contractor procedures for identification and analysis of research activity hazards are adequate. This activity hazard analysis process, like STD-101, would be enhanced by integration of safety with environmental hazards data bases. A potentially significant ambiguity in MCP-3571, Independent Hazard Reviews should be resolved by clarifying wording. The ambiguity concerns exemption from applicability, and resolution should ensure that a process is invoked for all INEEL research work. This has been discussed with the research Site Area Director.

Conclusion: This objective is substantially but not fully met by the procedures in place, but activity is noted which may correct deficiencies near term.

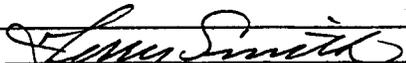
Issue(s):

- PRD-5042 is not linked to procedures for facility hazard categorization and assessment which trigger a review or analysis for all affected facilities. (HAZ1-1)
- Procedures do not assign responsibility to specific persons or positions for selecting those who participate in hazard categorization or analysis of facilities. (HAZ1-2)
- Facility level environmental hazards data bases are not linked to facility personnel safety and health hazard data bases, and environmental hazards are not procedurally required to be included in systematic facility level hazard assessment processes. (HAZ1-3)
- PDD-1004 and PDD-1012 do not adequately describe and integrate the derivation of appropriate environmental safety controls. (HAZ1-4)

Strengths:

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

- Emergency Management Planning Hazard Assessment Program supporting development of EPZs and PAGs. (HAZ1-5)
- The STD 101 Integrated Work Control Process hazard identification process is particularly noteworthy. This process in conjunction with PRD-5042 (Pending) and the associated hazard list can become an integrated and comprehensive tool for the identification of activity level hazards. (HAZ1-6)
- The INEEL Safety Analysis Committee (SAC) integrates safety analysis standards, policy and procedures. The INEEL presently consist of thirty nuclear facilities and approximately forty radiological and other industrial facilities. The SAC develops appropriate methods for the hazard analysis of these facilities and ensures that consistent facility operating control sets are developed. (HAZ1-7)

Inspector: <u></u> Terry Smith	Team Leader: <u></u> Joseph Arango
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ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

FUNCTIONAL AREA: HAZ	OBJECTIVE 2 DATE: April 15, 1999
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OBJECTIVE: Applicable standards and requirements are identified and agreed upon. Procedures ensure hazards are identified, and controls are tailored and agreed upon prior to work commencing. (CE I-4, CE I-9)

Criteria

1. Contractor procedures utilize acceptable methodologies to identify adequate hazard control standards at the corporate level, site area and facility level to protect the public, worker, and environment.
2. Contractor procedures ensure controls are tailored to the hazards associated with the work or operations to be authorized.
3. Contractor procedures ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.
4. Contractor procedures utilize accepted and structured methods and processes to identify, select, and gain approval for environment safety and health standards and requirements.
5. DOE procedures specify an appropriate review and approval process for the hazard controls and safety standards and requirements.
6. DOE contracting procedures require that the requirements of applicable Federal, State, and local regulations (List A) and the requirements of Department of Energy directives (List B) are appended to the contract.
7. Contractor and DOE procedures define the processes for the development, approval, and maintenance of documentation addressing the establishment of authorization protocols and authorization agreements.

Approach

Record Review: Review LMITCO procedures including MCP-3562, Hazard Identification, Analysis, and Control of Operational Activities, STD-101, Integrated Work Control Process, MCP-3571, Independent Hazard Review, PRD-5043, Operational Safety Boards, MCP-4337, Using Safe Work Permits, MCP-255, Preparation of Task Specific Health and Safety and

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

Limited Scope and Hazard Characterization Plans, MCP-2863, Construction Work Coordination and Hazard Control, MCP-153, Industrial Hygiene Exposure Assessment, MCP-7, Radiological Work Permit, MCP-91, ALARA Program and Implementation, and other implementing procedures for identification and designation of standards which specify and implement controls necessary to protect the worker, public and environment. The controls should be assessed for their consistency with industry and/or DOE standards. The controls may be tailored to the associated "level of hazard" for which they mitigate or control. Review contractor procedures for identification and designation of standards, such as procedure MCP-3567, Authorization Agreements with Authorization Bases List, and TEM-0002, Template for Authorization Agreements, that are incorporated into facility authorization basis documentation and assess their adequacy. Review ID procedures established to review and approve standards submitted by the contractor for approval. Review the approach to tailoring the selection of standards and requirements to the identified hazards and maintenance of an appropriate set of standards over time. Review the procedures established to ensure that the appropriate requirements are included in the contract as specified in List A or List B. Review the processes established to develop, approve, and maintain authorization protocols and authorization agreements as applicable. Review selected authorization agreements to verify that they are consistent with the described processes.

Interviews: Interview contractor site/corporate and ID personnel responsible for selection and approval of standards. Determine the understanding and compliance with the procedures for identification, tailoring, review, submittal, approval, and maintenance of the set of standards.

Observations: Observe ID and contractor activities involving the preparation, review, approval, and maintenance of the selected set of standards and requirements; or observe DOE and contractor activities that are scheduled to develop, approve, or maintain authorization protocols and authorization agreements as applicable.

Record Review:

- Contracts Lists A & B requirements
- PDD-19, Requirements Management
- MCP-2447, Requirements Management
- PRD-16, Overview of LMITCO Safety and Health Programs
- PRD-186, Safety and Health Programs
- PRD-1007, Work Control and Hazard Control
- PRD-112, Criticality Safety Program Requirements Manual
- PDD-1012, Environmental Management System

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

- MCP-3480, Environmental Instructions for Facilities, Processes and Equipment (Draft)
- MCP-2811, Engineering Change Control
- PRD-25, Activity Level Hazard Identification and Control
- STD-101, Integrated Work Control Process
- MCP-540, Graded Approach and Quality Level Assignment
- PDD-1005, Site Operations

Interviews Conducted:

- DOE ID SME for Requirements Management, OPA Policy and Assurance Division
- DOE ID ISMS Manager
- DOE ID Manager, Environmental Restoration Program
- Deputy General Manager, ESH&QA
- Director, safety and health
- Manager, Occupational Safety
- Program Manager, ISO 14000 Program
- Requirements Management Coordinator
- Chief Engineer, AEDL

Observations:

- DOE-ID Management Board Meeting

Discussion of Results:

ID procedures for consideration and addition of new or revised directives to the contract, and for removal or modification of requirements in the contract were reviewed and determined appropriate. Procedures for establishing ID internal directives were reviewed. The Management Board process for approval of both contract changes and internal ID directives was observed, including use of related checklists, justifications and comment resolutions.

Procedures for inclusion of requirements into contract Lists A&B were reviewed along with procedures for flowdown of requirements into corporate sitewide requirements, and further to line management for facility implementation. These procedures, PDD-19 and MCP-2447, are both approved but not yet effective. They are adequate to comply with ISMS expectations. MCP-2447 provides needed detail for this Requirements Management Program and should be included in the PDD-1004, ISMS Program Description Document section 3, and in Appendix B. (See MG1)

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

Procedures provide for contractor determination of applicable industry or other consensus standards, and for their incorporation into both sitewide and activity requirements programs.

Site area and facility level tailoring of sitewide requirements is addressed within contractor procedures such as MCP-540 and STD-101. Some safety programmatic requirements such as lockout-tagout procedures may not be tailored but are to be fully implemented sitewide. Others such as maintenance work controls or radiological control selections provide for tailoring to hazards by procedural application of graded approach. This requirements management program is adequately proceduralized within the PDD-1004 description of ISMS.

INEEL Engineering Department Procedure, specifically MCP 2811, "Engineering Change Control", addresses facility safety analysis in Appendix C. The safety analysis process in the form of Preliminary Safety Analysis Reports are recognized as technical inputs to the engineering design process to develop safety related SSCs and related design requirements. The pending MCP 2811 (approved but not issued) does not have this content included. The pending MCP 2811 should include a discussion of the importance of the facility safety analysis process to provide preliminary and final designation of safety class and safety significant SSCs. This designation provides specific design requirements relating to these SSCs that would prevent or mitigate related hazards or accidents. MCP 2811 does not reference DOE Order 420.1, Facility Safety, or DOE Orders 5480.23, Nuclear Safety Analysis Reports. (HAZ2-1) PDD-1004, INEEL Integrated Safety Management System, Section 3.3, Engineering, does not recognize the importance of the engineering process mitigating or preventing hazards/accidents by the use of engineering design criteria, engineered safety features or controls. Section 5.6.1, Company/Site Level Hazard Analysis, of PDD-1004, does not recognize the Engineering Program (Company Manuals 10A and 10B) as one that addresses Site/Facility hazards and accidents. Also, Section 5.7, discussing the development and implementation of controls, does not address the engineering program as one that performs the design functions of safety SSCs and engineered safety features and controls. (See MG1)

It was noted that the site does not always require the use of CERCLA processes in conducting facility decommissioning operations. This is apparently forced upon the site by environmental regulators. The site has not implemented the related DOE order on life cycle asset management into the contract, so the contractor is compliant with the list A&B requirements, though not with DOE Policy for D&D. It is recommended that DOE ID consider submission of an exemption request to headquarters for exemption from the DOE order, so that headquarters is aware of the apparent differences between DOE and EPA Headquarters negotiated policy and EPA region/State application of policy. Such an exemption request would trigger headquarters disposition in a way that informal communication may not.

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

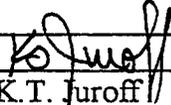
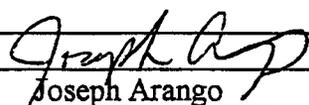
Conclusion: The objective has been met.

Issue(s):

- The flow down of engineering design requirements from the contract does not capture the integration of the ISMS core functions to "Identify and Analyze Hazards" and "Develop and Implement Controls" in the INEEL engineering design procedures. (HAZ2-1)

Strength(s):

- None

Inspector:  K.T. Juroff	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

FUNCTIONAL AREA: HAZ	OBJECTIVE 3 DATE: April 15, 1999
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OBJECTIVE: Contractor procedures ensure that contractor personnel responsible for analyzing the hazards and developing, reviewing, or implementing the controls, have competence that is commensurate with their responsibilities. DOE roles and responsibilities are clearly defined to ensure appropriate oversight and review of the analysis of hazards and the identification of controls. Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities. (CE I-7, CE I-8, CE I-9)

Criteria

1. Contractors and DOE have clearly defined roles and responsibilities for review, approval and oversight of hazard identification and controls selection at site, facility, and activity levels.
2. Contractor procedures require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.
3. DOE procedures have clearly defined roles and responsibilities for personnel assigned to oversee, review, and approve the analysis of hazards and controls associated with facilities and activities.
4. DOE procedures require that personnel responsible for approving hazards analyses and controls have competence commensurate with their responsibilities.

Approach

Record Review: Review LMITCO documentation including the Site Operations Manual (PDD-1005), Quality Assurance Program Description (PDD-1), the Competence Commensurate With Responsibility Determination Process located in the INEEL Integrated Safety Management Description Document (PDD-1004), and the Management Operations Plan Lockheed Martin Idaho Technologies Company (revision C, 2/20/99), to identify personnel including all levels of management to whom this objective applies. Review the position descriptions for those personnel to determine the required competencies. Review company/site training manual MCP-33, Personnel Qualification and Certification, and qualification and competency procedures. Review selected training and qualification records

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

for those personnel identified above to determine how the required competency has been gained, retained, and validated.

Review DOE FRAM/FRA or other implementing procedures that identify the roles and responsibilities for personnel who conduct oversight and review of the hazard analyses and the establishment controls. Verify that DOE line management and staff personnel's roles, responsibilities, and authorities are appropriate. Review selected qualification program records.

Interviews: Interview selected contractor individuals to verify their understanding of the required competencies and the degree to which they meet them.

Interview selected DOE personnel to determine their understanding of the assigned responsibilities and determine that they are competent to meet these requirements.

Record Review:

- PRD-25, Activity Level Hazard Identification, Analysis, and Control
- PDD-13, Training and Qualification Program
- MCP-33, Personnel Qualification and Certification
- MCP-540, Graded Approach and Quality Level Assignment
- MCP-255, Preparation of Task Specific Health & Safety and Limited Scope Hazard Characterization Plans (HASP)
- PDD-22, Safety Analysis
- PDD-12, Engineering Design
- PRD-5042, Facility Hazard Identification (Pending)
- STD-101, Integrated Work Control Process (Under Development)
- PDD-1005, Site Operations
- STD-1, Procedure Writing Standard
- PRD-16, Overview of LMITCO Safety and Health Programs
- PRD-186, Safety and Health Programs
- PRD-1007, Work Control and Hazard Control
- PRD-112, Criticality Safety Program Requirements Manual
- PDD-22, Safety Analysis
- PRD-113, Unreviewed Safety Questions
- MCP-123, Unreviewed Safety Questions
- PRD-164, Safety Analysis for Non-Nuclear Radiological, & Other Industrial Facilities
- MCP-135, Creating, Modifying, and Canceling Procedures and Other DCMS Documents

ISMS ASSESSMENT FORM

Hazards Identification and Standard Selection (HAZ)

- PRD-199, Fire Protection
- MCP-579, Fire Hazard Analysis
- PDD-1012, LMITCO Environmental Management System
- MCP-2449, Nuclear Safety Analysis
- MCP-2451, Safety Analysis for Non-Nuclear, Radiological, & Other Industrial Facilities
- MCP-2450, Technical Safety Requirements
- MCP-2811, Engineering Change Control
- MCP-3450, Job Safety Analysis
- MCP-3571, Independent Hazard Reviews
- MCP-2863, Construction Work Coordination Hazard Control
- MCP-3562, Hazard Identification, Analysis & Control of Operational Activities
- DOE-ID N 420.1A, Safety Basis Review and Approval Process
- ID N 411.1, DOE Idaho Function, Responsibilities, and Authorities Matrix, Effective 2/8/99
- MCP-29, Training Staff Qualification
- MCP-27, Preparation and Administration of Individual Training Plans

Interviews Conducted:

- DOE Office of Program Execution Deputy Director for Operations
- DOE Environmental Restoration Program Director
- DOE Assistant Manager for Office of Program Execution
- DOE Deputy Assistant Manager for Operations, Office of Program Execution
- ESH&QA Vice President
- Environmental Restoration Director
- Environmental Restoration Deputy Director
- Packaging and Transportation Department Manager
- Environmental Operations Branch Environmental Compliance Manager
- Site Services ESH&QA Manager
- ES&H Manager, TRA
- ES&H Manager, INTEC
- Safety and Health Director
- Project Management Department Manager
- Advisory Engineer, Facility Hazards Identification
- Emergency Preparedness Manager
- Environmental Management Systems Program Manager (?)
- Director of Technical Support for Nuclear Operations
- Safety Analysis Committee Chairman
- Safety Analysis EFCOG

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

- Facility Manager, INEEL Research Center
- Occupational Medicine Director
- Operational Training Deputy Director

Observations:

- None

Discussion of Results:

The Hazards sub-team interviewed the ID and contractor personnel identified above and reviewed the listed documents. Out of these interviews and reviews an increased understanding of the documentation, processes and procedures related to hazard identification, analysis, and control was obtained. In investigating the criteria of this objective, the sub-team specifically focused on the subjects of clearly defined roles and responsibilities, and competence commensurate with responsibilities.

The Hazards sub-team reviewed the ISMS description document, PDD-1004. In section 5.1, the ISMS description document defines line management and lists some of their roles and responsibilities related to hazard identification, analysis, and control. It describes how the INEEL organization satisfies the guiding principle that line management is responsible for integrating safety into work. Specifically, the ISMS description document states that the facility manager is responsible for planning and control of work in accordance with procedures, particularly, the standard work planning procedures. The statements in the ISMS description document indicate that facility managers utilize subject matter experts and an Operational Safety Board—whose role is also defined in section 5.1—to assist with work planning, and hazard identification, analysis, and control. Support personnel in the various disciplines that participate in hazard assessment are available to participate in a team approach when responsible managers have a need. This compensates for time and training limitations while taking advantage of the dependency upon professional rather than task qualification. Section 5.2, further describes broad roles and responsibilities (termed “work performance expectations”) for general categories of employees.

In interviews, DOE-ID and the contractor stated that responsibility for safety rested with line management. Personnel asserted that the definition of “line management” is contained in DOE-ID and contractor procedures. Through the interviews and document review, it became apparent that roles and responsibilities are intended to be delineated in not only the procedures, but also correspondingly, in both DOE-ID and contractor employee position descriptions. DOE personnel stated that they (DOE-ID) had one area in which roles and responsibilities are not completely, clearly defined. The employee position descriptions for DOE-ID employees that are considered

ISMS ASSESSMENT FORM

Hazards Identification and Standard Selection (HAZ)

the subject matter experts in the Operational Safety Division still need to be updated with specific roles and responsibilities related to hazard identification, analysis and control, and standard/requirement determination and selection.

The INEEL's process for assuring Competence Commensurate with Responsibilities is described in the ISMS description document in section 5.3. The process described is one that integrates the efforts of Human Resources, Training and Qualification, Document Control, Quality Assurance, various specific review boards and line management. The description of this guiding principle is thoroughly treated in PDD-1004. The description of the process described in the ISMS description document was re-asserted by personnel interviewed.

According to the ISMS description document, fundamental to the Competence Commensurate with Responsibilities process, is the establishment of an employee position description that identifies the competencies required in the position, and the Human Resources/Line Management hiring process. For employees new to the contractor's company or those within the company being hired for a new job, their technical competence is addressed during the recruitment and hiring process as supported by their position descriptions and performance evaluations. Interviewees bore witness to the importance of the selection and hiring process in ensuring competence commensurate with responsibilities for employees who perform hazard identification, analysis, and control functions.

The ISMS description document goes on to describe the function of employee training and qualification in the Competence Commensurate with Responsibility process. Training and qualification programs and procedures have been established and incorporated into the description of this ISMS guiding principle. The INEEL Training Board resolves ownership or funding issues associated with major training initiatives. Various sub-tier procedures address training, qualification, and competency requirements. For example, STD-101, Integrated Work Control Process, Appendix 1-2 identifies training requirements for regulatory drivers and job-specific drivers. Identification of training requirements and the mechanisms to complete identified training is delineated specific to roles and responsibilities. Also, LMITCO PDD-1012 LMITCO Environmental Management System Section 4.1 addresses training and competency requirements for site personnel with respect to environmental hazards and identifies mechanisms for ensuring appropriate levels of training. LMITCO MCP-29 Training Staff Qualification addresses requirements for insuring training staff are competent in their areas of instruction.

Continuing training and re-qualification is addressed in the Competence Commensurate with Responsibilities process description. Through continuing training, competence on INEEL hazard procedures and changes to these procedures is assured through the procedure approval process as described in the Site Operations Manual, PDD-1005. The Facility Training Review

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

and Implementation Board charter and procedures identify the audience (including safety professionals) and the timeline for implementing procedures and ensure that training has been provided before implementation of new or revised INEEL procedures.

Notwithstanding the adequate description of the overall Competence Commensurate with Responsibilities process, a professional training and qualification program is not identified for INEEL contractor facility safety analysis engineers or other safety professionals such as industrial safety engineers or environmental professionals. Furthermore, in spite of the sufficient description of the general continuing training and re-qualification process, continued professional level training is not identified in the procedures or ISMS description document that ensure these professionals remain proficient in performing INEEL accepted engineering methods for hazard analysis such as seismic analysis, analysis of design basis accidents or plume generation and dispersion. These deficiencies demonstrate that LMITCO lacks adequate formal establishment and documentation of training requirements and qualification programs for some persons assigned to conduct certain hazard assessments, controls determinations and reviews. (HAZ 3-1)

The overall Competence Commensurate with Responsibilities process, as described culminates at the point where there is "Safe Work Performed by Qualified Workers in Accordance with Effective Procedures." The process that leads to this point does not include an action to ensure or certify that personnel possess required competence. Responsible manager's assignment of personnel to perform tasks, particularly, hazard identification and hazard analysis, is based upon professional qualification, site, training, and experience. This may or may not provide the persons responsible with reasonable assurance that their competence is commensurate with their tasks. Supervisors who are responsible for hazard analysis and control approvals indicate that they rely heavily in their personal reviews upon understanding the competency of individuals involved. Although, ensuring competence is not likely a problem with regard to professionals working full-time within their professions, it could be a problem for personnel assigned hazard assessment responsibilities or review responsibilities not within the scope of their profession or position selection criteria. In some cases, an employee's position indicates appropriate background, and their work is in a specific type of activity full time (such as nuclear safety analysts). In other cases, they are assigned to a duty as a temporary assignment, such as the team leaders for the Facility Hazards Identifications. Using this as an example, the team leaders for ongoing Facility Hazard Identifications were apparently selected based upon their backgrounds, but training and qualification criteria were not formalized for this temporary responsibility (it being a one-time activity). It is not clear whether their training for this activity has been formally determined to be satisfactory to assure competence sufficient for their assigned responsibility. Since a formally documented system does not exist, no documentation was cited which provides systematic assurance of competency for hazard identification/analysis functions.

ISMS ASSESSMENT FORM

Hazards Identification and Standard Selection (HAZ)

At the hazard analysis procedure level, procedures lack steps that require an action to ensure that personnel selected to perform an action (related to hazard identification, analysis, and control) have the competence commensurate with the responsibilities associated with that action. (HAZ 3-2) Rather than ensuring through a procedural step that personnel have competence commensurate with responsibility, the intent appears to be to call out the personnel position title required to perform an action in a procedure, and assume that the person in that position has the required qualification (background, degrees, training, experience) and competence based on selection to that position, or demonstrated by training or level of employment.

Within the hazard analysis, environmental, safety, and health arenas there is not a proceduralized or formal qualification matrix for use in assigning personnel to hazard identification, analysis, and control tasks based on their level of qualification or competence. Though contractor ISMS Description (PDD-1004) contains statements requiring management to ensure that personnel responsible for identifying, analyzing, and controlling hazards have competence commensurate with their responsibilities, it appears that the procedural implementation of the requirement is not complete. There are job categories important to the identification and analysis of hazards that have multiple employee competence levels. Currently, the managers and supervisors in some areas have no formal, procedural, documented means (other than personal judgment) of determining and documenting the level of personnel to be assigned a task or project, based on ensuring that the assigned personnel have competence commensurate with the responsibilities.

Conclusion: The objective has been met. Overall, it appears that the contractor and DOE-ID understand that their procedures must have clearly defined roles and responsibilities for personnel assigned to oversee, review, and approve hazard identification and controls associated with facilities, and activities. In addition, it also appears generally that both the contractor and DOE-ID understand that personnel responsible for analyzing hazards and identification of adequate controls must have competence that is commensurate with their responsibilities. The ISMS description document is adequate, but lower tier directives need revision to address the issues below.

Issue(s):

- LMITCO lacks adequate formal establishment and documentation of training/continuing training requirements, and qualification/re-qualification programs for some personnel assigned to conduct certain hazard assessments, hazard controls determinations and hazard reviews. (HAZ3-1)

ISMS ASSESSMENT FORM
Hazards Identification and Standard Selection (HAZ)

- Processes are not in place to assure personnel assigned to perform hazard identification, analysis, and control determination have competence to properly execute those tasks.
(HAZ3-2)

Inspector: <u>Michael R. Anderson</u> Mike Anderson	Team Leader: <u>Joseph Arango</u> Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG	OBJECTIVE 1 DATE: April 13, 1999
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OBJECTIVE: The ISMS Description is consistent and responsive to DOE Policies 450.4, 450.5, and 450.6; the DEAR; and the direction to the contractor from the Approval Authority. The contractor policies and procedures ensure that the ISMS Description is maintained, implemented, and that implementation mechanisms result in integrated safety management. (CE I-1)

Criteria

1. The ISMS Description is consistent and responsive to DOE Policies 450.4, 450.5, and 450.6; the DEAR; and the direction to the contractor from the Approval Authority.

2. The contractor has mechanisms in place to direct, monitor, and verify the integrated implementation of the ISMS as described in the ISMS Description. Implementation and integration expectations and mechanisms are evident throughout all corporate/site organizational functions.

3. The contractor has assigned responsibilities and established mechanisms to ensure that the ISMS Description is maintained current and that the annual update information is prepared and submitted.

4. The contractor has established a process that establishes, documents, and implements environment, safety and health performance objectives, performance measures, and commitments in response to DOE program and budget execution guidance. The ISMS describes how system effectiveness will be measured.

Approach

Record Review: Review PDD-1004, INEEL Integrated Safety System Program Description Document, and the direction concerning the guidance on the preparation, content, review and approval of the ISMS program description document (Transmittal of Revised Contracting Officer Guidance On Integrated Safety Management System Description Document Development and Implementation for Contract DE-ACO7-94ID13223 (OPE-OS-98-104)). Review corporate/site procedures such as those for the implementation review, and maintenance of the ISMS Description and associated items, including provisions for the annual review and update to DOE. Review charters for the Executive Steering Group (ESG), Senior Maintenance Managers Council (SMMC), Site Operations Committee (SOC), Facility Training Review and Implementation Board (FTRIB), Facility Operations Review and

ISMS ASSESSMENT FORM

Management (MG)

Implementation Review Board (FORIB), Senior Operations Review Board (SORB), Corrective Action Review Board (CARB), and the Operational Safety Boards (OSB) and “output documentation” from any ISMS coordinating committees. Review implementation planning efforts such as those for the ISMS Project Work Breakdown Structure and detailed schedules, and any “gap analysis” reports which may have been developed. Review the process established such as in the Operational Excellence Performance Plan (PDD-1011), and the Trending and Analysis Program (MCP-3521), to measure the effectiveness of the ISMS to ensure that the methods support the establishment, documentation, and implementation of safety performance objectives that support DOE program and budget execution guidance.

Interviews: Interview contractor managers who are responsible for the development and maintenance of the ISMS Description. Interview contractor line managers who are or will be responsible for administering the mechanisms of the ISMS. Interview chairmen and key members of any ISMS coordinating committees.

Record Review:

- INEEL ID: PDD-1004, Program Description Document, INEEL Integrated Safety Management System (ISMS), Rev. 1, INEEL Integrated Safety Management System (ISMS)
- OPE-OS-98-104, DOE-ID Letter, re: ISMS Development and Implementation, July 29, 1998
- Manual 9, Conduct of Operations Manual, December 1995
- Conduct of Operations Training Design Plan, 3/4/99
- Document ID: STD-101, Revision 1 Draft D, Integrated Work Control Process Manual
- Integrated Work Control Process Training Design Plan, dated 12/14/98
- Manual 6, Facilities and Maintenance Manual/Conduct of Maintenance Manual, December MCP-533, SOD Alarm, Documentation, CAS Responsibilities and Operations
- MCP-553, Stop Work Authority
- GDE-51, INEEL Guide for Project Management
- MCP-2863, Construction Work Coordination and Hazard Control
- MCP-23, Planning and Managing Projects with Level I Cost and Schedule Controls
- DOE-IDN-130A, Work Authorization and Control, with Standard Order for DOE Work (SOEW), series
- LMITCO/INEEL poster, “30 Principles of Operations,” undated
- MCP-1059 Revision 1, Lockout and Tagout DRAFT-Effective 6/14/99
- Manual 5, Program Control
- MCCP-2668, Financial Planning, Administration, and Control of Indirect Activities/Work
- PDD-17, Performance Management Control Systems

ISMS ASSESSMENT FORM
Management (MG)

- MCCP-2447, Requirements Management
- MCP-2783, Startup and Restart of Nuclear Facilities
- MCP-3567, Authorization Agreements with Authorization Basis List
- MCP-7, Radiological Work Permit
- MCP-3447, Using Safe Work Permits
- MCP-8, LMITICO Self-Assessment Process for Continuous Improvement
- MCP-4, Contractor Performance-Based Business Management Process
- DOE-ID Project Management Plan for INEEL M&O Transition, Draft Revision 0, undated
- INEEL Executive Steering Group (ESG) Agendas, Minutes, and Documentation 1998 - 1999
- INEEL Senior Operations Review Board (SORB), Agendas, Minutes, and Documentation 1998 - 1999
- CTR-2, Facility Operations Review and Implementation Board Charter
- CTR-3, SORB Charter
- CTR-4, Test Reactor Area (TRA) Corrective Action Review Board Charter
- CTR-6, WROC-WERF-PBF Area Corrective Action Review Board Charter
- CTR-7, Radioactive Waste Management Complex (WRMC) Corrective Action Review Board Charter
- CTR-8, Town Facilities Corrective Action Review Board
- CTR-9, F/U/M Corrective Action Review Board Charter
- CTR-10, INTEC Corrective Action Review Board Charter
- CTR-11, Test Area North (TAN) Corrective Action Review Board Charter
- CTR-14, The Site Operations Council (SOC) Charter
- CTR-15, The ESG Charter
- CTR-16, The Facility Training Review and Implementation Board (FTRIB) Charter
- CTR-17, The Senior Maintenance Management Council (SMMC) Charter
- PLN-464, The ISMS Project Execution Plan Summary Schedule, dated February 1999
- PDD-1011, Facility Excellence Program
- INEEL ISMS Training Course and Reading Handouts (series)
- MCP-2872, Work For Others
- MCP-33 Personnel Qualification and Certification
- STD-14, The Standard for Project Management in EM Programs
- MCP-12, Company Work Breakdown Structure (WBS)
- MCP-3543, Planning and Managing Projects with Level II Cost and Schedule Controls
- MCP-4, Contractor Performance-Based Business Management Process
- PDD-17, Performance Management Control Systems
- MCP-3567, Authorization Agreement with Authorization Basis List
- PRD-164, Safety Analysis for Non-nuclear, Radiological, and Other Industrial Facilities

ISMS ASSESSMENT FORM
Management (MG)

- PRD-123/113, Unreviewed Safety Questions (USQ)
- PRD-155, Emergency Management System
- PLN-16A, Program Management Plan
- PDD-16, Overview of LMITCO Safety and Health Program
- PRD-183, INEL Radiological Control Manual
- PROD-1007, Work Coordination and Hazard Control
- PDD-1012, LMITCO Environmental Management System
- PRD-185, Conduct of Operations
- PDD-1, Quality Assurance Program Description
- PRD-1001, LMITCO Quality Assurance Program
- PDD-1007, Issues Management System
- PRD-115, Configuration Management
- STD-107, Configuration Management
- PRD-176, Management of Construction Projects
- Manual 12, Training and Qualification Manual (with enclosure documents, series), including MCP-57 Conduct of Training; MCP-27, Preparation and Administration of Individual Training Plans; Designing for Job Specific Initial and Continuing Training Programs; and MCP-79, Instructional Materials
- Nuclear Facility Manager Qualification Standard, Revision 0, March 2, 1999
- PDD-1005, Site Operations Plan-of-the-Day
- MCP-2450, Technical Safety Requirements
- MCP-3450, Job Safety Analysis
- MCP-540, Graded Approach and Quality Level Assignment
- MCP-2811, Engineering Change Control
- MCP-8, LMITCO Self-Assessment Process for Continuous Improvement
- MCP-192, Lessons Learned Program
- MCP-3003, Performing Pre-Job Briefings
- MCP-3450, Performing Job Safety Analyses
- MCP-552, Conduct of Independent Oversight Assessments
- MCP-598, Process Deficiency Resolution
- MCP-3521, Trending Center
- Independent Oversight Assessment Schedule, Revision 3, 3/26/99
- MCP-2811, Design and Engineering Change Control Draft ("Pending")
- PRD-115, Configuration Management Draft Revision ("Pending")
- STD-107, Operational Configuration Management Program Draft Revision ("Pending")
- MCP-2810, Identifying Configuration Controlled Items
- MCP-540, Graded Approach Quality Level Assignments

ISMS ASSESSMENT FORM
Management (MG)

- MCP-135, Creating, Modifying, and Canceling Procedures and Other DMCS-Controlled Documents
- MCP-557, Managing Records
- DOE-ID-10699//INEEL/EXT-98-01020, Consolidated Response to Type A Investigation of Carbon Dioxide Fatality at Test Reactor Area, INEEL, October 1998
- STD-101, Integrated Work Control Process, Draft Revision E

Interviews Conducted:

- Executive Vice President for Operations and Chief Operating Officer
- Deputy Vice President for Site Operations and Site Operations Director
- Vice President and General Manager for Nuclear Operations
- Deputy Director for Nuclear Operations
- Vice President for Environment, Safety, Health, and Quality Assurance
- Director, Integrated Safety Management, Office of the President
- Facility Director, ISMS Project Office
- Deputy Director, Safety and Health, Office of ESH&QA
- Deputy General Manager, ESH&QA
- DOE-ID Deputy AM Operations, Office of Program Execution
- Assistant Manager, Office of Program Execution
- DOE-ID Facility Director, Central Facilities Area/Test Area North
- Assistant Deputy General Manager for Nuclear Operations
- Site Area Director, Test Reactor Area (TRA)
- Site Area Director, Radioactive Waste Management Complex (RWMC)
- Site Area Director, INEEL Research Center (IRC)
- Site Area Director, Central Facilities Area (CFA)
- Site Area Director, Waste Experimental Reduction Facility (WERF)
- Site Facility Managers, for those Facilities that will Pilot ISMSV-Phase II at INEEL (5)
- Site Operations Program/Project Manager for Test Reactor Area
- RWMC Site Operations Program Manager
- Central Facilities Area (CWF) Deputy General Manager
- Laboratory Operations Facility Manager
- Waste Experimental Reduction Facility Operations Project Manager
- Site Operations Coordinator
- DOE-ID Facility Directors (2)
- INEEL Integrated Procedures Manager
- INEEL Issues Management Manager

ISMS ASSESSMENT FORM
Management (MG)

- Deputy Assistant ES&H Manager
- INEEL Operations Training Director
- Assistant Operations Training Manager
- INEEL Performance Assessment Manager
- Assistant Performance Assessment Manager for Evaluation and Trending
- INEEL Corrective Action Implementation Program (CAIP) Manager

Observations:

- ISMS Project Plan of the Week Meeting
- Senior Ops Review Board Meeting (SORB)
- Executive Steering Group (ESG) Meeting
- Operations Management Daily Stand-up Meeting
- Program Review Group/Board Meeting
- Weekly Site Area Director (SAD) Meeting
- Site Operations Council (SOC) meeting
- Senior Maintenance Management Council (SMMC) Meeting
- Program Documents Review Board Meeting

Discussion of Results:

The Idaho National Engineering and Environmental Laboratory (INEEL) Integrated Safety Management System (ISMS) Description is provided as Document ID: PDD-1004, Revision 1, effective as of March 12, 1999. Overall, this document is adequately consistent and responsive to DOE Policies 450.4, 450.5, and 450.6; the Department of Energy Acquisition Regulation (DEAR); and the direction to the contractor from the INEEL Approval Authority, the DOE Idaho Operations Office (DOE-ID). The results of the review of this objective are discussed below.

The contractor has a project management structure in place to direct and monitor the implementation of the described ISMS. Actions are assigned to individuals and they are being held accountable to specific due dates. The INEEL contractor policies and procedures that support this ISMS Description adequately provide a framework of processes to ensure that the ISMS Description is maintained and implemented. However, many of these policies and procedures have been recently revised, or are now in the process of revision. Currently, some of these procedures and processes are in the early stages of implementation and maturation.

ISMS ASSESSMENT FORM Management (MG)

The ISMS is to be implemented in a phased approach over the next few months, with the first implementation occurring prior to the change of INEEL M&O Contractor from the existing LMITCO organization to a new Contractor organization.

This replacement of the INEEL M&O Contractor will be concurrent with the completion of training on the new procedures and the initial ISMS implementation. The significance of an effective transition process of M&O INEEL contractor management to adequately maintain the continuity and integrity of the ISMS will be paramount.

During this review, some deficiencies and opportunities for improvement in the ISMS Description were noted. These observations and recommendations are divided into those of an "Administrative" nature, and those that may improve the ISMS Description by "Correcting, Clarifying, and enhancing the Continuity" of the Description. These observations and recommendations were discussed in detail with the respective contractor and DOE-ID representatives.

Administrative Observations and Recommendations to improve the ISMS Description. Although there was no attempt to conduct an editorial proof of the text, some discrepancies were noted as the Verification Team reviewed PDD-1004. An annotated copy of the document was provided to the contractor and DOE-ID during the course of this review.

Observations and Recommendations for "Correcting, Clarifying, and enhancing the Continuity of the Description." These recommendations are provided to assist in the correction of some deficiencies or discrepancies, assist in the clarification of some parts of the description, and to enhance the continuity of the description document.

MCP-2811, Engineering Change Control, is discussed extensively in Section 1, listed on Figure 3, and listed in Appendix B. However, the engineering process for mitigating or preventing hazards/accidents by the use of engineering design criteria, engineered safety features or controls is not addressed in Sections 3.3, 5.6.1, and 5.7 of PDD-1004 (See HAZ 1). (MG1-1)

PDD-19, Integrated Requirements Management Program, is cited as the major reference for Requirements Management in Section 3, on Figure 3, and in Appendix B. During the contractors' ISMS presentations and the subsequent review of records and personnel interviews with ISMSV Team Members, it was discovered that MCP-2447 on "Requirements Management" provides key elements for implementation of this process down to the Facility Managers' level. Additionally, the "Requirements Management Process," Appendix E of the Description comes from that

ISMS ASSESSMENT FORM Management (MG)

document. However, MCP-2447 is not discussed within the text nor cited in Figure 3 or in Appendix B. It is depicted in Appendix F showing the integration of requirements documents into the training process.

To ensure the most effective use of the INEEL ISMS Description, the ISMS processes and documents should be appropriately and consistently cited or referenced through the Description in Sections 1, 2, 3, 4, 5, Figure 3, Appendix B, and the other related appendices.

The inclusion in Section 3 of a sub-section on Conduct of Maintenance, similar to the Conduct of Operations, would improve the continuity. This could be developed from the STD-101, Integrated Work Control Process document.

The inclusion in Section 3 of a sub-section on Packaging and Transportation may also enhance the continuity of the Description Document.

The integration with DOE-ID for final approval of Authorization Agreements is not clearly described in Section 4. This section should be updated to reflect the DOE line manager who has final approval authority for Authorization Agreements (including for less than Hazard Category 1 or 2 facilities, if any) consistent with the MCP-3567 procedure. (MG1-2)

Section 5.1, Guiding Principle 1 – Line Management Responsibility, could be improved and clarified by the addition of a description of the Facility Manager with the corresponding references to the additional requirements for a Nuclear Facility Manager referenced to the respective INEEL PDD-PRD-MCP documents, such as MCP-2446.

Section 5.1 delineates the functions of the Operational Safety Board (OSBs). OSB charters are being developed, and none of the OSBs are now in operation. OSB guidance is outlined in PRD-5043, Operational Safety Boards, which is now in "Pending" status. Additionally the SOD and some of the SADs stated that they were carefully looking at the functions and responsibilities of related boards, such as the Corrective Action Review Boards (CARBs), to see if further integration could enhance their ISMS implementation effectiveness.

Section 5.6.2 should address how facility level environmental hazards data bases are linked to facility personnel safety and health hazards data bases. (Initial approval of PDD-1004 should not be delayed to resolve this linkage if time is needed to evaluate the options on how to link the hazard data bases.) (See HAZ1)

ISMS ASSESSMENT FORM Management (MG)

Section 5.7.1, Company/Site Level Hazard Controls, could be improved and clarified. The process for periodic updates to List A and List B described in section 5.7.1 can be improved by addressing the recent February 1999 guidance to the Heads of Contracting Activities concerning contractor ISM. Section 5.7.1 should be amplified to include the annual review and update (if necessary) of List A and List B that will be completed concurrent with the annual work scope and fee negotiations to ensure that List A and List B are complete and current. (MG1-3)

Section 5.7.2 should describe how the INEEL procedures are used to determine facility environmental hazard controls. (Initial approval of PDD-1004 should not be delayed to resolve this description if time is needed to evaluate options.) (See HAZ1)

INEEL ISMS Description Mechanisms: The INEEL contractor is now completing the development of the INEEL mechanisms designed to be put in place to direct, monitor, and verify the integrated implementation of the ISMS as described in the ISMS Description. By their description, these developing mechanisms appear adequate for the implementation and integration expectations and mechanisms at the INEEL corporate/site organizational functions, as long as they are effectively implemented.

Although the descriptions of these mechanisms are adequate to meet the needs for the ISMS implementation, INEEL is in the earliest stages of implementation for most of these processes, procedures, and mechanisms. Many of these mechanisms will be implemented in conjunction with major changes in the Conduct of Maintenance in accordance with the new INEEL STD-101, the Integrated Work Control Process, and the planned implementation for the improved and standardized Conduct of Operations. These are scheduled for implementation during the next few months.

As stated during the contractors' ISMS presentations, and reinforced during the subsequent personnel interviews of this ISMSV, many of these described mechanisms introduce and develop "new concepts" to the INEEL administrative and operational methods and processes. All of these are being implemented or will be implemented in conjunction with the ISMS implementation. As described by the contractor in their ISMS presentations and subsequent personnel interviews, these "new concepts" (among others) include:

- Integration and standardization of procedures and processes;
- An "Activity-Based" versus "Discipline-Based" approach to operations;
- Improvement and standardization in site "tenant-landlord interactions" and organizational interface that is planned to include the integration of any "interface agreements";

ISMS ASSESSMENT FORM Management (MG)

- Site-wide, standardized implementation of the "Plan-Of-the-Day (POD)" concept for scheduling and authorizing work and operations;
- Improvement and standardization of Lockout and Tagout processes;
- Improvement and standardization of management practices through the Site Area Directors (SADs);
- Improvement and standardization in Self-Assessment, Oversight, and Feedback and Improvement processes including Issues Management and Performance Monitoring;
- Improvement and standardization in Training and Qualification processes;
- Implementation and improvement in management through the use of many organizational boards such as: the Executive Steering Group (ESG), the Senior Operations Review Board (SORB), the Site Operations Council (SOC), the Senior Maintenance Management Council (SMMC), the Corrective Action Review Boards (CARBs), the Facility Operation Review and Implementation Board (FORIB), the Program Document Review Board (PDRB), and the Facility Training Review and Implementation Board (FTRIB).
- Additionally, the site and facilities are now developing the charters for the implementation of the Operations Safety Boards (OSBs).

A major issue that will impact the implementation of ISMS is the number of recent changes to documentation affecting all of these roles and responsibilities, caused by all of these new initiatives. During the personnel interviews it was confirmed that not all of the training and revisions required to fully implement these duties are complete.

Observation of meetings such as the ESG, the SORB, the SOC, and the SMMC indicated that these boards are effectively managing their responsibilities for ISMS. However, some of the contractor personnel indicated during the ISMSV personnel interviews, that there may be some additional benefits gained by the combination and reorganization of some of these efforts, and of the respective documents and procedures. (See MG3)

In fact, in addition to the training and implementation of a major element of the ISMS implementation, the STD-101, Integrated Work Control Process, there are approximately 46 additional procedures that are to be implemented during the next few months. The Site Operations Director (SOD) has a sound perspective for the required training on these initiatives in a "module concept," and their subsequent implementation.

The INEEL ISMS is to be implemented in conjunction with: the implementation of the identified 46 procedures; the concurrent improvement and standardization of the implementation of the Conduct of Operations; the completion of the INEEL Corrective Action Implementation Plan

ISMS ASSESSMENT FORM

Management (MG)

(CAIP); the scheduled ISMS implementation in the first set of facilities; and the transition of the INEEL M&O contractor by the end of September. This is a very ambitious and demanding schedule. However, ISMS implementation plans and project schedules have been developed to guide completion of the schedule. (MG1-6)

Interviews with DOE-ID and the contractor line management and support personnel at all management levels of the INEEL organizations indicated that overall these personnel understand their ISMS efforts. These personnel also demonstrated a consistently positive attitude toward ISMS at INEEL. This is a strength for the INEEL ISMS (MG1-7)

INEEL Maintenance of the ISMS Description: As discussed above, the current INEEL contractor has adequately assigned responsibilities for the maintenance of the ISMS. The contractor is now establishing the mechanisms to ensure that the ISMS Description will be maintained current and that the annual update information is prepared and submitted, as long as the mechanisms are effectively implemented.

During personnel interviews with DOE-ID, it was also identified that Section 6, "Summarizing the INEEL ISMS" could be improved by expanding on the discussion of the Annual Update of the ISMS, as described within MCP-135 that is referenced. This clarification would include the delineation of the interface and interactions between the contractor and DOE. The integration with DOE-ID for final approval of the annual update to the ISMS Description is not clearly described in Section 6, which addresses only ESG review and approval. This section should be updated to reflect the DOE approval of annual updates, which will support the efforts to maintain the described ISMS through the upcoming contract transition. (MG1-4)

INEEL ISMS Description Performance Measures: The current INEEL contractor has adequately described the processes that will establish, document, and implement the safety performance objectives, performance measures and commitments in response to the DOE program and budget execution guidance to measure the ISMS effectiveness.

The contractor is now establishing and implementing these measures, and improving existing processes, in conjunction with the considerable effort for their ISMS training and implementation. The effective implementation of these measures will be critical to their success.

However, the annual development of safety performance objectives, measures, and commitments for DOE-ID review and approval, as required by DEAR 970.5204-2 is not included in Section 2.2 (MG1-5).

ISMS ASSESSMENT FORM Management (MG)

Conclusion: The objective has been met. Overall, the INEEL ISMS Description is adequately consistent with the DOE Policy, the DEAR, and the DOE-ID guidance. The description of the contractor policies for the implementation and maintenance of the ISMS is adequate. There is some room for improvement in these descriptions. Observations and recommendations have been provided in this report to improve the ISMS Description. The criteria for this objective have been met.

Issue(s):

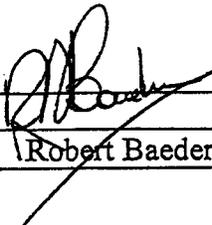
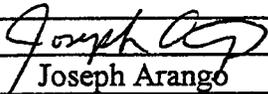
- Sections 3.3, 5.6.1, and 5.7 should be reviewed and updated to reflect the use of the engineering process for mitigating or preventing hazards/accidents by the use of engineering design criteria, engineered safety features, or controls. (MG1-1)
- The integration with DOE-ID for final approval of Authorization Agreements is not clearly described in Section 4. This section should be updated to reflect the DOE line manager who has final approval authority for Authorization Agreements (including for less than Hazard Category 1 or 2 facilities, if any) consistent with the MCP-3567 procedure. (MG1-2)
- The process for periodic updates to List A and List B described in section 5.7.1 can be improved by addressing the recent February 1999 guidance to the Heads of Contracting Activities concerning contractor ISM. Section 5.7.1 should be amplified to include the annual review and update (if necessary) of List A and List B that will be completed concurrent with the annual work scope and fee negotiations to ensure that List A and List B are complete and current. (MG1-3)
- The integration with DOE-ID for final approval of the annual update to the ISMS Description is not clearly described in Section 6, which addresses only ESG review and approval. This section should be updated to reflect the DOE approval of annual updates, which will support the efforts to maintain the described ISMS through the upcoming contract transition. (MG1-4)
- The annual development of safety performance objectives, measures, and commitments for DOE-ID review and approval, as required by DEAR 970.5204-2 is not included in Section 2.2. (MG1-5)

ISMS ASSESSMENT FORM
Management (MG)

Strength(s):

- ISMS implementation plans and project schedules have been developed to guide completion of a very ambitious and demanding schedule. Project controls with detailed accountability and specific due dates have been put in place for the ISMS implementation. (MG1-6)

- Interviews with DOE-ID and the contractor line management and support personnel at all management levels of the INEEL organizations indicated that overall these personnel understand their ISMS efforts. They demonstrated a consistently positive attitude toward ISMS at INEEL. (MG1-7)

Inspector:  Robert Baeder	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG

OBJECTIVE 2

DATE: April 13, 1999

OBJECTIVE: Contractor roles and responsibilities are clearly defined to ensure satisfactory safety, accountability and authority. Line management is responsible for safety. Competence is commensurate with responsibilities. (CE I-7, CE I-8)

Criteria

1. Contractor ISMS defines clear roles and responsibilities of all personnel to ensure environment, safety and health are protected at all levels. ISMS procedures and implementing mechanisms specify that line management is responsible for protection of environment, safety and health.
2. Contractor procedures identify line management as responsible for ensuring that the implementation of hazard controls is adequate to ensure that work is planned and approved and conducted safely. Procedures require that line managers are responsible for the verification of adequate implementation of controls to mitigate hazards prior to authorizing work to commence.
3. Contractor procedures identify line management as responsible for ensuring that hazard controls remain in effect so long as hazards are present.
4. Contractor procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.

Approach

Record Review: Review the Site Operations Manual (PDD-1005), the Competence Commensurate With Responsibility Determination Process located in the Integrated Safety Management Description Document (PDD-1004), the Management And Operations Plan, Lockheed Martin Idaho Technologies Company (revision C, 2/20/99), and the Quality Assurance Program Description (PDD-1) that define roles and responsibilities of personnel responsible for safety. Review STD-101 for responsibilities assigned for pre-job briefings and work authorization. Review procedures for identification of position requirements and hiring practices to determine if safety experience is included. Review position descriptions and other documentation that describes the roles and responsibilities related to ensuring safety is maintained when developing the definition of the scope of work. The review should consider

ISMS ASSESSMENT FORM
Management (MG)

personnel in both line management and staff positions and should evaluate whether line managers are responsible for safety. Review training procedures and records to determine how new employees are ensured the proper site and facility specific training to prepare them for their specific job functions.

Interviews: Interview selected management personnel that are identified by the record review above. Verify their understanding and commitment to ensuring safety during the processes of defining the scope of work.

Observations: Observe scheduled activities that demonstrate the planning and approval activities prior to authorizing work to assess that clear roles and responsibilities are established and that line management is responsible for safety. Activities such as weekly planning meetings, plans of the day, or site/corporate safety meetings are typical meetings, which may provide good examples of the safety decision making process.

Record Review:

- Modification 071 to LMITCO Contract DE-AC07-94ID13223, incorporating revised DEAR Clause DEAR 970.5204-2, "Integration of Environment, Safety, and Health into Work Planning and Execution"
- PDD-60, Revision TBD, to be effective 06/14/99, Conduct of Operations
- PDD-1005, Revision 0, Site Operations
- Operations/Maintenance Weekly Summary Reports (from Site Area Directors) for week ending April 2, 1999
- Selected Site Area Director Position Descriptions
- Selected Employee Individual Training Plans
- TRAIN database (queried TRAIN for Site Area Director Training Requirements)
- Conceptual Draft of Site Area Director Qualification Standard
- MCP-2813, Creating a Position, Internal Job Posting, Transfer, and Promotion Process
- MCP-2814, External Recruitment and Employment Offers
- LMITCO 1999 Compensation Guidelines (procedure for developing employee position description documents)
- GDE-10, LMITCO Employee Handbook
- CTR-24, Revision 0, Charter for the Program Review Board
- CTR-15, Revision 2, Charter for the Executive Steering Group
- CTR-3, Revision 1, Charter for the Senior Operations Review Board
- CTR-14, Revision 0, Charter for the Site Operations Council

ISMS ASSESSMENT FORM

Management (MG)

- CTR-18, Revision 0, Charter for the Program Document Review Board
- MCP-3567, Revision 0, Authorization Agreement with Authorization Basis List
- MCP-2446, Revision 5, Controlling the LMITCO Nuclear Facilities and Nuclear Facility Manager Lists
- MCP-2973, Revision TBD, to be effective 06/14/99, Chapter I-Operations Organization and Administration.
- MCP-2981, Revision 0, Chapter XII-Operations Turnover
- MCP-2863, Revision 3, Construction Work Coordination and Hazard Control
- STD-101, Draft D, Integrated Work Control Process
- PDD-1, Revision 5, Quality Assurance Program Description
- MCP-3003, Revision 4, Performing Pre-Job Briefings and Post-Job Reviews

Interviews Conducted:

- Deputy Director for Training
- Supervisor, Facilities, Utilities, and Maintenance Training
- Facility Training Review and Implementation Board Chairman
- ISMS Training Lead
- TRA Training Manager
- Radioanalytical Supervisor - TRA AEDL Facility Manager
- Director, Environmental Restoration
- Director, Staffing

Observations:

- Site Area Director Meeting
- Executive Steering Group Meeting

Discussion of Results:

The Management sub-team reviewed a variety of contractor documents, including the Site Operations Program Description Document, the draft Integrated Work Control Process Manual, and implementing procedures and illustrated examples of completed forms. The sub-team also observed applicable contractor meetings that occurred during the evaluation.

Finally, the sub-team conducted numerous interviews with key contractor senior management in order to validate the sub-team's understanding of the documents reviewed, and to obtain

ISMS ASSESSMENT FORM Management (MG)

additional insight into the mechanics of the various processes reviewed. The interviewees selected by the management sub-team were representative of a comprehensive cross-section of contractor line, program, and support organizations.

The contractor ISMS defines clear roles and responsibilities of all personnel to ensure environment, safety and health are protected at all levels. PDD-1004, INEEL Integrated Safety Management System, presents clearly stated roles and responsibilities for all contractor employees, categorized into the subgroups of workers, supervisors/foremen, Department Managers, Vice Presidents/Directors, and the President and CEO. GDE-10, LMITCO Employee Handbook, informs all employees that they are responsible for the safety of themselves and their coworkers, as well as protection of the environment.

The contractor's ISMS procedures specify that line management is responsible for protection of environment, safety and health. PDD-1004 specifically states that line management is responsible and accountable for integrating safety into the performance of work, and further defines 'safety' as encompassing environmental, safety, and health (ES&H), including pollution prevention and waste minimization. LMITCO employees are informed of line management's responsibilities in GDE-10, LMITCO Employee Handbook, which tells employees that line management is responsible to take an active leadership role in the implementation of safety programs. All line management personnel interviewed indicated that they understood their line management responsibilities in relationship to environment, safety and health.

Through the Site Operations Program Description Document, PDD-1005, the site operations organization is very effectively described, defining accountability and responsibility for the management of the numerous diverse and hazardous facilities found on the 900 square miles of the INEEL. PDD-1005 also lends great efficiency to pursue goals such as the implementation of integrated safety management, the Voluntary Protection Program, and the integration of INEEL safety programs into site operations. The Site Operations Council, defined in PDD-1005, is a tremendous influence that integrates the day-to-day operations of all INEEL facilities and ensures a high level of effective implementation of important DOE Directives such as Conduct of Operations. (MG2-1)

It was noted that the Site Operations Manual (PDD-1005) defines line management as "Any management level responsible for budgeting, planning, and execution of work within the organization." As used in the above context, it could be surmised that a Site Area Director, who sometimes is not within the "organization" responsible for budgeting, planning and execution of work (e.g. AEDL work, environmental restoration work, decontamination and decommissioning

ISMS ASSESSMENT FORM Management (MG)

work) is not the "line management" responsible for the safe execution of work in his or her area. By design, such is not the case. Numerous contractor policies and procedures assign the Site Area Directors (SAD) the responsibility for the safe conduct of work within their assigned areas, and more importantly, provide the SADs with the authority and control over the work performed. The ability to follow the line management "chain" for cost, scope, schedule, and safety through the management levels where these responsibilities diverge and converge, is sometimes difficult.

Contractor procedures identify line management as responsible for ensuring that the implementation of hazard controls is adequate, thus ensuring that the work is planned, approved, and conducted safely. STD-101, Integrated Work Control Process, Chapter 3, provides detailed instructions on how the work planning and hazard analysis process is used to identify potential hazards associated with the work scope, and establishes the required control sets to prevent or mitigate the hazards. STD-101 requires SADs to ensure that line managers under their responsibility use the standard for all maintenance and construction work in their area of responsibility.

Contractor procedures identify line manager responsibilities for verification of adequate implementation of controls to mitigate hazards prior to authorizing work to commence. PDD-1005 states that the SAD is always responsible for authorizing the work to be performed, thus ensuring the scope of work is within the authorization agreement for the facility. Furthermore, PDD-1005 also states that when an outside organization is performing work in a facility, the organization's management is responsible for safe conduct of the work and ensuring the work is scheduled on the appropriate schedule.

Contractor procedures identify line management as responsible for ensuring hazard controls remain in effect. PDD-1004 specifically states that line supervision is responsible to ensure that, during work execution, controls remain in place. It should be noted that MCP-2863, Construction Work Coordination and Hazard Control, which provides for consistent identification, analysis, and control of known hazards during construction and construction-related work activities throughout the INEEL, states it "... allows line management to safely coordinate construction activities with facility operations." Because MCP-2863 also states "Only Project/Construction Management personnel can give direction to construction personnel and subcontractors," it could be surmised that only project/construction managers, outside of the line management for a facility, can provide direction concerning the safe performance of construction work. Again, this does not appear to be the practice based on interviews and a review of SAD responsibilities and authorities presented in other contractor procedures.

ISMS ASSESSMENT FORM
Management (MG)

Contractor procedures ensure that personnel who supervise work have competence commensurate with responsibilities. PDD-1004 presents a clear process for ensuring personnel assigned to positions have competence commensurate with responsibilities. The ISM Project Office has developed a set of project controls that will allow the Site Operations Director to lead the development and implementation of ISMS training. These project controls allow detailed accountability with specific due dates assigned. Personnel who are identified to hold "key positions that impact safety" receive special emphasis. It should be noted that the process to maintain (periodic review and update) the list of personnel identified as "key positions that impact safety" is not yet in place. This is currently planned as a Phase II implementation activity.

MCP-2813, Creating a Position, Internal Job Posting, Transfer, and Promotion Process, and MCP-2814, External Recruitment and Employment Offers, provides the authority and responsibility to identify position specific qualification and training requirements to line management. LMITCO 1999 Compensation Guidelines indicates that the necessary documentation exists to assist managers in establishing qualification requirements for positions. Furthermore, the Staffing Director for LMITCO indicated that line managers are provided the authority to determine the qualification requirements for positions necessary in their organizations. Human Resource staffing and recruiting expertise is available to assist line managers, as well as review the final product (i.e., the employee position description, form 325.01) for conformance with company requirements.

The Competence Commensurate with Responsibilities (CCR) process was reviewed using the SADs as an example case. The SAD Position Descriptions indicate clearly stated minimum qualification requirements for the position, and also state special optional requirements, both general and facility specific. Review of the conceptual SAD qualification standard indicates that the standard is a very good draft of a comprehensive listing of competencies necessary to establish competence. Review of the TRAIN database, which is the contractor's database for all training requirements, indicates that the database has the capability to list all training courses necessary to support the SAD qualifications. Review of the Individual Training Plan for a SAD indicated the required courses and training, and dates for planned attendance and completion can be tracked. Interviews with Training Department management indicated that the projectized approach to ISMS implementation has provided consistent focus and support of Training Department processes and activities throughout the contractor organization. (MG2-2)

The CCR process incorporates the Facility Training Review and Implementation Board (FTRIB) as a mechanism by which many outside training initiatives can be reviewed and prioritized. The Board is designed to act as a filter to ensure that facility personnel receive training that will help

ISMS ASSESSMENT FORM
Management (MG)

them maintain competence commensurate with responsibilities. The FTRIB can be an effective tool to ensure the efficient and effective implementation of INEEL procedures, and establish the target employees who need training on INEEL procedures before those procedures are implemented. It should be noted that the process to prioritize the numerous training initiatives presented to the Board is not yet formalized in procedure.

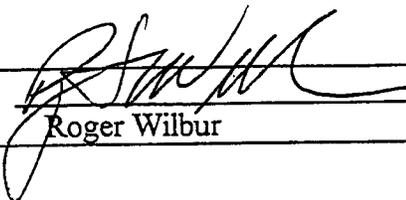
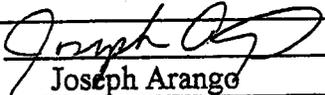
Conclusion: The objective has been met. Contractor ISMS documents and implementing procedures clearly define roles and responsibilities to ensure satisfactory safety, accountability and authority. Line management is responsible for safety. Although line management roles and responsibilities are clearly defined in the Site Operations Manual, program responsibilities for scope, cost, and schedule must continue to be managed at senior levels to remain integrated with facility manager and SAD responsibilities for directing and conducting work. Contractor procedures provide a process to ensure personnel are hired and trained so that they have competence commensurate with their responsibilities.

Issue(s):

- None

Strength(s):

- PDD-1005, Site Operations, is a well-developed document that clearly defines the site operations organization, and line management roles and responsibilities. (MG2-1)
- The projectized implementation of ISMS by the contractor has been a positive force in establishing support for the LMITCO training organization as well as enhancing the contractor's ability to implement the changes necessary to support ISMS. (MG2-2)

Inspector:  Roger Wilbur	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG	OBJECTIVE 3 DATE: April 14, 1999
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OBJECTIVE: Feedback information on the effectiveness of the ISMS is gathered, opportunities for improvement are identified and implemented, line and independent oversight is conducted, and, if necessary, regulatory enforcement actions occur. (CE I-6, CE I-7, CE I-8)

Criteria

1. Contractor procedures describe clear roles and responsibilities to provide feedback and continuous improvement including line management responsibility for environment, safety and health.
2. Contractor procedures ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.
3. Contractor procedures ensure that priorities are balanced to ensure feedback is provided and continuous improvement results.
4. Contractor procedures require line and independent oversight or assessment activities at all levels. Oversight and assessment activities verify that work is performed within agreed upon controls.
5. Contractor procedures ensure oversight or assessment results are managed to ensure lessons are learned and applied; that issues are identified and managed to resolution; that fundamental causes are determined; and effective corrective action plans are developed and implemented.
6. Contractor procedures ensure that performance measures or indicators and performance objectives are developed in coordination with DOE as required. Contractor procedures require effective management and use of performance measures and objectives to ascertain the status of the ISMS.
7. Contractor procedures provide for regulatory compliance and enforcement as required by rules, laws, and permits such as QA, PAAA, NEPA, RCRA, CERCLA, etc.

Approach

Record Review: Review LMITCO procedures such as MCP-598, Process Deficiency Resolution, MCP-8, LMITCO Self-Assessment Process for Continuous Improvement, MCP-

ISMS ASSESSMENT FORM

Management (MG)

348, Waste Management Compliance Audits, MCP-552, Conduct of Independent Assessments, and MCP-2723, Reporting and Resolving Employee Safety Concerns and Suggestions, to determine that the procedures, processes and requirements that meet this objective are effective. The review should include determining compliance with regulations in accordance with laws, rules, and permits. Review the quality assurance program (QAP) to verify that it describes a line management system that is consistent with integrated safety management principles and functions.

Review the issues management program, MCP-598, Process Deficiency Resolution, for adequacy, effectiveness, and support for process improvement.

Review the performance measures or indicators and performance objectives. Ensure that a process has been established to measure the performance of the ISMS. Review the process for development of the performance indicators including how the development and change is coordinated with DOE.

Interviews: Interview selected managers to determine the adequacy and effectiveness of the assessment activities. Interview contractor assessment managers to determine the adequacy and effectiveness of the contractor's oversight program, as well as other compliance or independent assessment programs that may be established.

Observation: If possible, observe senior management assessments or self-assessment activities, including documentation and post activity briefing of results. Observe a critique or management review including development of lessons learned and determination of root causes.

Record Review

- Worker Applied Safety Program Lockout/Tagout Observation Checklist
- Worker and Applied Safety Program Total Safety Culture Checklist
- Worker Applied Safety Program Safety Report Card
- Performance Measures and Trending Report in Support of Operational Excellence, 3/99
- INEEL Global VPP Independent Assessment number 103, 12/10/98
- PRD-5045, Worker Applied Safety Program (Draft)
- MCP-553, Stop Work Authority, Rev. 2, 3/15/99
- MCP-192, Lessons Learned Program, Rev. 3, 5/1/99
- MCP-73, Incorporating Lessons Learned, Rev. 0, 9/29/95
- MCP-598, Process Deficiency Resolution, Rev. 9, 4/1/99
- MCP-555, ICARE Administration, Rev. 1, 6/24/98

ISMS ASSESSMENT FORM
Management (MG)

- PDD-1007, Issues Management Program Description, Rev. 0, 4/1/99
- MCP-8, LMITCO Self-Assessment Process for Continuous Improvement, Rev. 2, 3/3/99
- PRD-101, Quality Assurance Program, Section 2, Rev. 3, 1/15/99
- PRD-101, Quality Assurance Program, Section 4, Quality Improvement, Rev. 3, 1/15/99
- PRD-101, Quality Assurance Program, Section 11, Management Assessment, Rev.3, 1/15/99
- PRD-101, Quality Assurance Program, Section 12, Independent Assessment, Rev. 3, 1/15/99
- PDD-1005, Site Operations, Rev. 0, 3/15/99
- MCP-190, Event Investigation and Occurrence Reporting, Rev. 6, 1/29/99
- MCP-3003, Performing Pre-Job Briefings and Post-Job Reviews, Rev. 4, 1/11/99
- STD-101, Integrated Work Control Process, Rev. 0, Draft F
- PDD-1011, Facility Excellence Program, Rev. 0, 3/15/99
- MCP-4, Contractor Performance-Based Business Management Process, Rev. TBD, 3/30/99
- PDD-1, Quality Assurance Program Description, Rev. 5, 2/25/99
- MCP-583, Fire Protection Assessments, Rev. 2, 2/1/97
- MCP-3449, Safety and Health Inspections, Rev. 0, 3/31/99
- MCP-552, Conduct of Independent Oversight Assessments, Rev. TBD, 5/1/99
- MCP-3521, Trending Center, Rev. 0, 3/1/99
- MCP-3506, EM Prioritization Process, Rev. 0, 3/15/99
- MCP-348, Waste Management Compliance Audits, Rev. 2, 11/20/98
- PDD-60, Conduct of Operations, Rev. TBD, 6/14/99
- MCP-2547, Price Anderson Deficiency Reporting, Rev. 4, 11/3/98
- MCP-2973, Operations Organization and Administration, Rev. TBD, 6/14/99
- CTR-2, Charter for Facility Operations Review and Implementation Board, Rev. 0, 1/26/99
- CTR-3, Charter for Senior Operations Review Board, Rev. 1, 3/18/99
- CTR-6, Charter for WROC-WERF-PBF Area Corrective Action Review Board, Rev. 0, 1/15/99
- CTR-7, Charter for Radioactive Waste Management Complex Corrective Action Review Board, Rev. 1, 3/3/99
- CTR-8, Charter for Town Facilities Corrective Action Review Board, Rev. 1, 3/9/99
- CTR-14, Charter for The Site Operations Council, Rev. 0, 1/20/99
- CTR-15, Charter for Executive Steering Group, Rev. 2, 3/12/99
- CTR-16, Charter for Facility Training Review and Implementation Board, Rev. 0, 3/2/99
- CTR-18, charter for Program Document Review Board, Rev. 0, 2/9/99
- CTR-24, Charter for Program Review Board, Rev. 0, Draft
- LMITCO Performance Evaluation and Measurement Plan, Contract No. DE-AC07-94ID-13223, 10/1/98 through 9/30/99
- MCP-2723, Reporting and Resolving Employee Safety Concerns and Suggestions, Rev. 2, 8/24/98

ISMS ASSESSMENT FORM
Management (MG)

Interviews Conducted:

- Mechanic/PACE Union Vice President
- Quality Assurance Director
- VPP Project Office Supervisor
- Utility Operator/PACE Union Safety Representative
- Independent Oversight and Trending Director
- Issues Management Program Director
- ES&H Program Oversight Manager
- CO2 Accident Corrective Action Project Manager
- Quality Assurance and Conduct of Operations Oversight Manager
- ESH&QA Vice President and General Manager
- Safety and Health Deputy Director

Observations:

- IRC/IF Corrective Actions Review Board Meeting
- Site Area Directors Meeting
- Executive Steering Group Meeting

Discussion of Results:

The MG sub-team reviewed a variety of documents, including program description and requirements documents for site operations, the LMITCO ESH&QA organization, and specific operations at the INEEL. Specific requirements and control procedures related to quality assurance, management and independent oversight assessments, issues management and lessons learned, and use of performance measures and indicators were also evaluated. The MG sub-team observed key LMITCO meetings that occurred during the evaluation related to ESH&QA, issues management, and the overall feedback and continuous improvement system. Interviews were conducted with senior LMITCO managers and with key program managers and staff in the ESH&QA organizations and site-areas. Site-areas provided a representative sample of typical facilities, activities, and associated implementing control procedures at the INEEL. Interviews were also conducted with worker union representatives involved in the total safety culture and worker applied safety programs at the site.

Contractor procedures describe clear roles and responsibilities to provide feedback and continuous improvement including line management responsibility for environment, safety and health. A strong commitment to integrated feedback, lessons learned, and continuous improvement is presented in the INEEL ISMS program description document (PDD-1004) and is

ISMS ASSESSMENT FORM

Management (MG)

supported by LMITCO management. The program clearly flows down through program description and requirements documents for site operations (PDD-1005), quality assurance (PDD-1), oversight and assessment (PRD-101), and issues management (PDD-1007). Of particular note, is the Facility Excellence Program (PDD-1011) which is designed to further enhance overall site performance in the areas of ESH&QA, conduct of operations and maintenance, and facility appearance. Also of particular note is the recent drafting of a program requirements document which recognizes the role within the LMITCO system of a worker initiated and applied safety program for conducting peer observations and providing feedback on an employee to employee basis without management involvement. (MG3-2)

The commitment to continuous improvement and excellence is incorporated into managers' responsibilities. The requirements documents, control procedures, and charters owned by site, facility, and activity managers translate these commitments into responsibilities, work direction, and controls that clearly delineate expectations, ensure competence commensurate with responsibilities, and ensure oversight, assessment, and feedback activities occur. Programs and activities that are key to a complete and well-functioning feedback and continuous improvement system are clearly integrated and structured to function seamlessly. However, it should be noted that some of these procedures and other documents are fairly new or have been recently revised and have not been tested yet. It is expected, therefore, that needed improvements will be identified and incorporated as the system evolves, but none of these improvements would appear to require wholesale changes to the structure that has been developed.

Contractor procedures ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement. Expectations regarding training and qualification of all employees involved with the feedback and continuous improvement programs are present in the INEEL ISMS program description document (PDD-1004). All requirements documents and control procedures associated with the components of the quality assurance, feedback, excellence, and continuous improvement processes that were reviewed addressed the need to provide training and ensure qualification of employees to perform functions and responsibilities for which they were charged and/or delineated specific assignments of responsibility and action to specific positions within line management where the level of competence necessary would be present. Additionally, through observation and interviews conducted during the evaluation, it was clear that the personnel in key positions for these activities, especially within the ESH&QA organization, are very qualified for the tasks and bring perspectives and management abilities clearly focused on integration, excellence, and performance.

Contractor procedures ensure that priorities are balanced to ensure feedback is provided and continuous improvement results, as described throughout the program description and requirement documents and in the specific procedures for quality improvement, self-assessment,

ISMS ASSESSMENT FORM

Management (MG)

oversight assessment, and issues management. The program description document for site operations (PDD-1005) and the charter for the Senior Operations Review Board (CTR-3) both require, delineate, and assign responsibility for prioritizing and balancing feedback and responses to continuous improvement initiatives. Currently there is not an ES&H infrastructure planning tool which helps to integrate the ultimate feedback from lessons learned and prioritization of needs with resource and budget prioritization, but one is being developed. (See BBC2) As described in the issues management program description (PDD-1007) and procedures for process deficiency resolution (MCP-598) a risk-based prioritization process is also used to determine the level of significance associated with a deficiency or issue. A graded approach to application of many requirements has been specifically included in control procedures, establishing separate requirements, where appropriate, for high-risk versus low-risk facilities or activities. Special procedures of rigor of effort with respect to feedback and continuous improvement are often noted for particularly complex or important activities and facilities such as spent fuel management, TRA, and INTEC.

Other organizational constructs, such as corrective action review boards, issues screening boards, and other review boards are required throughout for ensuring that prioritization and balancing functions are performed. Procedures require that issues flow through such boards for screening, resolution, and validation.

Contractor procedures require line and independent oversight and assessment activities at all levels. Conduct of line management and oversight assessment activities is integral to the requirements and programs described in the ISMS program description document (PDD-1004) for feedback and continuous improvement. Requirements to conduct line and oversight assessments flow down through the requirements of the Quality Assurance Program (PRD-101) to establish processes to detect and prevent quality problems, including development and implementation of corrective actions, and are present at all levels of the INEEL Contractor's organization. Oversight and assessment activities are constructed to verify that work is performed within agreed upon controls through the requirements and procedures. The quality assurance program requirements for management and independent assessments (PRD-101, Sections 11&12) specify that assessment shall be capable of assessing the effectiveness of systems and verifying that work is performed within agreed upon controls. Control procedures which flow down from these requirements exist for independent oversight assessments, self-assessments, safety and health inspections, waste management compliance audits, fire protection assessments, Price-Anderson Act deficiencies, configuration management assessments and event investigation and occurrence reporting.

ISMS ASSESSMENT FORM

Management (MG)

A notable addition to the suite of assessment tools is that of the facility excellence program (PDD-1011). As noted above, the purpose of the facility excellence program is to further enhance overall site performance in the areas of ESH&QA, conduct of operations and maintenance, and facility appearance. Under the facility excellence program, facility walkdown assessments are conducted by senior management and involve the manager responsible for a facility, safety and health professionals, environmental professionals, and workers. The facility excellence program and walkdowns are structured to strengthen line management's sense of ownership and accountability, communicate senior management's expectations, and provide a positive environment to communicate LMITCO standards to managers and receive input from unions, craft workers, and others. (MG3-3)

Contractor procedures ensure that oversight and assessment results are managed to ensure lessons are learned and applied through the lessons learned program (MCP-192), issues management program (PDD-1007), and as specified in specific oversight and assessment requirements for line and operations activities and for the conduct of assessments and preparation of corrective actions.

Issues are identified and managed to resolution through a variety of routes, including line and oversight assessments, self-assessments, and process deficiency reports. Identified issues, deficiencies (deviations from written requirements), failures, malfunctions, and defects are entered into the issues management system and processed for further identification of severity, need for action, development of corrective actions, and implementation and verification thereof. This process ensures that issues are managed to resolution and lessons learned are identified and applied. Corporate-wide roles and responsibilities regarding issue identification, management, and resolution are identified in the Quality Assurance Program (PRD-101) and flow down to specific procedures such as the Process Deficiency Resolution procedure (MCP-598) which also outlines requirements for ensuring competence commensurate with responsibilities, balancing of priorities based on severity and importance findings, management of issues through the corporate-wide ICARE system, and development and verification of corrective actions.

It was clear from interviews with ESH&QA program managers that coordination with and reporting to the issues management system is intended for all assessment activities, as appropriate. However, while procedures for most assessment activities clearly highlight these interface needs and the need for reporting to the issues management system, the procedure for fire protection assessments is less clear and might benefit from revision. The clearest articulation of this interface is contained in Section 4.3.4 of MCP-8.

The procedures also address identification of the need for reporting to appropriate regulatory and enforcement authorities if deficiencies involve quality assurance, potential NRC reportable events, DOE occurrence reporting, and PAAA violations. However, the procedure might be improved if

ISMS ASSESSMENT FORM Management (MG)

other regulatory and enforcement or reporting considerations were also included, such as CERCLA, NEPA, RCRA, and permit or enforceable agreement violations. The Issues Management Program Description (PDD-1007) would also benefit from clarification of the term "issue" (e.g., Section 2.1) which appears to be used alternately to refer either to the broadest category of concerns, including minor events which may be indicators of future more serious events, or corporate-wide concerns which are a more narrow subset of deficiencies.

Once issues are identified, they are entered into the central database that is used for managing various issues including environmental, safety, health, operations, and quality as specified by other procedures. The Issues Communication and Resolution Environment (ICARE) system incorporates administrative controls (MCP-555) to ensure its continued accuracy and efficacy, including configuration management over the issues management database and its software construct.

Through the Issues Management Program (PDD-1007), issues are prioritized and, depending on significance, dispositioned through the appropriate pathways. High-risk company-wide or programmatic issues will be referred to the Site Operations Review Board (SORB) or Executive Steering Group (ESG), and low-risk company-wide or programmatic issues will be managed by the Issues Screening Board. Each site-area assumes responsibility for the management of issues that affect primarily the site-area. Each site-area has a Corrective Actions Review Board (CARB) chaired by the Site-Area Director which reviews issues and deficiencies, prioritizes them and conducts root cause analyses, and plans and verifies corrective actions. While it is clear from PDD-1007, the charter for the Site Operations Review Board (CTR-3), and other related documents that the site-area CARBs are responsible for addressing site- and facility-specific issues, the site-area CARB charters are not all consistent with respect to roles and responsibilities. For instance, some clearly note their role with respect to lessons learned and corrective action verification, while others do not. A calibration and homogenization of these charters would preclude any possible confusion at the site-area level regarding roles and interfaces with issues management, lessons learned, and corrective actions.

Implementation of Site Operations (PDD-1005) has resulted in establishment of numerous boards and committees to perform all of the feedback and issues management functions described. Other program description and requirements documents envision the need for additional boards and committees. While the set of functions described in Site Operations presents a fully integrated process for feedback, issues management, and continuous improvement, questions were raised during interviews with program and area managers concerning the resources consumed by additional efforts. Several interviewees suggested that some functions may be consolidated, reducing the number of individual boards and committees needed, and conserving resources.
(MG3-1)

ISMS ASSESSMENT FORM

Management (MG)

The lessons learned program and associated requirements also flow down to top-level program documents (PRD-101), and are complete in terms of the delineation of roles and responsibilities, ensuring competence commensurate with responsibilities, and integration into and throughout all assessment, issues management, and occurrence reporting activities.

As noted in interviews with ESH&QA program managers and as evidenced in review of requirements documents and control procedures, much effort has gone into benchmarking the programs and looking to the commercial sector for examples of structure and additional operational experiences to input into programs. Specific design aspects of the program can be seen to parallel INPO structures. NRC and INPO operational experience data are also incorporated into the site lessons learned databases.

The lessons learned program is constructed to ensure that lessons learned are documented and applied. However, one improvement to MCP-192 would be a clarification with respect to the expectation to identify and report lessons learned. Specifically, the inclusion of a note or consideration that guides the reader (employee instructions, section 4.2) as to the types of situations when they are expected to consider whether lessons learned exist and should be documented and reported. This note could include a list of example situations such as at job completion, when addressing deficiency reports, when developing or closing corrective actions, or when otherwise conducting evaluative activities, completing a job, or conducting remedial activities. Such a statement would provide further impetus for identification and incorporation of lessons learned. The structure of the lessons learned program shows a number of important subtle aspects, such as the specific requirement for the lessons learned database to be accessed when planning or controlling work. Included in this requirement is a balancing and prioritizing such that the requirement applies a greater expectation for work controlled in accordance with the Maintenance Work Control procedures (MCP-2798) than work which is not. One additional improvement to this program would be an updating of the existing procedure for incorporation of lessons learned into training (MCP-73). While reasonably adequate for its purpose, the procedure was issued 4 years ago and would benefit from revisions to better reflect current ISMS thinking regarding roles, responsibilities, and philosophy of approach.

Fundamental causes of assessment findings, deficiencies, and other issues are determined and effective corrective action plans are developed and implemented through several requirements documents and control procedures. All control procedures reviewed which addressed assessment and audit activities, quality assurance and improvement, and event investigation and occurrence reporting exhibited clear requirements concerning identification of causes, development of corrective actions, and implementation and verification thereof. As noted, these requirements are

ISMS ASSESSMENT FORM Management (MG)

seen to flow down from the requirements documents for management and independent assessments (PRD-101 Sections 11&12), and ultimately through the Quality Assurance Program's quality improvement requirements (PRD-101, Section 4).

As noted above, the program description document for site operations (PDD-1005), charter for the Senior Operations Review Board (CTR-3), issues management program description (PDD-1007), and procedures for process deficiency resolution (MCP-598) provide an integrated picture of organizational responsibilities and requirements for site-area corrective actions review boards

Contractor procedures ensure that performance measures and indicators and performance objectives are developed. These requirements flow down from the quality assurance program description (PDD-1) into specific requirements documents and control procedures. Appropriate interfaces for data reporting are included in control procedures for investigations, assessments, issues management, and lessons learned. Performance measure data is reported to the Trending Center, where it is collated, trended, analyzed, and disseminated. Control procedures for the Trending Center specifically address the selection and verification of specific performance measures.

Although no requirements document or specific control procedures specifically addressed coordination with DOE on development of performance measures, it was noted in MCP-3521 that DOE is a partner in the development process and that an owner-supplier relationship is maintained to ensure that key DOE requirements and initiatives are captured. Interviews with ESH&QA program managers indicated that DOE coordination is present.

Contractor procedures require effective management and use of performance measures and objectives to ascertain the status of the ISMS. As noted, the requirements and procedures for the trending and performance measures activities clearly flow down from corporate program description documents. Integration across affected programs is evident throughout the requirements documents and control procedures. The Trending Center is clearly charged with the responsibility for developing an effective system for understanding the status of ISMS implementation through understanding the status of site operations and activities with respect to the goals of ISMS. It might be noted however, that while the overall trending and performance measures and indicators program is in place, specific indicators for ISMS implementation, conduct of maintenance, safety basis, and quality assurance have not yet been implemented. This should not necessarily be seen as a shortcoming, however, since the remaining 9 indicators help to establish an understanding of the effectiveness of ISMS implementation.

ISMS ASSESSMENT FORM Management (MG)

Overall, the performance measures and trending program appears to be extremely well integrated and effective in tracking and measuring performance with respect to ISMS implementation. As noted in interviews with ESH&QA program managers and as evidenced in review of requirements documents and control procedures, much effort has gone into benchmarking the programs and looking to the commercial sector for examples of structure. Of particular note is the Performance Measures and Trending Report in Support of Operational Excellence (March, 1999) which provides a very complete, easy to read overall picture of the performance and trends with respect to ISMS implementation. Also noteworthy is that the program is oriented to measure and trend not only compliance but also has a strong emphasis on operations excellence – going beyond simply compliance. (MG3-4)

Contractor procedures provide for regulatory compliance and enforcement as required by rules, laws, and permits such as QA, PAAA, NEPA, RCRA, CERCLA, etc. Program description documents at the corporate level, including ISMS description (PDD-1004), Site operations (PDD-1005) and quality assurance (PDD-1) all outline roles, responsibilities, and expectations for accountability, regulatory compliance, and enforcement. These expectations flow down through program requirements documents, and are captured in control procedures for assessment and oversight activities. The procedures (MCP-598, MCP-190) address identification of need for reporting to appropriate regulatory and enforcement authorities if deficiencies involve quality assurance, potential NRC reportable events, DOE occurrence reporting, and PAAA violations. However, the procedures might be improved if other regulatory and enforcement or reporting considerations were also included, such as CERCLA, NEPA, RCRA, and permit or enforceable agreement violations.

Conclusion: The objective has been met. Contractor programs, requirements, and procedures ensure that feedback information on the effectiveness of ISMS is gathered, opportunities for improvement are identified and implemented, line and independent oversight is conducted, and if necessary, regulatory enforcement actions occur. It was apparent that a strong commitment to integrated feedback and lessons learned for all aspects of ISMS is supported by LMITCO management, clearly flows down through program description documents, and is incorporated into managers' responsibilities. Requirements documents and control procedures owned by site, facility, and activity managers translate these commitments into responsibilities, work direction, and controls that clearly delineate expectations, ensure competence commensurate with responsibilities, and ensure oversight, assessment, and feedback activities occur. Programs and activities that are key to a complete and well-functioning feedback and continuous improvement system are clearly integrated and function seamlessly. Although formal documentation of some processes could benefit from improvements, communication and iterative feedback processes were evident and reinforce the sense of overall integration of effort.

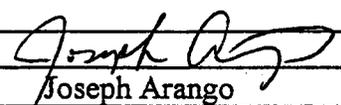
ISMS ASSESSMENT FORM
Management (MG)

Issue(s):

- Numerous boards and committees have been established or are being put in place as described in Site Operations (PDD-1005) and in other documents. While PDD-1005 presents a fully integrated picture regarding feedback and continuous improvement, ID and the contractor should review and define the need to continue to use separate boards and committees to perform all these functions after the ISMS has been fully implemented. (MG3-1)

Strengths:

- While the Worker Applied Safety Program is quite new, it is considered a strength that LMITCO has already drafted a program requirements document (PRD-5045 [draft]) which recognizes and institutionalizes the program into the overall ISMS structure at the INEEL. Whether, through implementation, the program is effective or not, it is noteworthy that LMITCO recognized the need to identify a role for the program within the overall ISMS framework. (MG3-2)
- Facility Excellence Walkdown Program is an effective mechanism for continuous facility improvement. (MG3-3)
- The feedback and continuous improvement processes, including issues management, lessons learned, and the performance measures trending are complete and well integrated. (MG3-4)

Inspector:  Marty Letourneau	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG	OBJECTIVE 4 - Configuration Management DATE: April 14, 1999
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OBJECTIVE: Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented. Contractor procedures provide assurance that controls will remain in affect so long as the hazards are present. (CE I-5, CE I-7, CE I-8)

NOTE

This objective will evaluate both the line management practices and mechanisms for work control, as well as the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness, lockout/tagout, and configuration management.

Criteria

1. Contractor system and procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in affect so long as the hazard is present.
2. Contractor system and procedures for individual disciplines ensure that individual processes or maintenance actions include adequate controls associated with the individual discipline prior to commencing work and that the controls remain in affect so long as the hazard is present.
3. Contractor system and procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.
4. Contractor ISMS mechanisms for the control of work specify that line management is responsible for safety.
5. Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.

Approach

Record Review: Review the LMITCO Conduct of Operations Manual 9; Integrated Work Control Process, STD-101; Independent Hazard Review, MCP-3571; Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255; Hazard Identification, Analysis, and Control for Operational Activities, MCP-

ISMS ASSESSMENT FORM

Management (MG)

3562; Construction Work Coordination Hazard Control, MCP-2863; Radiological Work Permit, MCP-7; ALARA Program and Implementation, MCP-91; Performing Job Safety Analysis, MCP-3450; IH Exposure Assessment, MCP-153; Using Safe Work Permits, MCP-3447; and Performing Pre-job Briefings and Post-job Reviews, MCP-3003; which define requirements to verify controls are in place prior to performing work and that these controls remain in place as long as the hazards are present. Review the processes for authorizing the commencement of work to ensure that managers are responsible for safety. Review the contractor's training and qualification process to ensure that personnel who plan, control, and conduct the work are competent. Review procedures for selected disciplines to ensure consistency and adequacy.

Interviews: Interview lines and support personnel responsible for implementation of requirements to control work. Through interviews, assess their understanding, support, and implementation of the control of work within the approved controls.

Record Review:

- PRD115, Configuration Management
- STD-107, Operational Configuration Management Program
- POL-17, Configuration Management
- LM CPS-422, Configuration Management
- WGuy-05-99, Interim response to Finding(s) 1,2, and 3 of Internal Audit Project IR1998029, Configuration Management
- HTC-6-98, Configuration Management Interim Actions
- HTC-7-98, Interim Response to Configuration Management Audit
- MCP-540, Graded Approach and Quality Level Assignment
- MCP-2811, Design and Engineering Control Change
- MCP-2377, Preparing, Reviewing, and Approving Drawings
- Form 431.37, Engineering Change Form
- LMITCO Lists A and B
- STD-13, Configuration Management Plans
- MCP-135, Creating, Modifying, and Canceling Procedures and Other DMCS-Controlled Documents
- MCP-3003, Performing Pre-Job Briefings and Post-Job Reviews
- STD-101, Integrated Work Control Process
- MCP-8, LMITCO Self-Assessment Process for Continuous Improvement
- MCP-2514, Management of Construction Projects
- MCP-2869, Project Turnover and Acceptance
- MCP-2978, Control of Equipment and System Status
- LMITCO Response to DOE Office of Oversight Comments on CO2 Accident Corrective Action Plan, February 11, 1999

ISMS ASSESSMENT FORM Management (MG)

Interviews Conducted:

- Director of Technical Support for Nuclear Operations
- Director of Quality Assurance
- Director of Independent Oversight and Trending
- Deputy General Manager for Environment, Safety, Health, and Quality Assurance
- WERF/WROC Maintenance Manager
- RWMC Maintenance Manager
- SMC Maintenance Manager
- AEDL Acting Director of Systems Engineering
- Principal Business/Ops Specialist (CM tasks for Site Operations Directorate)

Observations:

- Weekly Site Area Directors Meeting

Discussion of Results:

An evaluation of LMITCO's configuration management program was performed as part of the management sub-team review. The evaluation was based upon a review of ISMS program description document, PRD-1004, top level configuration management documents such as LMITCO policy documents, configuration management program description documents, configuration management requirements documents, and numerous implementing management control procedures for the configuration management program. In addition, interviews were held with various individuals with responsibilities for configuration management, including those with responsibilities for program and policy development, and those with responsibilities for implementation. Finally, discussions with other team members associated with this ISMS Phase I review effort were held, and relevant information was included in the following discussion and conclusions sections.

The configuration management system is based upon DOE Standard 1073-93, Guide for Operational Configuration Management Program. The objective of the system is to provide a set of management processes to maintain consistency between design requirements, physical configuration, and facility documentation throughout the life cycle of INEEL facilities. List B does not contractually invoke DOE Standard 1073-93; however, LMITCO Corporate Policy POL-17, Configuration Management, does mandate the use of the Standard as a requirements document. The applicable statements from DOE Standard 1073-93 have been implemented via a LMITCO Program Requirements Document PRD-115, Configuration Management, and a LMITCO Standard STD-107, Operational Configuration Management Program.

ISMS ASSESSMENT FORM Management (MG)

Weaknesses in the configuration management program at the INEEL were revealed in the review of the July 1998 fatality at the Test Reactor Area and in LMITCO Corporate Audits conducted during the fall of 1998. LMITCO's response to these identified weaknesses was two-fold. First, interim actions were put in place to ensure that systems important to safety were verified as being able to perform as advertised in authorization basis documentation, and that drawings used for work activities were verified on a case-by-case basis as they were used. Each Site Area Director was made responsible to ensure these functions were carried out to ensure safe operations until facilities were functioning under a comprehensive configuration management program. Secondly, a process was commenced to structure a new, comprehensive configuration management program after the DOE Standard 1073-93, and to implement this program in a two-phased approach. Initially, the new program requirements will be applied to new structure, system, and component (SSC) designs and installations, and to modifications to existing SSCs. As defined in STD-107, SSCs include supporting software configuration. Secondly, Configuration Management Recovery Plans will be developed at each Site Area to address reconstitution and/or baselining of information related to existing SSCs in the operational configuration management program. Guidance for developing these Site Area Recovery Plans is included in STD-107, but is quite limited. A configuration management implementation plan, PLN-485, was to be developed to describe in total the implementation approach; however, this plan has not yet been developed. Site Recovery Plans are set to be developed by the end of September 1999. The management sub-team was concerned that without completed Recovery Plans to address the level of activity to ensure existing systems, structures, and components are maintained under the configuration management program, it is too early to draw conclusions as to the adequacy of the CM program for existing INEEL facilities. (MG4CM-1)

The DOE Standard 1073-93 also recommends development of two adjunct programs to adequately support a configuration management program - Design Reconstitution (DR) and Material Condition and Aging (MCA). LMITCO plans to address DR with the development of the Recovery Plans, and to add the MCA portion after initial program implementation. In addition, LMITCO plans to expand the configuration management program to include configuration management for areas of (1) software not associated with SSC control and (2) programs/projects not associated with facilities but which would benefit from CM practices. Configuration management for such non-process software would include such systems as work control computer systems, drawing retrieval systems, document services on the intranet, and computer based training software. The need for this expanded software configuration management program has been reiterated in discussions with several LMITCO personnel and observations of management meetings during this review, pointing to LMITCO concerns with software configuration management of these types of systems. It is not yet clear how configuration management on such software systems will be addressed and which organization is to be responsible. Target dates for developing the MCA adjunct program and these expanded areas of CM have not yet been set. (MG4CM-2)

ISMS ASSESSMENT FORM Management (MG)

LMITCO's plan for improving configuration management at the INEEL was integrated into the July 1998 fatality corrective action plan, with personnel from the action plan team leading the effort. The CM program improvement team acted under the direction of the LMITCO Executive Vice President for Operations, was led by the Deputy General Manager for Environment, Safety, Health, and Quality Assurance (who was then the lead for the Fatality Corrective Action Plan), and included members of the various facility operations and engineering staffs. Responsibility for the overall CM program and policy now resides in the System Engineering Directorate of the AEDL Department. LMITCO will need to ensure that the CM strategy and programs are adequately maintained by the System Engineering Directorate.

PRD-115, Configuration Management, lays out the CM program requirements and includes a matrix which identifies each program element, its source document, and the LMITCO implementing document. Some of these implementing documents do not yet exist. STD-107, Operational Configuration Management Program, is the LMITCO document which details each CM program element and how, in general terms, the element will be implemented. Included are CM roles and responsibilities, which place responsibility for the overall CM program and policy in the System Engineering Directorate of the AEDL Department. The program is implemented within the line management authority of the Site Area Directors, with CM divided between facility managers, Site Area CM Leads and Primary Systems Owners. As such, LMITCO mechanisms for the control of work specify that line management is responsible for safety. However, noting that CM responsibility is within AEDL, a research laboratory reporting through senior laboratory management, and implementation responsibility is within operations, continued senior management attention will be required to ensure effective CM program implementation. STD-107 also addresses which equipment, design information, and documents will be included within the CM program, establishment of design bases, change control for design documentation, physical configuration, and documents, and assessments of the effectiveness of the CM program.

In addition to the development of PRD-115 and STD-107 as the main configuration management description documents, LMITCO has revised some existing implementing procedures, including MCP-2811, Engineering Change Control, and MCP 2377, Preparing, Reviewing, and Approving Drawings, MCP-135, Creating, Modifying, and Canceling Procedures and Other DMCS-Controlled Documents, STD-101, Integrated Work Control System and MCP-8, LMITCO Self-Assessment Process for Continuous Improvement. However, the relationships between the comprehensive set of configuration management requirements in DOE Standard 1073 and the various other CM drivers in other List A and List B documents are not clearly and consistently described in LMITCO documents. Therefore, LMITCO plans to ensure other necessary procedure revisions are completed to ensure consistency between existing documentation and the new CM program plans. Included will be revisions to implementing procedures in the areas where configuration management is required such as authorization basis documentation (requirements of DOE 5480.22 and DOE 5480.23), quality assurance (requirements of DOE 5700.6C and 10 CFR 830.120), design criteria (requirements of DOE 5480.30), operations (requirements of DOE 5480.19), and maintenance management (requirements of DOE 4330.4A).

ISMS ASSESSMENT FORM Management (MG)

It was determined that LMITCO procedures for configuration management are written to ensure that individual processes and maintenance actions include adequate controls associated with configuration management prior to commencing work and that the controls remain in affect so long as the hazard is present. In addition, LMITCO's procedures provide adequate mechanisms and processes for gaining authorization to conduct operations or perform work, thereby ensuring work activities adequately address the need for configuration management. All INEEL work will be controlled in accordance with STD-101, which requires any changes to SSCs or installation of new SSCs to be processed through MCP-2811, the Engineering Change Control process. The Engineering Change Control process addresses SSC design control, testing of SSCs after installation to ensure design criteria are satisfied, and documentation updates to ensure drawings, procedures, and other essential documents accurately reflect the facility configuration. STD-101 also controls work which does not require design changes, such as SSC repair and like-for-like replacements during maintenance. Control of facility configuration during such work is not well addressed in STD-101, however (i.e., control of temporary equipment for work activities, installation of temporary jumpers or blind flanges, lifted leads, etc.) These types of activities are adequately addressed in MCP-2978, Control of Equipment and System Status. However, it is not clear that the applicability of MCP-2978 would encompass the need to control temporary changes to all SSCs under configuration management control. In addition, the ECF process for equipment design changes addresses qualification testing of the changed or installed SSCs. However, repair work completed in accordance with STD-101 which does not involve the ECF process does not appear to give comparable guidance and requirements for post-maintenance acceptance testing. Post-maintenance acceptance testing is briefly addressed as being required, but STD-101 does not specifically require that testing be carried out to ensure that the SSCs affected by maintenance are verified as being able to meet their intended functions. MCP-2978, Control of Equipment and System Status, does have such requirements; however, these requirements were not explicitly referenced in STD-101 and it was again unclear whether the applicability of MCP-2978 would encompass the need to control post-maintenance testing of all SSCs under configuration management control. STD-101 should be reviewed to ensure it adequately addresses control of temporary system modifications and post-maintenance testing.

It was determined that LMITCO personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities in the area of configuration management. STD-107, Operational Configuration Management Program, requires training in the area of configuration management, and focuses on providing the training in three distinct levels. Orientation training for configuration management will be provided to engineering personnel, maintenance personnel, and operations personnel to ensure they have an understanding of program elements, implementing procedures, and management expectations. Secondly, an overview type of training will be provided to primary owners of SSCs, design engineers, engineering management, and ESH&QA professionals to ensure they understand the core implementation procedures and supporting procedures. Lastly, comprehensive training will

ISMS ASSESSMENT FORM
Management (MG)

be provided to configuration management leadership and configuration management professionals to ensure they understand all of the above plus detailed training on recovery plan development and execution. It should be noted that this training is not yet completed.

It was noted that DOE Idaho does not have an individual or an organization with defined responsibility to ensure that an adequate configuration management program exists at the INEEL. As such, DOE-ID has had only limited involvement in the development of the strategy for upgrade to the configuration management program, and decisions regarding future implementation steps and funding needs. (MG4CM-3)

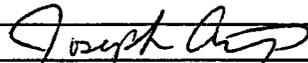
Conclusions: The objective has not been met. The configuration management program designed for use in new structure, system, and component (SSC) designs and installations, and to modifications to existing SSCs is comprehensive, well-founded, and modeled after DOE guidance. As such, it should provide adequate measures of configuration control to facilities at the INEEL. However, since Recovery Plans will address the level of activity to ensure existing systems, structures, and components are maintained under the configuration management program, and these plans will not be available until September 1999, it is too early to draw conclusions as to the adequacy of the CM program for existing INEEL facilities. Site Area reviews are only now in progress to evaluate the level of Design Reconstitution needed at the INEEL, and the Material Condition and Aging program is something to be developed in the future. In addition, configuration management for non-process software systems such as work control computer systems, drawing retrieval systems, document services on the intranet, and computer based training software is not scheduled to be developed until the next phase of the CM program, the date of which is not yet set. As such, it is not possible to draw conclusions regarding the adequacy of such controls. Of concern is the level of funding which will be required to bring existing SSCs under a comprehensive CM program, and whether the INEEL will be able to provide such resources. The lack of an individual or organization with defined responsibility for CM at DOE-ID may hinder INEEL efforts to attain excellence in the area of configuration management, and also detracts from DOE-ID's ability to judge whether or not interim actions for existing configuration management weaknesses are adequate.

Issue(s):

- The level of CM program development is not yet mature enough to ensure that an adequate CM program will exist at INEEL. (MG4CM-1)
- Configuration management for non-process software systems, e.g., PASSPORT, is not scheduled to be developed until the next phase of the CM program which could impact the ability to perform work safely. (MG4CM-2)

ISMS ASSESSMENT FORM
Management (MG)

- The lack of an individual or organization with defined responsibility for CM at DOE-ID may hinder INEEL efforts to attain excellence in the area of configuration management, and also detracts from ID's ability to judge whether or not interim actions for existing configuration management weaknesses are adequate. (MG4CM-3)

Inspector:  Keith Lockie	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG

OBJECTIVE 4, Emergency Preparedness
DATE: April 14, 1999

OBJECTIVE: Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented. Contractor procedures provide assurance that controls will remain in affect so long as the hazards are present. (CE I-5, CE I-7, CE I-8)

NOTE

This objective will evaluate both the line management practices and mechanisms for work control, as well as the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness, lockout/tagout, and configuration management.

Criteria

1. Contractor system and procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in affect so long as the hazard is present.
2. Contractor system and procedures for individual disciplines ensure that individual processes or maintenance actions include adequate controls associated with the individual discipline prior to commencing work and that the controls remain in affect so long as the hazard is present.
3. Contractor system and procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.
4. Contractor ISMS mechanisms for the control of work specify that line management is responsible for safety.
5. Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.

ISMS ASSESSMENT FORM Management (MG)

Approach

Record Review: Review the LMITCO Conduct of Operations Manual 9; Integrated Work Control Process, STD-101; Independent Hazard Review, MCP-3571; Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255; Hazard Identification, Analysis, and Control for Operational Activities, MCP-3562; Construction Work Coordination Hazard Control, MCP-2863; Radiological Work Permit, MCP-7; ALARA Program and Implementation, MCP-91; Performing Job Safety Analysis, MCP-3450; IH Exposure Assessment, MCP-153; Using Safe Work Permits, MCP-3447; and Performing Pre-job Briefings and Post-job Reviews, MCP-3003; which define requirements to verify controls are in place prior to performing work and that these controls remain in place as long as the hazards are present. Review the processes for authorizing the commencement of work to ensure that managers are responsible for safety. Review the contractor's training and qualification process to ensure that personnel who plan, control, and conduct the work are competent. Review procedures for selected disciplines to ensure consistency and adequacy.

Interviews: Interview lines and support personnel responsible for implementation of requirements to control work. Through interviews, assess their understanding, support, and implementation of the control of work within the approved controls.

Record Review:

- PDD-1007, Issues Management Program Description
- INEEL SMS Implementation Plan (LMITCO Gap Analysis)
- PLN-114, INEEL Emergency Plan/RCRA Contingency Plan; Section 2, Emergency Response Organization, and Section 12, Training
- PLN-114-5, INEEL Emergency Plan/RCRA Contingency Plan, Addendum 5 – Test Reactor Area, Section 4, Operational Emergency Event Classes
- 1999 Drills and Exercise Schedule
- MCP-2398, Developing and Maintaining Emergency Hazards Assessments
- EPI-77, Reentry, including INEEL Reentry Emergency Work Permit
- Emergency Preparedness Self-Assessment Reports (Section I and Addendum 2 – INTEC of the 1999 Emergency Preparedness Self-Assessment Schedule table)

Interviews Conducted:

- TRA ESH&QA Manager
- WROC ESH&QA Manager

ISMS ASSESSMENT FORM Management (MG)

- Emergency Preparedness Program Manager
- Safety and Health Director
- Occupational Safety Manager

Observations:

- None

Discussion of Results:

The Emergency Preparedness Program is a mature, well documented program that implements regulatory requirements and DOE O 151.1. No gaps were identified in the review of requirements flowdown that was performed by LMITCO. The overall company process for ensuring that appropriate controls are implemented during an emergency derives from the hazard assessment required by MCP-2398, Developing and Maintaining Emergency Hazards Assessments. This procedure defines the process for identification of hazards, characterization of hazards, estimating event consequences, and developing Emergency Action Levels and Emergency Planning Zones. Emergency Action Levels are documented in Chapter 4 of the facility Addenda to the Emergency Plan, and prescribe required protective actions that must be taken when prescribed conditions exist during an emergency. (MG4EP-1)

During an emergency, reentry into an evacuated area or established control area is authorized in accordance with EPI-77, Reentry. The INEEL Reentry Emergency Work Permit associated with this procedure is the mechanism for authorizing mitigation activities, and requires the approval of the Emergency Coordinator or Emergency Action Manager.

The emergency preparedness personnel are matrixed to the area ESH&QA Managers from the Emergency Preparedness Program Manager's staff. These individuals are responsible for assisting line management in the implementation of the INEEL Emergency Preparedness Program at the individual areas. Roles and responsibilities are clearly defined in the INEEL Emergency Preparedness Plan. Line management assumes key roles in the emergency organization, and is clearly responsible for safety during the response to and mitigation of the consequences of an emergency.

Training of personnel is addressed in Section 12, Training, of the INEEL Emergency Plan. Section 12 provides a structured approach by which personnel in the emergency response organization acquire duty orientation and job-specific knowledge required to respond to an

ISMS ASSESSMENT FORM
Management (MG)

emergency. The program requires initial training as well as requalification on an annual basis. The program is adequate to ensure that contractor personnel who plan, control, and conduct work during an emergency have competence commensurate with the assigned responsibilities.

Conclusion: The objective has been met. The Emergency Preparedness Plan and associated procedures provide a method to ensure that controls are implemented during emergency situations. The plan and procedures provide assurance that controls will remain in effect throughout the emergency situation.

Issue(s):

- None

Strength(s):

- LMITCO has a well documented, mature emergency preparedness program in place at the INEEL. (MG4EP-1)

Inspector: <u>Richard L. Dickson</u> Richard Dickson	Team Leader: <u>Joseph Arango</u> Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG	OBJECTIVE 4-IH/IS (LO/TO) DATE: April 14, 1999
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OBJECTIVE: Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented. Contractor procedures provide assurance that controls will remain in affect so long as the hazards are present. (CE I-5, CE I-7, CE I-8)

NOTE

This objective will evaluate both the line management practices and mechanisms for work control, as well as the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness, lockout/tagout, and configuration management.

Criteria

1. Contractor system and procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in affect so long as the hazard is present.
2. Contractor system and procedures for individual disciplines ensure that individual processes or maintenance actions include adequate controls associated with the individual discipline prior to commencing work and that the controls remain in affect so long as the hazard is present.
3. Contractor system and procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.
4. Contractor ISMS mechanisms for the control of work specify that line management is responsible for safety.
5. Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.

Approach

Record Review: Review the LMITCO Conduct of Operations Manual 9; Integrated Work Control Process, STD-101; Independent Hazard Review, MCP-3571; Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255; Hazard Identification, Analysis, and Control for Operational Activities, MCP-3562; Construction Work Coordination Hazard Control, MCP-2863; Radiological Work Permit,

MG4-1

ISMS ASSESSMENT FORM

Management (MG)

MCP-7; ALARA Program and Implementation, MCP-91; Performing Job Safety Analysis, MCP-3450; IH Exposure Assessment, MCP-153; Using Safe Work Permits, MCP-3447; and Performing Pre-job Briefings and Post-job Reviews, MCP-3003; which define requirements to verify controls are in place prior to performing work and that these controls remain in place as long as the hazards are present. Review the processes for authorizing the commencement of work to ensure that managers are responsible for safety. Review the contractor's training and qualification process to ensure that personnel who plan, control, and conduct the work are competent. Review procedures for selected disciplines to ensure consistency and adequacy.

Interviews: Interview lines and support personnel responsible for implementation of requirements to control work. Through interviews, assess their understanding, support, and implementation of the control of work within the approved controls.

Record Review:

- Idaho Operations Office Memorandum, Lockout/Tagout Issue, February 25, 1999
- Lockout and Tagout, MCP-1059, 6/14/99
- Occupational Health Program, PDD-61, Rev. 0
- Ability to Work, POL-7, Rev. 0
- Access to Employee Exposure and Medical Records, PRD-33, Rev. 2
- Accident Reporting and Follow-ups, MCP-49, Rev. 0
- Use of First Aid Kits, MCP-2559, Rev. 1
- Chronic Beryllium Disease Prevention, MCP-50, Rev. 0
- Bloodborne Pathogens, MCP-2707, Rev. 0
- Carcinogens, MCP-2703, Rev. 0
- Heat and Cold Stress, MCP-2704, Rev. 0
- Hazard Communication, MCP-2715, Rev. 0
- Document Action Request, DAR No.13669, 4/6/99
- Laser Safety Program, MCP-2717, Rev. 0
- Controlling and Monitoring Exposure to Noise, MCP-2719, Rev. 1
- Respiratory Protection, MCP-2726, Rev. 2
- Hazardous Waste Operations and Emergency Response, MCP-2748, Rev. 1
- Confined Spaces, MCP-2749, Rev. 1
- Ordering, Receiving, Storing and Handling Chemicals, INTEC-MCP-4.1.25, Rev. 28
- Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255, Rev. 3
- Independent Hazard Review, MCP-3571, Rev. 0
- Chemical Hygiene Plan, AEDL-CE-05, Rev. 0
- Chemical Receiving, Storage, and Distribution, AEDL-CE-02, Rev. 1
- Lockout Tagout Record Monthly Checklist, 6671X

ISMS ASSESSMENT FORM

Management (MG)

- Supplemental Procedure to MCP-1059 Lockouts and Tagouts, MCP-575, Rev. 2
- Supplemental Procedure to MCP-1059 Lockouts and Tagouts, MCP-1075, Rev. 2
- Lockouts and Tagouts, PRD-2012, Rev. 0
- INEEL Risk Management, POL-18, Rev. 0
- Overview of the LMITCO Safety and Health Program, PDD-16, Rev. 3
- Safety and Health Protection Program, PRD-186, Rev. 2
- Reporting and Resolving Employee Safety Concerns & Suggestions, MCP-2723, Rev. 2
- Performing Safety Reviews, MCP-2727, Rev. 2
- Using Safe Work Permits, MCP-3447, Rev. 1
- Safety and Health Inspections, MCP-3449, Rev. 0
- Hazard Identification, Analysis & Control of Operational Activities, MCP-3562
- Consolidated Response to Type A Investigation of CO₂ Fatality at Test Reactor Area, Idaho National Engineering and Environmental Laboratory, DOE/ID-10699, INEEL/EST-98-0102, October 1998
- INEEL CO₂ Accident Corrective Action Implementation Plan, DOE/ID-10671, INEEL/EXT-98-01172, Revision 2, March 1999
- Performing Job Safety Analyses, MCP-3450, Rev. 0
- Compatible Chemical Storage, MCP-2707, Rev. 1
- Performing Pre-Job Briefings and Post-Job Reviews, MCP-3003, Rev. 4
- Flammable and Combustible Liquid Storage and Handling, MCP-584, Rev. 2
- Preparation and Administration of Individual Training Plans, MCP-27, Rev. 1
- Training and Qualification Program, PDD-13, Rev. 1
- LMITCO Fire Protection Program, PDD-1009, Rev. 0
- LMITCO Fire Protection Program, PRD-199, Rev. 0
- Fire Hazards Analysis, MCP-579, Rev. 2
- Managing Fire Protection Impairments, MCP-585, Rev. 2
- Storage and Control of Time-Sensitive Chemicals, MCP-2706, Rev. 1

Interviews Conducted:

- Occupational Health Director
- Site Operations Coordinator
- Central Facilities Area, Site Area Director
- Waste Experimental Reduction Facility, Site Area Director
- INEEL Research Center, Site Area Director
- Test Reactor Area, Site Area Director
- Radioactive Waste Management Complex, Site Area Director
- Safety and Health Director
- Occupational Safety Manager
- Central Facilities Area, Facility Manager

ISMS ASSESSMENT FORM

Management (MG)

- Waste Experimental Reduction Facility, Facility Manager
- INEEL Research Center, Facility Manager
- Test Reactor Area, Facility Manager
- Radioactive Waste Management Complex, Facility Manager

Observations:

- None

Discussion of Results:

The industrial hygiene program is organizationally under the Occupational Health Directorate, which provides a comprehensive medical program and provides support to LMITCO programs at the INEEL. In addition to the industrial hygiene program the Occupational Health Directorate is responsible for the Material Safety Data Sheet (MSDS) Program, Occupational Medical Program, Employee Assistance Program, Wellness Program, Workman's Compensation Administration Program, and OSHA Injury/Illness Reporting (OSHA 200). The program description document for these occupational health programs is PDD-61, Occupational Health Program.

The procedures and systems used by industrial hygiene personnel to ensure occupational hazards associated with operations and maintenance have been identified and analyzed are described in the Safety and Health 14B, Industrial Hygiene Manual. These procedures also describe the roles and responsibilities of industrial hygiene personnel in identifying hazards.

The industrial safety programs, including fire protection, are organizationally under the Safety and Health Director who reports directly to the Vice President and General Manager of Environmental, Safety and Health and Quality Assurance. The Directorate is composed of department managers for Occupational Safety and Health, Radiological Control, and Emergency Preparedness. These departments are supported by supervisors and foremen, as well as the various discipline professionals, technicians, and administrative staff. These professionals, technicians, and support staff report to the Safety and Health Director, but are matrixed to the line organizations to provide day-to-day support to facilities, programs, and projects.

The procedures and systems used by industrial safety personnel to ensure occupational hazards associated with operations and maintenance have been identified and analyzed are described in the Manual 14A, Health and Safety Occupational Safety and Fire Protection. Industrial Safety programs are integrated in various LMITCO safety management processes as they apply to the identification and analysis of hazards and to determine the appropriate controls for employee protection. The responsibility for establishing sitewide industrial safety program requirements and interpretations belongs to the Occupational Safety Department. Implementation of the

ISMS ASSESSMENT FORM

Management (MG)

industrial safety requirements is the responsibility of line management, supported by industrial safety professionals who are assigned to the facility ESH&QA managers.

Line management has direct responsibility for safety and health. Safety and Health management and technical staff are resources for line management in accomplishing LMITCO's operational mission. Line organizations have facility ES&H managers who provide day-to-day direction to the assigned matrixed safety and health supervisors and technical staff. These ES&H facility managers are accountable to line management to integrate the various safety and health activities within their respective organizations.

Appropriate identification and implementation of controls for mitigation of the personnel hazards present within the facility are in procedures or mechanisms and utilized by the facility and occupational safety and industrial hygiene personnel. These procedures/mechanisms address the set of safety requirements agreed upon between the Contractor and DOE and are appropriately tailored to the hazards and reflect site guidance.

Procedures or mechanisms are in place and utilized by occupational safety and industrial hygiene personnel which ensure that operations and maintenance personnel are knowledgeable of occupational safety and industrial hygiene, as well as the engineered and administrative controls used to mitigate those hazards. Line managers effectively balance the conduct of work in a manner, which supports mission needs while ensuring occupational safety, and industrial hygiene safety precautions are met.

Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities. Training and qualification programs are established to ensure employees are trained to safely, competently, and effectively perform their job functions, while protecting themselves, the public, and the environment. PDD-13, Training and Qualification Program, provides the program description.

Hazardous energy sources are controlled through procedure, MCP-1059, Lockout and Tagout. There have been several assessments on the hazardous energy control program by both the DOE and the contractor. These assessments have led to the revision to the Lockout and Tagout (LO/TO) program and the need to take temporary actions such as having a Senior Supervisory Watch (SSW) monitor all LO/TO(s) and suspension of level 1 lockouts. Corrective actions for these assessments have also led to the development of a new program for ensuring proficiency of the LO/TO program. This program will identify LO/TO "experts" in each area for personnel performing LO/TO(s) to seek guidance or assistance. The LO/TO Mentoring Program is a worker owned and established program to achieve zero defects in the execution of lockout and tagout activities. The mentoring program establishes proficiency requirements for LO/TO authorized employees and provides a method to maintain authorized employees proficient in their lockout and tagout skills. This is a noteworthy idea that demonstrates worker involvement in attempting to solve problems within a program by applying new and innovative techniques.

ISMS ASSESSMENT FORM

Management (MG)

Successful implementation of the mentoring program and management attention on lockouts should improve the LO/TO program and allow relaxation of the SSW and moratorium on level 1 LO/TO.

Interviews of safety and health personnel, including facility management, indicated that they have a strong understanding of their responsibilities and they have a firm commitment to conducting work safely in accordance with site requirements. From the interviews and discussions, they appear to be competent and the overall process for maintaining this competency is adequate. Throughout these interviews and discussions, the positive sense of management responsibility for integrated safety management was noteworthy.

The interview of the Site Area Directors and Facility Managers demonstrated a strong commitment to resolve safety issues for the facility and integration of safety into facility operations. Operations and supervisory personnel preplan their daily activities with a plan of the day meeting with safety foremost in mind for each activity scheduled for their shift. Emphasis is placed on planning for personal safety and safety of fellow employees, for all activities, through such mechanisms as Hazard Identification, Analysis, and Control for Operational Activities, MCP-3562, STD-101, Integrated Work Control Process, Independent Hazard Review, MCP-3571, pre-job briefings, and critiques.

Conclusion: The objective has been met. Formal processes exist that provide rigor and discipline in performing work safely. The safety program descriptions direct that all work be done safely through prescriptive work planning and execution. Planning and execution are driven by worker safety requirements that specify the necessary tools, training, procedures and equipment. When the work is completed, formal feedback mechanisms are used to improve the work planning and execution process, including the analysis and control of hazards, achieving continuous improvement.

Issue(s):

- None

Strength(s):

- None

Inspector: <u>Glenn M. Morton</u> Glenn M. Morton, P.E.	Team Leader: <u>Joseph Arango</u> Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG

OBJECTIVE 4, RadCon

DATE: April 14, 1999

OBJECTIVE: Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented. Contractor procedures provide assurance that controls will remain in affect so long as the hazards are present. (CE I-5, CE I-7, CE I-8)

NOTE

This objective will evaluate both the line management practices and mechanisms for work control, as well as the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness, lockout/tagout, and configuration management.

Criteria

1. Contractor system and procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in affect so long as the hazard is present.

2. Contractor system and procedures for individual disciplines ensure that individual processes or maintenance actions include adequate controls associated with the individual discipline prior to commencing work and that the controls remain in affect so long as the hazard is present.

3. Contractor system and procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.

4. Contractor ISMS mechanisms for the control of work specify that line management is responsible for safety.

5. Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.

ISMS ASSESSMENT FORM Management (MG)

Approach

Record Review: Review the LMITCO Conduct of Operations Manual 9; Integrated Work Control Process, STD-101; Independent Hazard Review, MCP-3571; Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255; Hazard Identification, Analysis, and Control for Operational Activities, MCP-3562; Construction Work Coordination Hazard Control, MCP-2863; Radiological Work Permit, MCP-7; ALARA Program and Implementation, MCP-91; Performing Job Safety Analysis, MCP-3450; IH Exposure Assessment, MCP-153; Using Safe Work Permits, MCP-3447; and Performing Pre-job Briefings and Post-job Reviews, MCP-3003; which define requirements to verify controls are in place prior to performing work and that these controls remain in place as long as the hazards are present. Review the processes for authorizing the commencement of work to ensure that managers are responsible for safety. Review the contractor's training and qualification process to ensure that personnel who plan, control, and conduct the work are competent. Review procedures for selected disciplines to ensure consistency and adequacy.

Interviews: Interview lines and support personnel responsible for implementation of requirements to control work. Through interviews, assess their understanding, support, and implementation of the control of work within the approved controls.

Record Review:

- PDD-1007, Issues Management Program Description
- INEEL SMS Implementation Plan (LMITCO Gap Analysis)
- STD-101, Integrated Work Control Process (Draft F)
- MCP-2863, Construction Work Coordination and Hazard Control
- MCP-3562, Hazard Identification, Analysis And Control of Operational Activities
- MCP-3571, Independent Hazard Review
- Requirements Flowdown Verification Forms for DOE N 441.1, Radiological Protection for DOE Activities, and DOE N 5480.11, Extension of DOE N 5480.10
- MCP-7, Radiological Work Permit
- MCP-91, ALARA Program and Implementation
- MCP-542, Radiological Control Surveillance Plan
- MCP-3003, Performing Pre-job Briefings and Post-Job Reviews
- PLN-470, Radiological Control Program Performance Excellence Plan
- Radiological Engineer Training Program Plan and Qualification Standard (January 1999)

Interviews Conducted:

- TRA ESH&QA Manager

ISMS ASSESSMENT FORM Management (MG)

- WROC ESH&QA Manager
- Radiological Control Manager
- Safety and Health Director
- Occupational Safety Manager

Observations:

- None

Discussion of Results:

LMITCO assessed the flowdown of requirements from List B in November 1998 for DOE N 441.1, Radiological Protection for DOE Activities, and DOE N 5480.11, Extension of DOE N 5480.10 (which invokes the DOE Radiological Control Manual). The requirements of 10 CFR 835, DOE N 441.1, and the DOE Radiological Control Manual form the basis for the LMITCO radiation protection program. LMITCO performed the flowdown verification for DOE N 441.1 appropriately. LMITCO did not perform the flowdown verification for DOE N 5480.11. While DOE N 5480.11 is technically a canceled notice in the DOE directives system, it remains fully enforceable by its inclusion in List B of the LMITCO contract.

PRD-183, Radiation Protection – INEL Radiological Control Manual, establishes the radiation protection program for the INEEL. Flowdown of requirements from 10 CFR 835 into PRD-183 was established through the Radiation Protection Program Plan when the rule was initially implemented. The Radiological Control Manual presents some unique challenges, as it functions as a program description document, program requirements document, and management control procedure. LMITCO has not established a mechanism for identifying which portions of the Radiological Control Manual are implemented directly, and which portions are implemented by formal procedure. Additionally, no mechanism has been established to ensure the systematic flowdown of all requirements from the manual into procedures. (MG4RC-1)

Contractor systems for control of maintenance, laboratory, and operational activities are defined in STD-101, MCP-2863, MCP-3562, and MCP-3571 (Integrated Work Control; Construction Work Coordination and Hazard Control; Hazard Identification, Analysis, and Control for Operational Activities; and Independent Hazard Review). These procedures provide an adequate basis for ensuring that controls are implemented prior to commencing work and remain in affect so long as the hazard is present. Systems and procedures for ensuring adequate radiological controls are established prior to commencing work and remain in affect so long as the hazard is

ISMS ASSESSMENT FORM Management (MG)

present are addressed in PRD-183, Radiation Protection - INEL Radiological Control Manual, and implementing procedures in company-wide Manuals 15B and 15C (Radiation Protection Procedures). Key procedures include MCP-7, Radiological Work Permit, and MCP-91, ALARA Program and Implementation.

The fundamental mechanism for authorization of radiological work is the Radiation Work Permit (RWP). This document includes a description of the work to be performed, radiological conditions, conditions that would void the permit, verification that required ALARA planning and reviews have been conducted, and special instructions that would apply to the work. Pre-job briefings and post-job reviews are performed in accordance with MCP-3003, Performing Pre-job Briefings and Post-job Reviews.

The Radiological Control Manager maintains a group of radiological engineers to support the infrastructure of the program and area ESH&QA Managers. The area ESH&QA Managers each have radiological engineers and radiological control technicians assigned directly to them to support work within their areas. Presentations provided to the ISMS review team and interviews with LMITCO personnel confirmed that the Radiological Control Manager, area ESH&QA Managers, and radiological support personnel are not considered to be line management. Several individuals volunteered personal opinions as to the appropriateness of this interpretation. However, the overall impact of the interpretation on the ability of the radiological control program to perform its function is judged to be neutral. It is noted that the present definition of line management may serve to highlight line management's responsibility for performing the work safely, and the radiological control organization's responsibility for monitoring and supporting the line to ensure that adequate controls are established and maintained.

The radiological engineer training and qualification program does not ensure that personnel who plan, control, and conduct work have competence commensurate with assigned responsibilities. The Radiological Engineer Training and Qualification Standard: (1) does not adequately address task/job specific skills that must be demonstrated by an *operational* radiological engineer, and (2) does not address the full range of differences in expectations for personnel assigned to this job category. (MG4RC-2)

The list of duties and responsibilities for a radiological engineer was derived from DOE Technical Qualification program that applies to federal radiation protection personnel providing direction and oversight of contractors at defense nuclear facilities. As a result, the list does not adequately address the operational aspects of identification and assessment of hazards to workers, the public, and the environment, and mitigation of hazards using engineered design features and administrative controls to control work and ensure that doses are ALARA. These duties and

ISMS ASSESSMENT FORM

Management (MG)

responsibilities apply at both the facility level in terms of preparation of safety basis documents, and at the activity level in terms of planning and execution of work. Examples of operational problem solving skills of a radiological engineer that are not adequately addressed by the standard include assessment of environmental impact of radioactive releases during routine operations and accidents; performance of shielding calculations; and assessment of radiological doses to workers from internal intakes and accidental exposures. A minimum working level knowledge, and in some instances expert level of knowledge, is needed for individuals performing these tasks. The Facility Specific Qualification Checklist does not require at least a working level knowledge of Safety Significant Systems and Components that affect the control of radiological hazards by radiological engineers working within a facility. The qualification standard does not require at least a working level knowledge of the radiological engineer's roles and responsibilities in the work control system (STD-101, MCP-2863, MCP-3562, and MCP-3571) and safety analysis system. No mechanism is described for requiring enhanced training and skills for personnel assigned to specialized programs such as decontamination & decommissioning, CERCLA remediation, processing and control of alpha emitting transuranics, NRC licensed facilities, or hazardous material transportation and shipping. Limitations on the use of ABHP Part I and NRRPT certifications as the basis for equivalency determinations within the General Technical section of the standard are not clearly stated.

Broad differences presently exist in knowledge, skills, and abilities for personnel assigned to the radiological engineer job category. These differences can be conceptualized as the differences between a radiological engineer and a radiological engineering technician. A radiological engineer should possess knowledge of mathematics, physics, nuclear physics, and chemistry required to assess complex radiological problems using fundamental principles and complex mathematical equations. This knowledge and ability is usually demonstrated by possession of a 4-year college degree with at least 30 semester hours in health physics, radiological science, chemistry, physics, biology, mathematics and calculus; a bachelor's degree with a radiological protection specialty, or certification by the American Board of Health Physics. A radiological engineering technician possesses, at a minimum, the education and training expected of a journeyman level Radiological Control Technician, plus additional skills, training, and experience in the identification, evaluation, mitigation, and control of radiological hazards encountered during the performance of radiological work. Problem solving skills are related to practical situations that are normally addressed by existing operating procedures, but involve complex considerations of facility design, administrative controls, and work evolution in order to maintain radiation exposures ALARA. Complex technical problem solving would require coordination with and review by a radiological engineer. The training program plan and qualification standard does not address these fundamental differences in expectations between individuals presently assigned to the single job category of radiological engineer.

ISMS ASSESSMENT FORM
Management (MG)

MCP-542, Radiological Control Surveillance Plan, implements the requirement in 10 CFR 835 to audit all functional elements on a three-year cycle, as well as the company requirements for self-assessment. The procedure was revised in August 1998, but is not aligned with the ISMS described in PDD-1004. References to the self-assessment program need to be revised to reflect MCP-8. Responsibilities for entering deficiencies identified in individual surveillance reports in accordance with Process Deficiency Resolution, MCP-598, are not identified. The procedure does not establish formal mechanisms for communicating surveillance reports or programmatic problems and global deficiencies identified in the quarterly review conducted by the Radiological Control Manager to the area ESH&QA Managers.

Conclusion: The objective has been met. Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified radiological hazards and the controls are effectively implemented. Contractor procedures provide assurance that radiological controls will remain in affect so long as the hazards are present.

Issue(s):

- Requirements flowdown has not been demonstrated for radiological requirements into the Program Requirements Document (PRD-183), and then into company-wide Management Control Procedures. (MG4RC-1)
- The radiological engineer training and qualification program does not ensure that personnel who plan, control, and conduct radiological work have competence commensurate with assigned responsibilities. (MG4RC-2)

Strength(s):

- None

Inspector: <u>Richard Dickson</u> Richard Dickson	Team Leader: <u>Joseph Arango</u> Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG	OBJECTIVE 4 – Work Control DATE: April 13, 1999
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OBJECTIVE: Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented. Contractor procedures provide assurance that controls will remain in affect so long as the hazards are present. (CE I-5, CE I-7, CE I-8)

NOTE

This objective will evaluate both the line management practices and mechanisms for work control, as well as the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness, lockout/tagout, and configuration management.

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4. Contractor ISMS mechanisms for the control of work specify that line management is responsible for safety.
5. Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.

ISMS ASSESSMENT FORM Management (MG)

Approach

Record Review: Review the LMITCO Conduct of Operations Manual 9; Integrated Work Control Process, STD-101; Independent Hazard Review, MCP-3571; Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255; Hazard Identification, Analysis, and Control for Operational Activities, MCP-3562; Construction Work Coordination Hazard Control, MCP-2863; Radiological Work Permit, MCP-7; ALARA Program and Implementation, MCP-91; Performing Job Safety Analysis, MCP-3450; IH Exposure Assessment, MCP-153; Using Safe Work Permits, MCP-3447; and Performing Pre-job Briefings and Post-job Reviews, MCP-3003; which define requirements to verify controls are in place prior to performing work and that these controls remain in place as long as the hazards are present. Review the processes for authorizing the commencement of work to ensure that managers are responsible for safety. Review the contractor's training and qualification process to ensure that personnel who plan, control, and conduct the work are competent. Review procedures for selected disciplines to ensure consistency and adequacy.

Interviews: Interview lines and support personnel responsible for implementation of requirements to control work. Through interviews, assess their understanding, support, and implementation of the control of work within the approved controls.

Record Review:

- DOE-ID letter, July 29, 1998, re: ISMS Development and Implementation, OPE-OS-98-104
- Manual 9, Conduct of Operations Manual, December 1995
- PDD-60, Conduct of Operations
- PDD-1005, Site Operations
- PRD-185, Conduct of Operations
- MCP-02973, Operations Organization and Administration
- MCP-2974, Shift Routines and Operating Practices
- MCP-2975, Control Area Activities
- MCP-2976, Operations Communications
- MCP-2977, Control of On-Shift Training
- MCP-190, Event Investigation and Occurrence Reporting
- MCP-2978, Control of Equipment and System Status
- MCP-1059, Lockout and Tagout
- MCP-2979, Independent Verification
- MCP-2980, Logkeeping
- MCP-2981, Operations Turnover
- MCP-2982, Operations Aspects of Facility Chemistry and Unique Processes

ISMS ASSESSMENT FORM
Management (MG)

- MCP-2983, Required Reading
- MCP-2984, Timely Orders to Operators
- MCP-2986, Operator Aids
- MCP-2987, Equipment and Piping Labeling
- MCP-3003, Performing Pre-Job Briefings and Post-Job Review (1/11/99)
- Conduct of Operations Training Design Plan, 3/4/99
- Document ID: STD-101, Integrated Work Control Process Manual, Rev. 1, Draft D
- Integrated Work Control Process Training Design Plan, 12/14/98
- Manual 6, Facilities and Maintenance Manual/Conduct of Maintenance Manual, December 1998
- PDD-20, Facilities and Maintenance Management Program
- PLN-173, Program Quality Control Plan
- PRD-178, Facilities and Maintenance
- GDE-50, Guide for Maintenance Planners
- INT-8, Graded Approach
- MCP-56, Training Qualification, and Certification for Facilities/Utilities/Maintenance (F/U/M)
- MCP-2382, Establishing and Using Maintenance Priority
- MCP-2795, Master Equipment List
- MCP-2797, Maintenance Calibration Program
- MCP-2798, Maintenance Work Control
- MCP-2800, Predictive Maintenance
- MCP-2801, Maintenance Resource Forecasting and Scheduling
- MCP-2802, Measurement, Analysis, and Reporting of Maintenance Performance
- MCP-2807, Winterization and Freeze Protection
- MCP-41, Conducting Asset Physical Condition Assessments
- MCP-158, Facilities Information Management System (FMS)
- MCP-2480, Technical Site Information (TSI) Change Administration
- MCP-2481, Building Space Occupancy Change Administration; MCP-2860, Building/Facility Turnover
- MCP-2, Outages
- MCP-533, SOD Alarm, Documentation, CAS Responsibilities and Operations
- MCP-553, Stop Work Authority
- GDE-51, INEEL Guide for Project Management
- MCP-2863, Construction Work Coordination and Hazard Control
- MCP-23, Planning and Managing Projects with Level I Cost and Schedule Controls
- DOE-IDN-130A, Work Authorization and Control, with Standard Order for DOE Work (SOEW), series
- LMITCO/INEEL poster, 30 Principles of Operations,

ISMS ASSESSMENT FORM
Management (MG)

- MCP-1059, Lockout and Tagout, Rev. 1, Draft, 6/14/99
- Manual 5, Program Control
- MCCP-2668, Financial Planning, Administration, and Control of Indirect Activities/Work
- PDD-17, Performance Management Control Systems
- MCCP-2447, Requirements Management
- MCP-2783, Startup and Restart of Nuclear Facilities
- MCP-3567, Authorization Agreements with Authorization Basis List
- MCP-7, Radiological Work Permit
- MCP-3447, Using Safe Work Permits
- MCP-8, LMITICO Self-Assessment Process for Continuous Improvement
- MCP-4, Contractor Performance-Based Business Management Process
- DOE-ID Project Management Plan for INEEL M&O Transition, Draft Rev. 0
- INEEL Executive Steering Group (ESG) Agendas, Minutes, and Documentation 1998 - 1999
- INEEL Senior Operations Review Board (SORB), Agendas, Minutes, and Documentation 1998 - 1999
- CTR-2, Facility Operations Review and Implementation Board Charter
- CTR-3, SORB Charter
- CTR-4, Test Reactor Area (TRA) Corrective Action Review Board Charter
- CTR-6, WROC-WERF-PBF Area Corrective Action Review Board Charter
- CTR-7, Radioactive Waste Management Complex (WRMC) Corrective Action Review Board Charter
- CTR-8, Town Facilities Corrective Action Review Board
- CTR-9, F/U/M Corrective Action Review Board Charter
- CTR-10, INTEC Corrective Action Review Board Charter
- CTR-11, Test Area North (TAN) Corrective Action Review Board Charter
- CTR-14, The Site Operations Council (SOC) Charter
- CTR-15, The ESG Charter
- CTR-16, The Facility Training Review and Implementation Board (FTRIB) Charter
- CTR-17, The Senior Maintenance Management Council (SMMC) Charter
- PLN-464, The ISMS Project Execution Plan Summary Schedule, February 1999
- PDD-1011, Facility Excellence Program
- INEEL ISMS Training Course and Reading Handouts (series)
- MCP-2872, Work For Others
- MCP-33 Personnel Qualification and Certification
- STD-14, The Standard for Project Management in EM Programs
- MCP-12, Company Work Breakdown Structure (WBS)
- MCP-3543, Planning and Managing Projects with Level II Cost and Schedule Controls
- MCP-4, Contractor Performance-Based Business Management Process

ISMS ASSESSMENT FORM
Management (MG)

- PDD-17, Performance Management Control Systems
- MCP-3567, Authorization Agreement with Authorization Basis List
- PRD-164, Safety Analysis for Non-nuclear, Radiological, and Other Industrial Facilities
- PRD-123/113, Unreviewed Safety Questions (USQ)
- PRD-155, Emergency Management System
- PLN-16A, Program Management Plan
- PDD-16, Overview of LMITCO Safety and Health Program
- PRD-183, INEL Radiological Control Manual
- PROD-1007, Work Coordination and Hazard Control
- PDD-1012, LMITCO Environmental Management System
- PRD-185, Conduct of Operations
- PDD-1, Quality Assurance Program Description
- PRD-1001, LMITCO Quality Assurance Program
- PDD-1007, Issues Management System
- PRD-115, Configuration Management
- STD-107, Configuration Management
- PRD-176, Management of Construction Projects
- Manual 12, Training and Qualification Manual
- MCP-57 Conduct of Training
- MCP-27, Preparation and Administration of Individual Training Plans
- Designing for Job Specific Initial and Continuing Training Programs
- MCP-79, Instructional Materials
- Nuclear Facility Manager Qualification Standard, Rev. 0, March 2, 1999
- PDD-1005, Site Operations Plan-of-the-Day
- MCP-2450, Technical Safety Requirements
- MCP-3450, Job Safety Analysis
- MCP-540, Graded Approach and Quality Level Assignment
- MCP-2811, Engineering Change Control
- MCP-8, LMITCO Self-Assessment Process for Continuous Improvement
- MCP-192, Lessons Learned Program
- MCP-3003, Performing Pre-Job Briefings
- MCP-3450, Performing Job Safety Analyses
- MCP-552, Conduct of Independent Oversight Assessments
- MCP-598, Process Deficiency Resolution
- MCP-3521, Trending Center
- Independent Oversight Assessment Schedule, Rev. 3, 3/26/99
- MCP-2811, Design and Engineering Change Control, Draft ("Pending")
- PRD-115, Configuration Management, Draft Revision ("Pending")

ISMS ASSESSMENT FORM
Management (MG)

- STD-107, Operational Configuration Management Program, Draft Revision ("Pending")
- MCP-2810, Identifying Configuration Controlled Items
- MCP-540, Graded Approach Quality Level Assignments
- MCP-135, Creating, Modifying, and Canceling Procedures and Other DMCS-Controlled Documents
- MCP-557, Managing Records
- DOE-ID-10699//INEEL/EXT-98-01020, Consolidated Response to Type A Investigation of Carbon Dioxide Fatality at Test Reactor Area, INEEL, October 1998
- STD-101, Integrated Work Control Process, Draft Rev. E

Interviews Conducted:

- Executive Vice President for Operations and Chief Operating Officer
- Deputy Vice President for Site Operations and Site Operations Director
- Vice President and General Manager for Nuclear Operations
- Deputy Director for Nuclear Operations
- Vice President for Environment, Safety, Health, and Quality Assurance
- Director, Integrated Safety Management, Office of the President
- Facility Director, ISMS Project Office
- Deputy Director, Safety and Health, Office of ESH&QA
- Deputy General Manager, ESH&QA
- Deputy AM Operations, Office of Program Execution
- Assistant Manager, Office of Program Execution
- Facility Director, Central Facilities Area/Test Area North
- Assistant Deputy General Manager for Nuclear Operations
- Site Area Director, Test Reactor Area (TRA)
- Site Area Director, Radioactive Waste Management Complex (RWMC)
- Site Area Director, INEEL Research Center (IRC)
- Site Area Director, Central Facilities Area (CFA)
- Site Area Director, Waste Experimental Reduction Facility (WERF)
- Site Facility Managers, for those Facilities that will Pilot ISMSV-Phase II at INEEL (5)
- Site Operations Program/Project Manager for Test Reactor Area
- RWMC Site Operations Program Manager
- Central Facilities Area (CWF) Deputy General Manager
- Laboratory Operations Facility Manager
- Waste Experimental Reduction Facility Operations Project Manager
- Site Operations Coordinator
- DOE-ID Facility Directors (2)

ISMS ASSESSMENT FORM

Management (MG)

- INEEL Integrated Procedures Manager
- INEEL Issues Management Manager
- Deputy Assistant ES&H Manager
- INEEL Operations Training Director
- Assistant Operations Training Manager
- INEEL Performance Assessment Manager
- Assistant Performance Assessment Manager for Evaluation and Trending
- INEEL Corrective Action Implementation Program (CAIP) Manager

Observations:

- ISMS Project Plan of the Week Meeting
- Senior Ops Review Board Meeting (SORB)
- Executive Steering Group (ESG) Meeting
- Operations Management Daily Stand-up Meeting
- Program Review Group/Board Meeting
- Weekly Site Area Director (SAD) Meeting
- Facility Excellence Program Walkdown
- Site Operations Council (SOC) meeting
- Senior Maintenance Management Council (SMMC) Meeting
- Program Documents Review Board Meeting

Discussion of Results:

A major element for the implementation of the ISMS at INEEL is the new INEEL "Integrated Work Control Process," as described in the Draft STD-101. The implementation of that Work Control Process includes personnel training that is scheduled to be completed during the next few weeks. The subsequent implementation of STD-101 is also scheduled for completion during the next few weeks, in conjunction with the implementation of other INEEL ISMS processes.

This evaluation centered on the review of ISMS Work Control as described within that process and the associated documentation. Because of the importance of this Work Control Process in its linkage to the ISMS, this review was done in conjunction with the review for Management (MG) Objective 1, on the ISMS Description. MG-1 discusses the ISMS Description in detail.

The other aspects of this MG-4 objective evaluate the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness,

ISMS ASSESSMENT FORM Management (MG)

lockout/tagout, and configuration management. They were reviewed separately. Those reviews included the respective reviews of the associated documents, associated personnel interviews, and the supporting observations. The results of those other MG-4 reviews are reported elsewhere within the MG section of this review report. Additionally, related aspects to this objective are discussed within the Hazards (HAZ), Business, Budget, and Contracts (BBC), and ID (DOE) sections of this review report.

Overall, the INEEL contractor policies and procedures associated with the STD-101 adequately provide a description of processes to support the new work control methodology, in conjunction with the INEEL ISMS Description. However, many of these policies and procedures have been recently revised, or are now in the process of revision. Some of these related Work Control procedures and processes are in the early stages of implementation and maturation. Some of these processes are being implemented now, and some are to be implemented in conjunction with an effort for the improved and standardized implementation of Conduct of Operations.

As discussed elsewhere within this report, the significance of an effective transition process of M&O INEEL contractor management to adequately maintain the continuity and integrity of the "Integrated Work Control Process" as the major element of their ISMS will also be paramount.

A major element for the implementation of the ISMS is the INEEL "Integrated Work Control Process," as described in the draft STD-101. The implementation of this Work Control process will be a centerpiece of the ISMS implementation, and it will be implemented in conjunction with the other supporting ISMS mechanisms. Those other mechanisms include improvements in the determination of the Hazard Analysis and Controls Implementation for Work Control.

STD-101, the INEEL "Integrated Work Control Process," was briefed in the contractors' ISMS presentations as the draft form, Revision D. During the past week of this review, two new draft forms were developed. On Tuesday, it was reported to the ISMSV Team that Revision E was now the effective draft being considered, but that all of the changes from Revision D were administrative in nature. On Thursday, it was reported to the ISMSV Team that Revision F was now developed and being considered. Again, the contractor reported that these new drafts corrected only administrative deficiencies, without changing the processes of the described work controls. On Friday it was reported to the ISMSV Team that although the draft in for review is Revision F, an additional draft revision might be developed to correct some additional administrative deficiencies. Again, it was specifically confirmed during personnel interviews with the ISMSV Team Members that the essential elements of the Revision D were maintained throughout the subsequent revisions to correct administrative deficiencies.

ISMS ASSESSMENT FORM Management (MG)

The rapidly dynamic nature of the change process currently in progress on the draft forms of STD-101, the "Integrated Work Control Process," indicate that contractor Line Management will have to continue to very closely manage the associated training now in development, and the implementation of the final STD-101 version. (MGWC4-1)

The draft STD-101, Revision D, adequately described the overall processes for Work Control and maintenance actions. The provisions adequately described the INEEL Work Control Process that the contractor is planning to use to ensure that the designated work controls are implemented, and that they will remain in effect during the work process. Additionally, the work processes described within Revision D appear to be adequately linked with many other iterations that are now in progress for the development and implementation of the ISMS.

The INEEL contractor, led by the Site Operations Director (SOD) and his key staff, have a solid perspective of the elements of Work Control, the elements of the required training for this process, and the path forward to implement the process. It will be critical that the leadership maintains their control of the linkages and implementation processes. This provides a challenge to what the contractor has called, in his terminology, the "dynamic tension" for implementation of so many initiatives at INEEL during the next few months. This challenge has also been discussed within the report for the objective MG-1, the evaluation of the ISMS Description.

Overall, by their description, these developing Work Control processes and mechanisms appear adequate for Work Control. These mechanisms include: the implementation of hazard controls, work authorization, line management responsibility for the control of work, and the methods to ensure that the contractors personnel will have competence commensurate with their assigned responsibilities. To ensure their success all of these mechanisms and processes will have to be completely and effectively implemented.

As stated during the contractors' ISMS presentations, and reinforced during the subsequent personnel interviews of this review, many of these mechanisms introduce and develop "new concepts" to the INEEL Work Control process. There are at least ten major "new concepts" for the ISMS, and about one half of these are directly related to Work Control. Some of the significant changes that are being developed to improve and strengthen Work Control include:

- An "Activity-Based" versus "Discipline-Based" approach to operations;
- Site-wide, standardized implementation of the "Plan-Of-the-Day (POD)" concept for scheduling and authorizing work and operations;
- Improvement and standardization of Lockout and Tagout processes;

ISMS ASSESSMENT FORM
Management (MG)

- Improvement and standardization of management practices through the Site Area Directors (SADs);
- Improvement and standardization in Training and Qualification processes;

Specifically, each of these “new concepts” relate directly to the contractor’s planned Work Control improvements:

- The Integrated Work Control Process as described by the STD-101 Draft Revision D was developed to improve the overall Control of Work. The described processes are designed to improve the implementation of controls prior to the work commencing, and to improve the mechanisms for work authorization.
- The “Activity-Based” versus “Discipline-Based” approach to operations is also designed to improve and strengthen the areas of hazards control implementation during work.
- The Site-wide, standardized implementation of the “Plan-Of-the-Day (POD)” concept for scheduling and authorizing work and operations is designed to specifically improve the process for work authorization.
- Improvement and standardization of Lockout and Tagout processes is also designed to improve and strengthen the areas of hazards control implementation during work.
- Improvement and standardization of management practices through the Site Area Directors (SADs) is designed specifically to improve the contractor ISMS mechanisms for the execution of line management’s safety responsibilities during work.
- Improvement and standardization in Training and Qualification processes combined with the currently planned training effort for the implementation of STD-101, the ISMS, and other maintenance and operations improvement initiatives.

Overall, the descriptions of the Work Control processes include many initiatives planned to improve and strengthen the contractor’s execution of Work Control. As outlined by STD-101 and the associated documents the descriptions of these processes are adequate for the implementation of hazard controls for work, the work authorization process, the execution of line management responsibilities for work control, and for the processes to match commensurate competence with the assigned work responsibilities. The descriptions of these processes are adequate.

ISMS ASSESSMENT FORM
Management (MG)

Conclusion: The objective has been met. Overall, the INEEL Integrated Work Control Process Description, as provided in the Draft Revision D of STD-101, combined with the other associated documents and processes adequately describe a system of procedures and mechanisms for the Control of Work in ISMS.

The described contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The described procedures should also ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented, and would remain in affect so long as the hazards are present.

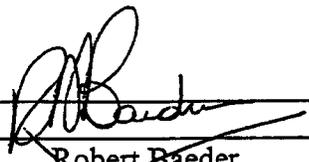
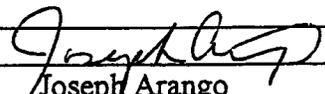
However, many of these procedures and processes are being concurrently developed, improved, and implemented in conjunction with the development and implementation of STD-101.

Issue(s):

- The rapidly dynamic nature of the change process currently in progress on the draft forms of STD-101, the "Integrated Work Control Process," indicate that contractor Line Management will have to continue to very closely manage the associated training now in development, and the implementation of the final STD-101 version. (MG4WC-1)

Strength(s):

- None

Inspector:  Robert Baeder	Team Leader:  Joseph Arango
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ISMS ASSESSMENT FORM
Management (MG)

FUNCTIONAL AREA: MG	OBJECTIVE 4 - Environmental Management System DATE: April 14, 1999
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OBJECTIVE: Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work at each level. The procedures ensure that adequate controls are identified to mitigate the identified hazards and the controls are effectively implemented. Contractor procedures provide assurance that controls will remain in affect so long as the hazards are present. (CE I-5, CE I-7, CE I-8)

NOTE

This objective will evaluate both the line management practices and mechanisms for work control, as well as the practices and mechanisms associated with the selected individual disciplines such as industrial hygiene/industrial safety, environmental management systems/environmental compliance, radiological controls, emergency preparedness, lockout/tagout, and configuration management.

Criteria

1. Contractor system and procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in affect so long as the hazard is present.
2. Contractor system and procedures for individual disciplines ensure that individual processes or maintenance actions include adequate controls associated with the individual discipline prior to commencing work and that the controls remain in affect so long as the hazard is present.
3. Contractor system and procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.
4. Contractor ISMS mechanisms for the control of work specify that line management is responsible for safety.
5. Contractor personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.

ISMS ASSESSMENT FORM Management (MG)

Approach

Record Review: Review the LMITCO Conduct of Operations Manual 9; Integrated Work Control Process, STD-101; Independent Hazard Review, MCP-3571; Preparation of Task-Specific Health and Safety and Limited Scope and Hazard Characterization Plans, MCP-255; Hazard Identification, Analysis, and Control for Operational Activities, MCP-3562; Construction Work Coordination Hazard Control, MCP-2863; Radiological Work Permit, MCP-7; ALARA Program and Implementation, MCP-91; Performing Job Safety Analysis, MCP-3450; IH Exposure Assessment, MCP-153; Using Safe Work Permits, MCP-3447; and Performing Pre-job Briefings and Post-job Reviews, MCP-3003; which define requirements to verify controls are in place prior to performing work and that these controls remain in place as long as the hazards are present. Review the processes for authorizing the commencement of work to ensure that managers are responsible for safety. Review the contractor's training and qualification process to ensure that personnel who plan, control, and conduct the work are competent. Review procedures for selected disciplines to ensure consistency and adequacy.

Interviews: Interview lines and support personnel responsible for implementation of requirements to control work. Through interviews, assess their understanding, support, and implementation of the control of work within the approved controls.

Record Review:

- PDD-1012, INEEL EMS Program Description Document
- INEEL ISMS Environmental Protection and Compliance briefing package
- INEEL Environmental Aspects identification process documents
- LMITCO Manual 8 Environmental Management
- DEAR 970.5204-2, LMITCO ISMS Contract Clause
- INEEL ISMS Implementation Plan
- INEEL ISMS Work Breakdown Structure
- INEEL Pollution Prevention Plan
- INEEL Environmental Policy
- INEEL Risk Management Vision and Policy
- Idaho Falls Facilities Waste Minimization Plan
- Environmental Restoration P2/Waste Minimization Plan
- LMITCO EMS Project Schedule
- MCP-3571, Independent Hazard Review
- PRD-5042, Facility Hazard Identification
- Facility Hazards List
- MCP-2449, Nuclear Safety Analysis

ISMS ASSESSMENT FORM
Management (MG)

- MCP-2451, Safety Analysis for Non Nuclear Facilities
- The Voluntary Protection Program
- The Worker Applied Safety Program
- MCP-123, Unreviewed Safety Questions
- Company Employee Safety Team charter
- PRD-5030, Environmental Requirements for Facilities, Processes, and Equipment
- MCP-3483, Environmental Instructions for Procurement, Property Management, and Subcontracting
- MCP-3482, Environmental Instructions for Deactivating, Decontaminating, and Dismantling Activities
- MCP-3478, Research and Development Including Laboratory Operations
- MCP-3481, Environmental Instructions for Operating Facilities, Processes, and Equipment
- MCP-3480, Environmental Instructions for Maintenance of Facilities and Equipment
- "Integrating Safety into Procedures" CBT module
- "Automated Hazards Identification and Mitigation " CBT module
- MCP-3567, Authorization Agreement with Authorization Basis List
- ID Notice 450.C Authorization Agreements
- Authorization Agreements for TAN, PBF, INTEC and RWMC
- STD-101, Integrated Work Control Process (Draft)
- MCP-3003, and Form 433.24 Post Job Review Procedure and Checklist
- MCP-3571, Independent Hazard Review
- MCP-3562, Hazard Identification, Analysis & Control of Operational Activities
- PDD-1015, AEDL Research Laboratory Operations DRAFT
- PDD-1005, Site Operations
- MCP-553, Stop Work Authority

Interviews Conducted:

- EMS Program Manager
- EMS Program staff scientist
- Pollution Prevention Program Manager
- Union representative
- Director Environmental Restoration
- Deputy Director Environmental Restoration
- Deputy Director Operational Training
- Operational Training Directorate Program Manager
- Executive Vice President for Operations
- Site Operations Director

ISMS ASSESSMENT FORM
Management (MG)

- TRA ESH&QA Manager
- WROC ESH&QA Manager
- Site Area Directors (4)

Observations:

- Union Safety Summit meeting

Discussion of Results:

In interviews and from LMITCO presentations, it is apparent that the traditional safety components, i.e., industrial safety or radiation protection, of ISM are better understood and therefore further along in incorporation into the ISM. However, the higher levels of management and the ESH&QA managers are aware and support integration of environmental aspects into the safety management system.

The systems and procedures, drafted or in place, Control of Maintenance and Construction (STD-101), Independent Hazard Review, for R&D activities (MCP-3571), and Hazard Identification Analysis and Control of Operational Activities (MCP 3562), all contain environmental components. STD-101 and MCP-3562 contain extensive checklists based on activities that trigger reviews by environmental coordinators as well as matching lists of procedures that should be followed to mitigate the environmental hazards.

MCP-3571, Independent Hazard Review and PDD-1015, AEDL Research Laboratory Operations do not integrate all the potential hazards into the review checklist as thoroughly as the other procedures. There is an area of vulnerability regarding environmental hazard review and mitigation. The procedures rely on the expertise of the principle investigator and AEDL Manager to recognize the types of activities that would require further environmental review including the evaluation of the activity against agreements with the city, air quality requirements, the existing NEPA documentation and any other documents describing the facility environmental envelope. The principle investigator (PI) is responsible for the initial review of hazards based on the hazards mitigation guide. The procedure does not require consultation with appropriate subject matter experts, so the process could rely solely on the expertise of the PI in recognition of hazards. The hazards list is written to assume the preparer has knowledge of the facility environmental operating envelope and what would trigger a check mark in the hazards column. In addition, since this hazards list is meant to cover any INEEL research activities, additional environmental hazards such as soil disturbance, cultural resources, or work in RCRA or CERCLA sites should

ISMS ASSESSMENT FORM Management (MG)

be listed. Unless the PIs have been trained in some detail on the facility environmental envelope it is unlikely they would know how to respond appropriately for listings such as "Environmental Impact (NEPA documentation)" or "Sewer Regulated Wastes generated".

If the PI does not find significant hazards, the burden is then on the AEDL Manager and the Work Organization Manager to fully understand the environmental operating conditions and agreements for the facility or to call in the appropriate SMEs during their review of the documentation before authorizing the work. This process would require a significant amount of environmental training for the AEDL Manager on each of the facilities where research would occur. A new draft procedure, MCP-3480, Environmental Instructions for Facilities, Processes, and Equipment, may mitigate this weakness to some extent, once implemented, since it requires submission of an environmental checklist for research and development activities and review and response by an environmental SME. (See HAZ Assessment forms)

The MCP-553, Stop Work Authority Procedure, has integrated environmental aspects into a traditional safety oriented procedure. It gives individual workers the authority to stop work for imminent environmental threats as well as unsafe conditions for the workers.

At the inception of the LMITCO initiative to develop an Environmental Management System (EMS), a gap analysis was conducted and a comprehensive Project Plan and schedule were generated. Adequate resources and management commitment were secured to proceed with system development. These efforts identified all actions necessary to meet Safety Management System requirements for the integration of environment into the totality of work. Both the DOE-ID and INEEL established Environmental Policies, which include broad environmental, integration and Pollution Prevention (P2) objectives that establish the framework for the EMS. The INEEL Environmental Management System (PDD-1012), addresses the entire breadth of environmental matters/considerations related to the operation of the INEEL. Environmental/regulatory compliance is one important component of the EMS; environmental protection; P2; hazard/impact identification and mitigation; surveillance and monitoring; communications; and training are examples of other key components. A Program Requirements Document (PRD-5030) has been generated that includes all environmental protection and regulatory requirements applicable to the INEEL.

The INEEL EMS initiative began as a project to establish a management system in conformance to the international voluntary consensus standard ISO14001 Environmental Management Systems. When the initiative to establish an Integrated Safety Management System (ISMS) for the INEEL was manifested, the decision was made to merge efforts. The focus of the "new" EMS

ISMS ASSESSMENT FORM Management (MG)

project became and remains to implement ISMS and to ensure that environmental management is adequately integrated into the planning and execution of all work. A joint DOE/LMITCO goal has been established to obtain registration to this standard in the future. (see DOE1-9)

The Environmental Aspects identification process is a key element of ISO14001 and an integral part of the INEEL ISMS. Environmental Aspects are those aspects of activities, products, and services that have the potential to interact with the environment. The results comprise a list of categories related to INEEL business and extant operations for which specific "aspect hazards" have been identified for use in work planning and execution. The rigorous systematic approach utilized to identify aspects is laudable. The INEEL Environmental Aspects Identification Process and the results obtained from application of the process are of excellent value and utility and could serve as a model for the DOE complex. (MG4EMS-2)

The LMITCO ISMS PDD-1004 clearly defines safety in accordance with the DOE Safety Management System Policy, to encompass "environmental." Hence, whenever the term "safety" is presented in the context of the INEEL Integrated Safety Management System, it encompasses "environmental safety." However, this same clear definition has not flowed down into all facility-level Hazard and Safety control documents (PRD-5042 Facility Hazard Identification, 5630x Facility Hazards List, MCP-2449 Nuclear Safety Analysis, MCP-2451 Safety Analysis for Non Nuclear Facilities). Other initiatives and processes that do not include environmental safety, but for which such inclusion would be appropriate and in accordance with the ISMS philosophy, are: the VPP, the Worker Applied Safety Program, MCP-123 Unreviewed Safety Questions, the Company Employee Safety Team, Employee Safety Teams, and the Safety Concerns Program. (MG4EMS-1)

Environmental safety is also defined as including pollution prevention and waste minimization. Although bits and pieces of the P2 program exist, the overall INEEL strategy/description for inclusion of P2 into the totality of work has not been clearly articulated in a systematic manner. The INEEL P2 program is a key element of the ISMS and must be thoroughly integrated into the totality of work. Program documentation should exist that describes how this is accomplished. No Program Description Document, Program Requirements Document, or Management Control Procedure exists for the P2 program that formally institutes requirements and responsibilities at the corporate level; or describes relationships and links program components for consistent, formal application site-wide. Documentation that currently exists but for which there is no systematic linkage, includes the INEEL Pollution Prevention Plan (the current INEEL P2 Plan does not reflect the current approach to P2 and needs revision), Facility/Generator Waste Minimization Plans; Recycling, Materials Exchange Program, Affirmative Procurement Program procedures; Awareness, Pollution Prevention Opportunity Assessment, training, and Design For Environment documentation. Other programs that have P2 relationships include the Waste

ISMS ASSESSMENT FORM Management (MG)

Tracking system, Integrated Chemical Management system, the Waste Generator Services program, and the self-assessment and independent oversight programs. P2 has also been addressed in ISMS/EMS program description documents.

One comprehensive activity based MCP has been developed, MCP-3480, that includes instructions for Procurement, Property Management and Subcontracting; Deactivating, Decontaminating and Dismantling Facilities; Research and Development; Operating Facilities, Processes, and Equipment; Maintenance of Facilities and Equipment; and for Constructing or Modifying Facilities and Equipment. This approach represents the first attempt within LMITCO to prepare activity-based environmental procedures.

Facility Authorization Agreements were reviewed to determine the extent environmental requirements were incorporated into the authorization process. All of the agreements reviewed contained references to environmental terms and conditions specific to each facility such as permits, regulatory agreements, and environmental impact statements. The ISMS Description Document and the LMITCO contract, which include List A and B requirements were also referenced. There was some inconsistency between agreements on the sitewide environmental documents listed, such as the Title V Clean Air Act permit application and the Final EIS #203 "Programmatic Spent Nuclear Fuel Management and Idaho Waste Management Programs". The LMITCO procedure MCP-3567 specifically requires that environmental component be included in the agreements although the ID Notice 450.C does not specifically call out environmental components as a part of safety.

PRD-25 establishes the requirements for the hazards analysis and categorization. STD-101, MCP-3571 and MCP-3562 are all procedures for hazard identification and work control. Each has a work authorization step after the hazards and mitigation have been identified and reviewed. However, these procedures are not integrated with environmental hazards databases. (See HAZ Assessment forms)

The INEEL NEPA program, which includes the provision to prepare environmental checklists during work planning, can be considered to be part of the INEEL work authorization process. Documentation of exclusion, a checklist, or a formal NEPA document requires authorized signature before work is conducted.

The Site Operations Description Document, PDD-1005, identifies the line responsibilities for environmental safety for the Site Operations Director and the Site Area Directors. The Environmental Management System Program Description Document and draft MCP-3480,

ISMS ASSESSMENT FORM Management (MG)

among many other procedures identify line management responsibility for ESH&QA. It is apparent through interviews and the presentations that management and staff is well aware of line management environmental responsibility.

All assessment work performed confirmed that line management responsibility for environmental management and environmental safety is sufficiently understood, acknowledged, and documented.

The Team determined that contractor personnel who plan, control, and conduct work have competence commensurate with the assigned responsibilities. General environmental training requirements for all employees are adequately addressed by the formal Job Task Analysis procedure and the Individual Training Plan. Numerous environmental training courses and initiatives exist at the Corporate level. The Environmental Affairs Directorate also provides additional specialized training and administers an Environmental Awareness Program that is part of the ISMS/EMS that functions admirably to enhance workforce awareness and knowledge on key environmental safety issues.

Certain key positions were reviewed for inclusion of environmental training. Formal Qualification Programs have been instituted for Work Planners, Nuclear Facility Managers, and Site Area Directors. These Programs incorporate sufficient environmental management training to provide these personnel with a sound understanding of company level and facility specific environmental safety standards, as required by the LMITCO INEEL ISMS PDD-1004.

Training on new activity-based Environmental Procedures is planned as part of the ISMS implementation, in accordance with the prioritization scheme to be developed by the Facility Training Review Implementation Board.

Conclusion: The objective has been met. The EMS is integrated with the mainstream ISMS, and documented in a Program Description Document (PDD-1012), which complements and provides the basis for the integration of environmental management considerations into all work planning and execution. The INEEL EMS approach utilizes the international voluntary consensus standard ISO14001 environmental management systems as a template which postures the INEEL for eventual ISO14001 registration. Unique activity based procedures have been developed for operational use. However, use of the "safety" to encompass environmental safety has not flowed down to all hazard and safety control documents. While P2 work is being conducted, P2 procedures are weak with respect to establishing work requirements and significance, pursuant to the importance this activity has within the context of ISMS and the INEEL's strategic missions and objectives. Hazard identification and mitigation for research and development activities also show some weakness but the basic process is in place.

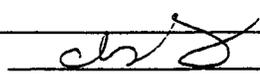
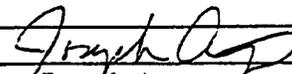
ISMS ASSESSMENT FORM
Management (MG)

Issue(s):

- While PDD-1004 clearly defines safety as encompassing environmental safety, this inclusive definition does not consistently flow down into the following hazards identification and safety control documents and procedures: PRD-5042, Facility Hazard Identification; Facility Hazards List; MCP-2449, Nuclear Safety Analysis; MCP-2451, Safety Analysis for Non-Nuclear Facilities. (MG4EMS-1)

Strength(s):

- The INEEL Environment Aspect Identification Process and the results obtained are of excellent value. (MG4EMS-2)

Inspector: <u></u> Chuck Ljungberg	Team Leader: <u></u> Joseph Arango
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