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U.S. Department of Energy
Richland Operations Office

Integrated Safety Management System Phase I Verification

Volumes I and II

Richland, Washington

April 12-28, 2000

DOE/RL-2000-30
Revision 0
Volume I & II

Fluor Hanford Integrated Safety Management System Phase I Verification

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

U.S. Department of Energy under Contract DE-AC06-96RL13200

United States Department of Energy
P.O. Box 550
Richland, Washington 99352

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Fluor Hanford Integrated Safety Management System Phase I Verification

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U.S. Department of Energy

Date Published
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Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

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United States Government **Department of Energy**

memorandum

Richland Operations Office

DATE: APR 28 2000

REPLY TO ATTN OF: AMSE:JEP/00-AMSE-013

SUBJECT: INTEGRATED SAFETY MANAGEMENT SYSTEM (ISMS) PHASE I VERIFICATION FLUOR HANFORD, INC. (FHI)

TO: Keith A. Klein
Manager

As Team Leader for the subject ISMS Verification, I have attached the Final Report, Volumes I and II. The verification was conducted in accordance with the Department of Energy (DOE) ISMS Guide 450.4-1A, the ISMS Verification Team Leader's Handbook, DOE-HDBK-3027-99, and with full consideration of your guidance and comments in your memorandum of March 13, 2000, which appointed me as Team Leader. As a result, a Review Plan and all preparations to have a qualified team were in place for the verification. The verification was conducted with excellent response and support from DOE and contractor personnel at FHI.

The team's recommendation regarding the FHI ISMS Description (Phase I) is to approve it once the following three issues are addressed:

- Definition of FHI roles and responsibilities at the project/facility level;
- institutionalization of issue management systems that are independent of the Corrective Action Management System; and
- resolution of the two outstanding corrective actions resulting from the previous Phase I Verifications.

The Final Report specified Noteworthy Practices and Opportunities for Improvement to further guide in continuous improvement. The Noteworthy Practices observed by the team are evidence of a commitment to ISMS that should be reinforced and continued.

The Opportunities for Improvement serve as focal areas for consideration in achieving future process improvement. The listed Opportunities for Improvement are intended to identify additional areas for improvement and, in some cases, emphasize current actions identified by FHI to improve ISMS.

If I can be of any assistance to you in clarifying this report, please contact me on (202) 586-3771. Thank you for the opportunity to conduct this verification.

ORIGINAL SIGNED BY

Michael Mikolanis, Team Leader
ISMS Verification Fluor Hanford, Inc.
Office of the Departmental Representative to the
Defense Nuclear Facilities Safety Board (S-3.1)

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If I can be of any assistance to you in clarifying this report, please contact me on (202) 586-3771. Thank you for the opportunity to conduct this verification.

Michael Mikolanis, Team Leader
ISMS Verification Fluor Hanford, Inc.
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SIGNATURE PAGE

I, by signature below, concur with the ISMS Verification team, Team Leader and Team Lead Advisor in the issues, Opportunities for Improvement, Noteworthy Practices, and recommendations of this report.

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EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) commits to accomplishing its mission safely. To ensure this objective is met, DOE issued DOE P 450.4, *Safety Management System Policy*, and incorporated safety management into the DOE Acquisition Regulations ([DEAR] 48 CFR 970.5204-2 and 90.5204-78).

Integrated Safety Management (ISM) requires contractors to integrate safety into management and work practices at all levels so that missions are achieved while protecting the public, the worker, and the environment. The contractor is required to describe the Integrated Safety Management System (ISMS) to be used to implement the safety performance objective.

SCOPE

DOE, Richland Operations Office (RL) conducted an ISMS Phase I verification review. This report documents the results of the review conducted to verify the following:

- The Fluor Hanford (FH) ISM System Description and associated plans, manuals of practices, and procedures are consistent with the objectives, guiding principles, and core functions of ISM.

- The corrective actions derived from the previously conducted Fluor Daniel Hanford, Spent Nuclear Fuel Project, and the Nuclear Materials Stabilization Phase I Verifications have been adequately completed.

The general conduct of the review was consistent with direction provided by DOE G 450.4-1A, *Integrated Safety Management System Guide* and the *Integrated Safety Management System (ISMS) Verification Team Leader's Handbook* (DOE 1999).

To conduct the verification review, the team was organized into three functional area subteams: Business, Budgets, and Contracts (BBC); Hazards Identification and Standards Selection (HAZ); and Management Oversight (MGO). The HAZ subteam was also augmented by two Subject Matter Experts. The subteams conducted their review over a period of 2 weeks at the Hanford Site. The reviews were conducted using Criteria and Review Approach Documents (i.e., Assessment Forms) that were based on the core functions and guiding principles from DOE P 450.4 and DOE G 450.4-1A. The functional area summaries are provided in Section 6.2 of this report (Volume 1) and the details of the reviews are contained in the Assessment Forms (Volume 2).

RESULTS

The ISMS Verification Team found that the ISM System Description of April 12, 2000 was responsive to the requirements of the DEAR clause and DOE management direction for work activities conducted by FH. The ISM System Description provides a framework for understanding the mechanisms by which safety of the public, worker, and environment is protected during operations at FH facilities. However, the ISM System Description does not address FH roles and responsibilities at the project/facility level and does not institutionalize issue management systems that are independent of the Corrective Action Management (CAM) System.

FH line management clearly understands their responsibility for safety and managers have demonstrated their commitment to the safety of their workers and an overall understanding of their roles and responsibilities. Throughout interviews, individuals demonstrated competence in executing these responsibilities. The self-assessment performed by FH in preparation for this verification was found to be thorough and comprehensive. Finally, the Fast Flux Test Facility's "Fix It Now" process, the River Corridor Project Safety Book, and the Analytical Services

Provider safety issues/idea program represent good examples of institutionalizing worker involvement and feedback.

CONCLUSION

While the ISMS Verification Team found that the FH ISM System Description of April 12, 2000 is responsive to the DEAR clauses and DOE management direction, the team identified weaknesses that should be corrected prior to considering the FH ISM System Description to be complete.

The ISMS Verification Team recommends that the RL Manager approve the ISM System Description once FH addresses the following:

- Definition of FH roles and responsibilities at the project/facility level
- Institutionalization of issue management systems that are independent of the Corrective Action Management System
- Resolution of two outstanding corrective actions resulting from previous Phase I Verifications.

The Noteworthy Practices observed by the ISMS Verification Team are evidence of a commitment to ISMS that should be reinforced and continued. The team concluded that the approach used to develop a system description that integrated FH projects was sound and that its content was adequate.

The Opportunities for Improvement serve as focal areas for consideration in achieving future process improvements. The following key Opportunities for Improvement are intended to identify additional areas for improvement and, in some cases, emphasize current actions identified by FH to improve ISMS.

NOTEWORTHY PRACTICES

- The self-assessment performed by FH in preparation for this verification was found to be thorough and comprehensive.

- The contractor has institutionalized processes that provide good opportunities for worker involvement.

- All senior managers interviewed demonstrated an awareness and dedication to the ISMS and to the principles of ISM.

OPPORTUNITIES FOR IMPROVEMENT

- Clarification is needed between institutional, project-level, and facility procedures in relation to roles and responsibilities and how they relate to the definition of line management/line organizations.

- Numerous informal, independent systems are used to manage issues with the Project Hanford Management Contract.

- The System Description inconsistently describes those mechanisms that comprise the safety management system. Several mechanisms were omitted and many are not well integrated.

- The 324/327 buildings have two separate entities involved with authorization of operations activities and the release of planned work.

- FH has not institutionalized a process to flow down all elements of the DEAR clause into subcontracts and has not institutionalized a process for approving subcontractor system descriptions.

- The contractor has not established formal processes for tailoring environmental, safety, and health requirements at low hazard facilities or for establishing a safety basis for facilities in transition to the River Corridor Project and legacy facilities undergoing deactivation.

- The CAM process does not clearly define deficiencies and allows issues to be screened out based on postulated consequence prior to analysis. This may result in eliminating an issue with safety or environmental impacts from CAMs.

TABLE OF CONTENTS

ACRONYMS

ASP	Analytical Services Provider
BBC	Business, Budgets, and Contracts (subteam)
CAP	Corrective Action Plan
CRAD	Criteria and Review Approach Document
DEAR	Department of Energy Acquisition Regulations
DOE	U. S. Department of Energy
ES&H	Environmental, Safety, and Health
FFTF	Fast Flux Test Facility
FH	Fluor Hanford
HAZ	Hazard Identification and Standard Selection (subteam)
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
MGO	Management Oversight (subteam)
NMS	Nuclear Materials Stabilization
PFP	Plutonium Finishing Plant
PHMC	Project Hanford Management Contract
RCP	River Corridor Project
RL	DOE, Richland Operations Office
SNF	Spent Nuclear Fuels
SME	Subject Matter Expert
WMP	Waste Management Project

1.0 INTRODUCTION

The U.S. Department of Energy (DOE) policy (DOE P 450.4) requires that safety be integrated into all aspects of the management and operations of its facilities. In simple terms, DOE and its contractors will "Do work safely." The goal of an institutionalized Integrated Safety Management System (ISMS) is to have a single integrated system that includes Environment, Safety, and Health (ES&H) requirements in the work planning and execution processes to ensure the protection of the worker, public, environment, and Federal property.

The purpose of the Fluor Hanford (FH) ISMS Phase I Verification was to determine whether ISMS processes are in place within the FH revised system to accomplish the objective of "Do work safely."

The ISMS is comprised of the following:

- Described functions, components, processes, and interfaces (system map or blueprint).
- Competent personnel perform assigned roles and responsibilities to manage and control the ISMS.

Therefore, this Phase I Verification evaluated the "paper" aspects of the ISMS to ensure the system is developed and effective within FH.

2.0 PURPOSE

The purpose of the FH ISMS Phase I Verification was to verify the adequacy of documentation as submitted to the Approval Authority by FH. The review was not only a review of the ISM System Description documentation, but was also a review of the procedures, policies, and manuals of practices used to implement safety management. To accomplish this purpose, the FH Phase I Verification was organized to achieve the following:

- Verify that key FH ISM System Description (FH 2000c) and associated plans, manuals of practice, and procedures used to implement safety management are adequate.
- Verify that the corrective actions derived from the previously conducted Fluor Daniel Hanford, Spent Nuclear Fuels (SNF) Project, and Nuclear Materials Stabilization (NMS) Project Phase I Verifications have been adequately completed.

The Project Hanford Management Contract (PHMC) supports the *Hanford Strategic Plan* (DOE-RL 1996) to safely clean up and manage legacy waste, protect the Columbia River Corridor, and deploy science and technology while incorporating the ISMS central theme to "Do work safely" and protect human health and the environment.

3.0 BACKGROUND

In response to the need to streamline Hanford Site activities and to better focus the PHMC on the site mission, FH has instituted a major re-structuring of the fundamental approach to their conduct of business. In October 1999, FH shifted from an integrator role to a role that emphasizes project management. The scope of FH project organizations includes the following:

- SNF Project - The mission of the SNF Project is to support Hanford Site clean up by providing safe, economic, and environmentally sound management of spent nuclear fuel in a manner that stages it to final disposition as well as deactivation of the associated facilities.

- NMS Project - The mission of the NMS Project is to provide for the safe stabilization, storage, repackaging, and shipment of the Plutonium Finishing Plant (PFP) inventory of plutonium-bearing materials and other nuclear materials to other locations for reuse, long-term storage, and/or final disposition.

- Waste Management Project (WMP) - The mission of the WMP is to provide safe, compliant, and cost-effective waste management services for the Hanford Site and the DOE complex. These services include solid waste storage, treatment, disposal, and management of liquid effluents.

- River Corridor Project (RCP) - The mission of the RCP is to deactivate contaminated facilities in preparation for decontamination and decommissioning.

- Fast Flux Test Facility (FFTF) Project - The FFTF and affiliated 400 Area buildings are to be maintained in a safe and compliant standby condition.

In support of the project management organizations, FH has established a series of functional area support organizations, as well as service provider organizations. Each functional area organization is responsible for monitoring, interpreting, and communicating requirements and standards to the projects and other organizations. Additionally, functional area support organizations assure consistency of application of cross-cutting issues. Project service provider organizations support the FH projects by providing site infrastructure and specialty services support.

FH has chosen to require specific descriptions of the safety management processes for three of these project service providers: Analytical Services Provider (ASP), Site Services/Infrastructure, and Site Services/Safeguards and Security. Of the three, ASP description documents will be incorporated into HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description* (FH 2000c), while Infrastructure and Safeguards and Security are to be prepared and maintained by the functional subcontractor organization (per HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts* [FH 1999a]).

HNF-MP-003, Rev. 3 (FH 2000c) represents the safety management system documentation required by Department of Energy Acquisition Regulations (DEAR) clause 970.5204-2 and the Project Hanford Management Contract (PHMC) clause C.2.D for FH. HNF-MP-003, Rev. 0 was

originally approved by the DOE, Richland Operations Office (RL) based on a review against the existing contractual requirements (derived from an earlier draft of the 970.5204-2 DEAR clause) for that document. The PHMC was recently modified to reflect FH's new organizational focus on project management, and HNF-MP-003 (FH 2000c) has been revised accordingly.

4.0 SCOPE

The scope of this Phase I Verification is associated with FH in its role as the PHMC management and integration contractor. Other than verifying processes that provide for the flow down of requirements, this review does not verify the implementation of ISM within the RL organization, but covers interface between DOE and FH.

To date, the following ISMS verifications have been performed for FH:

- Phase I Verification at the FH institutional level (DOE-RL 1999a)
- Phase I/II Verification at SNF (K Basins) (DOE-RL 1999b)
- Phase I Verification at NMS (PFP) (DOE-RL 2000).

As directed in the ISMS Verification Team Leader letter of appointment (Klein 2000), the results of previous ISMS Phase I Verifications were considered in the conduct of this verification to avoid unnecessary duplication of effort. These include the Phase I Verifications of FH, SNF, and NMS.

The objectives of this ISMS Phase I Verification are to provide the following:

- Verify adequacy of the FH ISM System Description (FH 2000c) and associated plans, manuals of practice, and procedures used to implement safety management.

- Verify that key corrective actions derived from the previously conducted FH, SNF, and NMS Phase I Verifications have been adequately completed.

- Identify, as appropriate, any strengths in the FH ISM System Description that deserve to be highlighted so good practices are reinforced and applied at other facilities and activities.

- Develop lessons learned from this verification effort that can be used to improve the effectiveness of future verifications.

5.0 PREREQUISITES

Overall acceptance by RL to proceed with the FH Phase I Verification was based on the following:

- Corrective actions and associated activities were completed as specified in *Corrective Action Plan for Fluor Hanford, Inc. Integrated Environment, Safety and Health Management System Phase I Verification* (FH 2000a).

- Prerequisites associated with the Phase I Verification were completed as identified in the ISMS implementation project schedule, per *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan* (FH 2000b).

6.0 INTEGRATED SAFETY MANAGEMENT SYSTEM ASSESSMENT RESULTS

6.1 INTRODUCTION

To conduct the verification review, the ISMS Verification Team was organized into three functional area subteams: Business, Budgets, and Contracts (BBC); Hazards Identification and Standards Selection (HAZ); and Management Oversight (MGO). Based on a review of previously conducted Phase I Verifications for FH, the HAZ subteam was augmented by two Subject Matter Experts (SME) in the areas of Environmental Protection/Chemical Management and Maintenance and Work Controls. The reviews were conducted using Criteria Review and Approach Documents that were based on the core functions and guiding principles from DOE P 450.4 and DOE G 450.4-1A. The following sections provide a summary of the ISMS Phase I Verification results for each of the subteam functional areas. The summaries focus on the guiding principles of ISM defined in DOE P 450.4.

The guiding principles of safety management provide the essential criteria for evaluating line management's performance in establishing an effective safety management program, identifying the requirements that apply to work processes, and ensuring that the necessary analysis and controls processes have been established to ensure that work can be performed safely and in an environmentally sound manner. The principles are both a framework and a tool for analyzing strengths and weaknesses in the ISM System Description. Weaknesses subsequently found in program implementation can frequently be directly related to weaknesses in the implementation of the guiding principles.

6.2 FUNCTIONAL AREA SUMMARIES

6.2.1 Business, Budgets, and Contracts

The BBC subteam assessed how FH's ISMS was incorporated into work processes by performing document reviews and interviews with FH and project-level personnel. The focus of the ISMS Verification was on work planning, change control, prioritization, personnel competence, and flow down of ISM requirements to subcontractors. In addition, selected corrective actions resulting from previous FH Phase I ISMS Verifications were reviewed.

Programmatic and ES&H expectations are set and consistent with DOE direction that flows down to various project missions. Prioritization of work scope is used to develop baseline schedules and are refined through baseline change control to reflect the impacts of the annual DOE budget cycle.

A mechanism to flow down ISMS requirements to subcontractors has been developed. The use of FH Special Provisions 5A (full ISMS) and 5B (standard ES&H) is now recognized by all FH projects. Special Provision 5A omits the provisions of DEAR 970.5204-2 paragraph (d), which is considered a deviation from the requirements of the DEAR clause. FH does not have a defined mechanism in place to review and approve the subcontractor's ISMS.

The allocation of resources to address safety, programmatic, and operational considerations was evidenced at the task level through procedures and discussions with interviewees. The principles of ISM are being applied in the contractor budgeting and resource allocation processes.

The BBC subteam reviewed four corrective action packages. Two corrective action packages (BBC 1.5 and BBC 1.7) adequately addressed the Opportunities for Improvement previously expressed by the ISMS Verification Teams. One corrective action package (BBC DOE/RL-99-73, Opportunity 2) partially addressed the previous concerns; however, complete closure of this corrective action was not achieved. The major element of the corrective action that is still unresolved is addressed in MGO.1. The remaining corrective action package (BBC 1.9) is being revised because the Corrective Action submittal did not adequately address the previous ISMS Verification Team's concern.

Line Management Responsible for Safety: FH scope definition, prioritization, and resource allocation processes address both ES&H and programmatic issues and involve line management staff for their input and approval of the results. Baseline changes require ES&H involvement and programmatic consideration by line management.

Competence Commensurate with Responsibility: Hiring and maintaining competency of personnel who define, prioritize, and approve work scope, including personnel who allocate resources to accomplish it, are achieved by complying with appropriate employment and training procedures. These documents, with minor exceptions, are generally consistent with the objective of ensuring that personnel competence is commensurate with assigned responsibilities. Established work scope definition, prioritization, approval, and resource allocation processes are understood. However, review of system descriptions revealed that the relationship between

Guiding Principle 3 (Competency Commensurate with Responsibility) and all core functions was absent in the documentation at the FH and project levels.

Balanced Priorities: FH adheres to the balanced priorities that flow down from RL, as evidenced through procedures and practices. The balancing of priorities is strengthened through the contractual performance incentives and the project's ES&H performance indicators. The primary element is safety. The priorities are reviewed on an annual basis with the public, regulators, and tribal nations to ensure that their priorities are incorporated.

Feedback and Continuous Improvement: The methodology for providing feedback and improvement in scope definition, resource allocation, and prioritization is the baseline change control process. The plan for executing the project scope of work is maintained current in a continuous manner via change control documentation. Impacts from proposed changes are thoroughly reviewed via the FH Change Control Board, and appropriate changes are approved.

Noteworthy Practices:

None.

Opportunities for Improvement:

- FH has not institutionalized a process to flow down all elements of the DEAR clause into subcontracts and has not institutionalized a process for reviewing and approving subcontractor system descriptions. **(BBC.1-2, BBC.1-3, BBC.1-4)**

- The FH ISM System Description inconsistently describes those mechanisms that comprise the safety management system. Several mechanisms were omitted and many are not well integrated. **(BBC.3-1, BBC.3-2)**

6.2.2 Hazards Identification and Standards Selection

The HAZ subteam assessed the FH ISMS to determine if it adequately described how the contractor identified hazards and requirements, analyzed hazards and controls, and performed work within these controls during the planning and conduct of work as applied to the PHMC. The HAZ subteam was also charged with verifying that the contractor has policies, procedures and/or mechanisms in place that ensured individuals tasked with identifying hazards, requirements, and controls; analyzing hazards; and ensuring work is performed within these controls had a level of competency commensurate with their responsibilities. This scope was subdivided into three objectives and two SMEs: Maintenance and Work Control and Environmental Protection/Chemical Management. In addition, selected corrective actions resulting from previous FH Phase I ISMS Verifications were reviewed. The three corrective actions reviewed were assigned to the SME Environmental Protection/Chemical Management. Two of the corrective actions required the institutionalization of environmental and radiological controls into FH–level Operations and Maintenance procedures, while the third dealt with the PFP institutionalization of the internal environmental technical review process. The three corrective actions were reviewed and found to be adequate for closure.

At the project and facility level, the contractor has adequately described how the core functions and guiding principles of ISM are accomplished. Polices, procedures and mechanisms used by the projects to meet the goals and objectives of ISM are, in some cases, not applied in a consistent, integrated manner.

HNF-MP-001 (FH 2000d) briefly discusses the management system process applied by FH. However, HNF-MP-003 (FH 2000c) does not describe the elements of the system discussed in HNF-MP-001 (i.e., Strategic Planning, etc.) and does not identify how the goals and objectives of ISM are accomplished by that management system. Future revisions of the ISM System Description should strongly consider describing appropriate procedural linkages and management system process flow.

Line Management Responsibility for Safety: At the facility level, procedures clearly indicated that individuals in line management positions were responsible for safety. The ISMS Verification Team found that as the hierarchy of documents progressed upward to the project level and to HNF-MP-001 (FH 2000d), this delineation of responsibility became less clearly defined. Section 2.3 of HNF-MP-001 discusses roles and responsibilities of Project Directors and Project Managers but does not clearly indicate that safety is a line management responsibility.

Clear Roles and Responsibilities: The contractor presented two documents, HNF-MP-001 (FH 2000d) and HNF-MP-003 (FH 2000c), as meeting the goals and objectives of ISM for work as applied to the PHMC. The Team found that the linkage of these documents relative to roles and responsibilities at the institutional, project and facility level was not clearly demonstrated. The team could not determine the clear responsibilities of the Discipline Lead as defined in HNF-MP-001 were adequately flowed down in HNF-MP-003. Further, three projects, RCP, WMP and ASP provided to the ISMS Verification Team implementing mechanisms for HNF-MP-001 that were in draft form. The concerns with the system description identified in the Environmental Protection/Chemical Management Assessment Form demonstrates an incomplete institutionalization within the management structure of clear roles and responsibilities of line management for transportation and packaging, chemical management, and solid waste functions at the site, project, and facilities levels.

Appendix B of HNF-MP-003 (FH 2000c) discusses expectations, which are defined as a role coupled with a responsibility assigned to an individual or an organization. This appendix appears to address the ISMS Verification Team's issues but was not presented by the contractor as meeting this guiding principle of ISM.

Competence Commensurate with Responsibility: Interviews with management and supervisors of FH and the projects demonstrated an understanding of the importance of these criteria and a good working knowledge of the procedures. Training documentation was consistent although the tailoring process varied with the use of the procedures. The responsibilities and qualifications were adequately applied and worker involvement was included in the process of hazard identification, hazard analysis, and in the development of controls for safe work.

As identified by Maintenance and Work Control relating to work control procedures, there was not consistent procedural flow down of specific technical roles and responsibilities for identification or control of hazards. And, there is no FH corporate level system describing a method to consistently achieve qualification verification for subcontractors at the same level as applied to the FH workforce. These items are not viewed as detrimental to satisfying their specific criterion contained in HAZ Objective 3, and therefore are not considered a concern for these criteria.

Safety Standards and Requirements Defined: FH has a comprehensive system of identifying and applying standards and requirements for protecting the environment and health and safety of the public and worker. The requirements are applied to the full range of facilities that are categorized as nuclear, radiological, non-nuclear, or industrial. FH uses a well-established documented process for tailoring and grading the ES&H requirements for the higher hazard nuclear facilities.

The PHMC requires that the requirements and standards be applied in a graded manner. However, the configuration management and control of these standards and requirements is inconsistent across the projects. Additionally, a formal process is lacking for tailoring and grading the application of standards and requirements for those facilities below Hazard Category III.

The contractor has not established a formal procedure to create Authorization Basis documents for those facilities transferred to the RCP without an established safety basis. In the case of these inactive legacy facilities with inadequate safety basis and/or poor characterization data, the contractor does not have a formal documented process or procedure to conduct further characterization and establish the safety basis necessary for deactivation.

Hazard Controls Tailored to Work Being Performed: FH has established methodologies and procedures for analyzing all types of hazards for the broad range of facilities, operations, and activities. These analyses, along with assessments, surveillances and other mechanisms, provide the basis for identifying a hierarchy of controls that are appropriate to the nature and magnitude of hazard. Interviews with FH management and project personnel and review of FH procedures indicated that the FH ISM System Description (FH 2000c) references corporate and project procedures to identify, analyze, and categorize hazards associated with work.

Operations Authorization: For WMP, Waste Encapsulation and Storage Facility (WESF), ASP, RCP and FFTF, the planning of work includes an integrated analysis of hazards and development and specification of necessary controls. The Automated Job Hazard Analysis (AJHA) tool and process is used for medium- and high-risk work. A graded approach is used for simple, low risk, and routine work. An Opportunity for Improvement was identified in the previous FH ISMS Phase 1 Verification conducted in October 1999, relative to the risk and complexity determination process specified in HNF-PRO-079, *Job Hazard Analysis* (FH 1999b). When this verification was initiated (April 2000), this Opportunity for Improvement had not yet been addressed.

For WMP, WESF, ASP, RCP, and FFTF, there is an adequate process for the authorization and control of work and a process for identifying opportunities for feedback and continuous

improvement. At the 324/327 facilities, a deficiency was identified in the area of work authorization. (See discussion in SME M&WC Assessment Form, Criterion 3 and concerns 1 through 4 for details.)

For WMH, WESF, ASP, RCP, and FFTF, procedures and mechanisms are in place that ensure line managers are responsible for safety, provide clear roles and responsibilities, and ensure a satisfactory level of competence.

Projects under the FH umbrella, in the area of Maintenance and Work Control, do not implement the requirements of the upper-tier HNF-PROs (HNF-PRO-079 [FH 1999b], HNF-PRO-069, *Work Management* [FH 2000f], and HNF-PRO-4616, *Supervision of Field Work Activities* [FH 2000g]) consistently across FH and the projects. This could lead to confusion for the Hanford Site work force as they perform work from facility to facility. See HAZ.3, Criterion 1, for additional discussion of this subject as related to hazard identification.

Noteworthy Practices

The contractor has institutionalized processes that provide good opportunities for worker involvement. **(SME-M&WC-1, SME-M&WC-2, MGO.3-2)**

Opportunities for Improvement

- Clarification is needed between institutional (HNF-MP-001 and HNF-MP-003) project and facility–level procedures in relation to roles and responsibilities and how they relate to the definition of line management and line organizations. **(HAZ.2-7, SME-EP-1, SME-EP-3, SME-EP-4)**

- The FH ISM System Description inconsistently describes those mechanisms that describe the safety management system. Several mechanisms were omitted and many were not well integrated. **(HAZ.2-5, HAZ.2-8, SME-EP-2, SME-EP-5, SME-M&WC-3)**

- Building 324/327 have two separate entities involved with the authorization of operations activities and the release of planned work. **(SME-M&WC-4)**

- The contractor has not established formal processes for tailoring ES&H requirements for low hazard facilities and for establishing the safety basis for facilities transitioning to RCP for deactivation of legacy facilities. **(HAZ.2-3, HAZ.2-4, HAZ.2-6, HAZ.2-9, HAZ.2-10, and HAZ.2-11)**

6.2.3 Management Oversight

The MGO functional area subteam assessed the institutionalization of the FH ISM System Description (FH 2000c) through document reviews and interviews with FH personnel. The MGO subteam review focused on 4 major areas including the 1) ISM System Description, 2) roles and responsibilities, 3) feedback and improvement, and 4) work control. The MGO subteam also reviewed corrective actions from previous FH ISMS Phase I Verifications. The subteam reviewed the FH ISM System Description (FH 2000c) and compared it with DOE

Policies 450.4, 450.5, and 450.6; the DEAR clauses 970.5204-2 and 970-5204-78; and direction to the contractor from the DOE. The Vice President, ES&H, when interviewed, stated that HNF-MP-003 (FH 2000c) was prepared consistent with DOE Policies 450.4, 450.5, and 450.6, the DEAR clauses, and direction to FH from the RL Approval Authority.

Since the previous FH Phase I Verification (conducted October 1999), FH has moved from an integrating-contractor-with-major-subcontractors organization to project-based organization with service providers.

All project/service provider senior managers interviewed demonstrated an awareness and dedication to the FH ISMS and to the principles of ISM. These interviews included line managers as well as support managers. All interviewees understood the principle that the line manager is responsible for safety. First-line supervision and the workforce supported the identification and development of safety controls.

Line Management Responsibility for Safety: The FH ISM System Description (FH 2000c) states that line management is responsible for implementing ISM such that work is planned and executed in a safe manner in accordance with applicable requirements. This responsibility is also stated in HNF-PRO-074, *Safety Responsibilities* (FH 1997) which outlines the responsibilities of both line management and supervisors for implementing safety. HNF-MP-003, Section 3.0 (FH 2000c) holds line management responsible for ensuring that hazards controls are adequate and to ensure work is planned, approved, and executed in a safe manner. Terminology clarification is needed between the FH ISM System Description (FH 2000c) and the FH Management Plan (FH 2000d) in relation to functional group managers, functional area managers, discipline leads, interpretive authorities, and technical authorities and how these functions relate to who is FH line management/line organization

Clear Roles and Responsibilities: Interviews conducted with project level personnel revealed that specified positions (such as facility managers, discipline leads, and functional area managers) roles and responsibilities were not consistent with those same titles described in the FH Management Plan (FH 2000d) for the implementation of the ISM System Description (FH 2000c). Positions descriptions reviewed for discipline leads at the project level were found to describe the project roles and responsibilities of personnel in the position, yet did not include those defined in HNF-MP-001 (FH 2000d). Table 1 of HNF-MP-001 is difficult to follow; some of the titles listed within the functional area responsibilities are being used on some projects as direct job titles and not on others. Through interviews, the MGO subteam found that the intent of the chart is to flow down roles and responsibilities regardless of the job title.

Competence Commensurate with Responsibility: FH has procedures that ensure personnel who supervise work have competence commensurate with responsibilities. HNF-MP-011, *Sitewide Qualification and Training Plan* (FH 1999c) provides Hanford Site-wide information concerning worker training and qualification. HNF-MP-011 establishes the framework and standards to ensure that all training provided to workers meets applicable contractual and regulatory requirements. HNF-MP-011 defines the mechanisms to meet the Hanford Site ISMS guiding principle ensuring that FH workers have competence commensurate with responsibility.

Based on interviews conducted during this verification, it was apparent that FH management was aware of the processes in place to ensure employees were competent and trained. Position descriptions reviewed defined the requirements for those individuals who supervise work. The appropriate training and qualification was found in the Training Implementation Matrices and Training Matrix (HNF-PRO-164, *Training Matrix Capabilities and Access*). By using the Training Matrix and Training Implementation Matrices, managers can ensure that employees are qualified and trained to conduct work in a safe manner.

Balanced Priorities: FH uses an integrated planning process to identify and prioritize mission-related tasks. This planning process supports development of the Multi-Year Work Plan (MYWP). Details of this process are described in HNF-3552, *FH Project Execution Plan*, Section 4.0, "Project Controls," Section 5.0, and Exhibits 2-4, 4-1, 4-2, 4-35-1, and 5-2. The project work breakdown structure (WBS) divides the project scope into discrete, manageable work packages. The WBS has a coding structure that permits tracking of progress, costs, work hours, and schedule.

Hazard Controls Tailored to Work Being Performed: FH institutional–level procedures for ES&H analysis for work are in place. These mechanisms ensure that controls are implemented prior to commencing work and that these controls remain in effect as long as the hazard is present. At the project and/or facility–level, procedures provide work authorization levels and process steps prior to commencing work. The work control process allows for worker input and the worker has Stop Work authority.

Provide Feedback and Continuous Improvement: FH uses a series of tools to provide feedback for both positive and deficient work activities. Some of these tools include Enhanced Work Planning, AJHA, post-job reviews, lessons learned, management self-assessment, and corrective action management. Use of these tools provides for worker involvement with input from various support organizations in the pre-planning and post-job reviews.

The feedback and improvement processes within the PHMC have improved since the October 1999 ISMS Phase I Verification. Many functions have been centralized with established single points of control. The FH plans demonstrate additional movement toward this centralized direction. Although improvement is noticeable, further effort will be needed.

The Corrective Action Management (CAM) process does not clearly define deficiencies and allows issues to be screened out based on postulated consequence prior to analysis. This may result in eliminating an issue with safety or environmental impacts from CAMs.

Additionally, there are numerous, informal systems in use to track issues. These informal systems are not associated with the CAMs system and many are not institutionalized.

Worker Involvement: All FH managers interviewed recognized the benefits of employee involvement in identification of hazards and the development of hazard controls. The contractor has institutionalized processes that provide good opportunities for worker involvement.

Noteworthy Practices

- All senior managers interviewed demonstrated an awareness and dedication to the ISMS and to the principles of ISM. **(MGO.1-1, MGO.1-4)**

- The self-assessment performed by FH in preparation for this verification were found to be thorough and comprehensive. **(MGO.3-1)**

Opportunities for Improvement

- The system description inconsistency describes those mechanisms that comprise the safety management system. Several mechanisms were omitted and many are not well integrated. **(MGO.1-2, MGO.1-4)**

- Clarification is needed between institutional (HNF-MP-001/HNF-MP-003) and project-level and facility procedures in relation to roles and responsibilities and how they relate to the definition of line management/line organizations. **(MGO.1-3, MGO.2-3, MGO.2-4, MGO.2-5, MGO.2-7, MGO.2-8, MGO.3-3)**

- Numerous informal, independent systems are used to manage issues with the PHMC. **(MGO.2-6, MGO.2-9, MGO.3-6, MGO.3-9)**

- The CAM process does not clearly define deficiencies and allows issues to be screened out based on postulated consequence prior to analysis. This may result in eliminating an issue with safety or environmental impacts from CAMs. **(MGO.2-6, MGO.2-9, MGO.3-4, MGO.3-5)**

7.0 CONCLUSION AND RECOMMENDATION

The team recommends that the RL Manager approve the ISM System Description after FH addresses the following:

- Definition of FH roles and responsibilities at the project/facility level

- Institutionalization of issue management systems that are independent of the Corrective Action Management System

- Resolution of two outstanding corrective actions resulting from previous Phase I Verifications.

8.0 LESSONS LEARNED

In developing the Review Plan (Volume 2) and the approach for this ISMS Verification, the Verification Team reviewed the lessons learned from the previous eight Hanford Site ISMS Verifications and incorporated those lessons applicable to this verification.

No new lessons learned were identified by the Team during this verification that would be of significant value to the final ISM verification planned for this fiscal year.

9.0 REFERENCES

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.

48 CFR 970.5204-78, "Laws, Regulations, and DOE Directives," Title 48, *Code of Federal Regulations*, (DEAR) Section 970.5204-78, as amended, U.S. Department of Energy, Washington, D.C.

48 CFR 970.5204-2, "Integration of Environment, Safety, and Health Into Work Planning and Execution," Title 48, *Code of Federal Regulations*, (DEAR) Section 970.5204-2, as amended, U.S. Department of Energy, Washington, D.C.

DOE, 1999, *Integrated Safety Management System (ISMS) Verification Team Leader's Handbook*, DOE-HDBK-3027-99, U.S. Department of Energy, Washington, D.C.

DOE P 450.4, *Safety Management System Policy*, U.S. Department of Energy, Washington, D.C., as amended.

DOE G 450.4-1A, *Integrated Safety Management System Guide*, Volume 1, "Guidance," and Volume 2, "Appendixes," U.S. Department of Energy, Washington, D.C., as amended.

DOE P 450.5, *Line Environment, Safety, and Health Oversight*, U.S. Department of Energy, Washington, D.C., as amended.

DOE P 450.6, *Secretarial Policy Statement Environment, Safety and Health Purpose and Scope*, U.S. Department of Energy, Washington, D.C., as amended.

DOE-RL, 1996, *Hanford Strategic Plan*, DOE/RL-96-92, Rev. 2, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 1999a, *Fluor Daniel Hanford, Inc., Integrated Safety Management System Phase I Verification*, DOE/RL-99-72, 2 Vols., U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 1999b, *Spent Nuclear Fuel Project Integrated Safety Management System Phase I/II Verification,* DOE/RL-99-73, 2 Vols., U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2000, *Plutonium Finishing Plant Integrated Safety Management System Phase I Verification,* DOE/RL-99-86, 2 Vols., U. S. Department of Energy, Richland Operations Office, Richland, Washington..

FH, 1997, *Safety Responsibilities,* HNF-PRO-074, Rev. 1, Fluor Hanford, Richland, Washington.

FH, 1999a, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts,* HNF-MD-4821, Rev. 0, Fluor Hanford, Richland, Washington.

FH, 1999b, *Job Hazard Analysis,* HNF-PRO-079, Rev. 4, Fluor Hanford, Richland, Washington.

FH, 1999c, *Sitewide Qualification and Training Plan,* HNF-MP-011, Rev. 1, Fluor Hanford, Richland, Washington.

FH, 2000a, *Corrective Action Plan for Fluor Hanford, Inc. Integrated Environment, Safety and Health Management System Phase I Verification,* FH 9958945A R1, Rev. 1, Fluor Hanford, Richland, Washington.

FH, 2000b, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan,* HNF-4554, Rev. 4, Fluor Hanford, Richland, Washington.

FH, 2000c, *Integrated Environment, Safety, and Health Management System Description,* HNF-MP-003, Rev. 3, Fluor Hanford, Richland, Washington.

FH, 2000d, *Fluor Hanford Management Plan,* HNF-MP-001, Rev. 2, Fluor Hanford, Richland, Washington.

FH, 2000e, *Solid Waste Management,* HNF-PRO-455, Rev. 1, Fluor Hanford, Richland, Washington.

FH, 2000f, *Maintenance Management,* HNF-PRO-069, Rev. 3, Fluor Hanford, Richland, Washington.

FH, 2000g, *Supervision of Field Work Activities,* HNF-PRO-4616, Rev. 3, Fluor Hanford, Richland, Washington.

Klein, K. A., 2000, *Memorandum of Appointment as Integrated Environment, Safety and Health Management (ISM) System Team Leader for Verification of the Fluor Hanford, Inc. (FHI) System Description,* Memorandum AMS: DSS/00-AMS-032, Keith A. Klein, Manager, DOE, Richland Operations Office to Michael A. Mikolanis, Office of the Departmental Representative, Headquarters, dated March 13.

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 4/27/00

OBJECTIVE

BBC.1 - FH 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-7, CE I-9).

Criteria

1. FH procedures translate mission expectations from DOE into tasks that permit identification of resource requirements, relative prioritization, and performance measures.

2. FH procedures provide for DOE approval of proposed tasks and prioritization. Work planning procedures provide for feedback and continuous improvement.

3. FH procedures provide for change control of approved tasks, prioritization, and identification of resources.

4. FH procedures provide for flow-down of DEAR 970.5204-2, *Integration of Environment, Safety and Health into Work Planning and Execution* requirements into subcontracts involving complex or hazardous work.

5. FH has established a process that establishes documents, and implements ES&H performance objectives, performance measures, and commitments in response to DOE program and budget execution guidance. The ISMS describes how system effectiveness will be measured.

6. Ensure completion of corrective actions from previous Phase I verifications.

Approach

Record Review

- 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.

- 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 the budget process allows adequate resources for standards selection, hazard controls, and work authorization processes to support work planning and scope definition.

- Review corporate/site manuals of practice that describe the budget and planning process and those documents that identify mission requirements, the approval of contractor plans, and those that address the assignment of budget priorities.

- Review corporate/site procedures for formally documenting change control procedures.

- Review how safety requirements are included in subcontracts as well as the flow-down of the DEAR clause into subcontracts for hazardous work.

- Select several mission tasks from the DOE programs and planning documents and track the tasks through the process to evaluate how the above criteria are met.

- Review future year planning and current year authorized work.

- Select several current-year authorizations and track change control.

- Select several project-specific subcontracts and review for incorporation of the ISM DEAR clauses.

Interviews

- Interview project contractor personnel responsible for management of the budget process.

- Interview line managers responsible for Headquarters-directed mission accomplishment.

- Interview the ES&H manager to determine how the process for integration of safety into mission tasks is accomplished.

- Interview managers at selected project levels to determine their understanding and implementation of the defined process for translation of mission into work authorization.

- Interview selected ES&H professionals and line managers to determine how safety is incorporated into the budget plans and authorization.

- Interview project contractor procurement personnel regarding subcontract flow-down requirements.

Record Review

- 00-MPD-048, *Contract No. DE-AC06-96RL13200 – Hanford Mission Planning Guidance (MPG) for Fiscal Year (FY)2002 – Amendment #2*, Correspondence from S. A. Sieracki, RL, to R. D. Hanson, FH, April 10, 2000

- 99-PID-054, *Contract No. DE-AC06-96RL13200 – Fiscal Year (FY) 2000 Baseline Updating Guidance (BUG)*, Correspondence from J. C. Hall, DOE-RL, to R. D. Hanson, FDH, April 7, 1999
- ASP-200, *Analytical Services Procedures*
  - Section 1.18, "Technical Procedures Group," Rev. 0, approved DRAFT dated April 11, 2000
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 2, September 30, 1999
- DE-AC06-RL13200, Mod 086, *Project Hanford Management Contract*, October 1, 1999
- FDH-9955044, *FY 2000 Multi-Year Work Plan Guidance*, Correspondence from L. Hafer, FDH, to Distribution, July 27, 1999
- FFTF Operations Administrative Procedure
  - A-28, *FFTF Work Management Process*, Rev. 13
  - A-33, *Work Prioritization and Scheduling*, Rev. 4
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-03, "Work Management Process," Rev. 5, December 13, 1999
  - Section CM-05, *Controlling Subcontractor Work at WESF*, Rev. 3, March 29, 2000
  - Section EN-2, "System Engineers' Responsibilities," Rev. 6, March 13, 2000
  - Section MS-13, "Work Prioritization and Scheduling," Rev. 0, March 8, 2000
- FSP-WESF-002, *WESF Conduct of Operations*
  - Section 1.0, "Operations Organization and Administration," Rev. 1, December 8, 1999
  - Section 16.1, "Technical Procedure Process," Rev. 2, September, 8, 1999
- HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, Rev. 4, March 10, 2000
- HNF-MD-016, *Annual Budget Submittal*, Rev. 0, March 31, 1997
- HNF-MD-029, *Hanford Site Technical Baseline Change Control*, Rev. 1, May 17, 1999
- HNF-MD-032, *Presidents and Employee Zero Accidents Councils*, Rev. 0, July 1, 1997
- HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts*, Rev. 0, July 30, 1999
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, Mach 10, 2000
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*, Rev. 3, April 12, 2000
- HNF-MP-005, *Risk Management Plan*, Rev. 0, February 26, 1998
- HNF-MP-599, *Quality Assurance Program Description*, Rev. 4, January 14, 2000
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-069, *Maintenance Management*, Rev. 3, January 14, 2000
- HNF-PRO-074, *Safety Responsibilities*, Rev. 3, March 2000
- HNF-PRO-078, *Subcontractor Safety & Health Management*, Rev. 2, August 10, 1999
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-123, *The Material Request/Purchase Requisition/Contract Requisition Process*, Rev. 6, July 22,1999
- HNF-PRO-183, *Preacquisition Planning Requirements*, Rev. 4, June 18, 1999
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 8, 1999

- HNF-PRO-192, *Assignment and Duties of the Buyers Technical Representative (BTR),* Rev. 2, December 3, 1999
- HNF-PRO-268, *Control of Purchased Items and Services*, Rev. 5, October 19, 1999
- HNF-PRO-4294, *Performance Indicator Process*, Rev. 1, December 1, 1999
- HNF-PRO-518, *Work Breakdown Structure, Index, and Dictionary,* Rev. 0, July 22, 1999
- HNF-PRO-519, *Schedule Development,* Rev. 0, March 16, 1998
- HNF-PRO-522, *Multi-Year Work Planning,* Rev. 0, September 1, 1999
- HNF-PRO-533, *Change Control,* Rev. 1, April 5, 2000
- HNF-PRO-585, *Cost Estimating,* Rev. 0, March 26, 1999
- HNF-PRO-706, *PHMC Acquisition System Requirements,* Rev. 0, October 17, 1997
- HNF-PRO-706, *PHMC Acquisition System Requirements,* Rev. 2, Draft
- HNF-SP-1240, *Fiscal Year 1999 Multi-Year Work Plan – Advanced Reactor Transition Program,* Rev. 1, September, 1998
- SI-RCP-009, *Pre-Award/Notice to Proceed Checklist For Contract Releases and Amendments,* Rev. 0, Draft
- WHC-IP-1217, *Work Management Guidance,* Rev. 0, January 19, 1996
- WMH-200, *Waste Management Hanford Procedures*
  - Section 2.1, "Organization and Administration," Rev. 2, September 16, 1999
  - Section 2.16, "Technical Procedures," Rev. 8, August 23, 1999
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 2, October 28, 1999
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 7.2, "Engineering Practices," Rev. 0, April 7, 2000, approved Draft.

Interviews Conducted

Analytical Services Provider (ASP)

- Functional Lead, Safety
- ISMS Coordinator
- Lead, Contracts and Procurement
- Lead, Project Controls and Budget
- Lead, Project Controls and Procurement
- Manager, Maintenance and Work Control
- Manager, Project Support.

Fast Flux Test Facility (FFTF)

- Accountant
- Project Control Analyst
- Project Office Engineer
- Project/Program Manager, Transition Project Office
- Scheduler
- Team Lead, Project Control

- Team Lead, Project Integration.

Fluor Hanford (FH)

- Acting Manager, Plan and Budget
- Director, Occupational Safety and Health
- Director, Project Controls
- Manager, Management Control Systems
- Manager, Performance and Reporting
- Manager, Project Hanford Management Contract (PHMC) Requirements and Standards (Training)
- Manager, Salary Administration and Human Resources Integrated System
- Vice President, Performance Assurance.

River Corridor Project (RCP)

- Buyer, Project Controls and Business Support
- Director, Business Management and Integration
- Expert, Performance Indicators
- Manager, Project Control and Business Support
- Planner/Scheduler/Estimator
- Project Manager, Project Controls and Business Support.

Waste Management Project (WMP)

- Acting Manager, Solid Waste Storage and Disposal Projects
- Activity Engineer
- Engineer (2)
- Engineer, Site Planning and Integration (2)
- ISMS Coordinator
- Manager, Contracts (2)
- Manager, Operations
- Manager, Procurement
- Nuclear Safety Oversight
- Operations Supervisor Waste Receiving and Process (WRAP) Facility
- Supervisor, Waste Sampling and Characterization Facility (WESF)
- Team Lead, Work Management Maintenance Project Support.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 4/27/00

Discussion of Results

Criterion 1: *FH procedures translate mission expectations from DOE into tasks that permit identification of resource requirements, relative prioritization, and performance measures.*

FH plans, procedures, and management directives provide a framework for the translation of DOE direction into work. DOE provides direction on mission and priorities through the annual *Hanford Mission Planning Guidance (MPG),* and *Baseline Updating Guidance (BUG)* documents. These documents are frequently passed directly to the Projects. However, additional guidance is sometimes provided by FH to clarify the DOE guidance; for example, FDH-9955044, *FY 2000 Multi-Year Work Plan Guidance.* The MPG is the source for the annual budget submittal and development of the Integrated Priority List (IPL). This established the general criteria for RL's priority scheme. Per the direction of HNF-MP-005, *Risk Management Plan,* Units of Analysis elements are created which group similar work activities within each project. Accordingly, FH has each project develop its own Project Priority List, which is reviewed and consolidated for submission to DOE. FH uses a risk–based approach for initial priority setting after complying with DOE direction contained in the MPG. In discussions with interviewees it was found that as part of the budget development process, resources are identified at the lowest level of detail of work activities to support the prioritization of mission work.

Even though the process is well understood by staff and management, the specifics for developing the IPL was found not to be well documented. **(BBC.1-1)** The IPL process is mentioned in the high–level documents. HNF-MP-001, *Fluor Hanford Management Plan,* and HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description,* but the detail is lacking for the project level. This is a repeat of a concern noted during the October DOE/RL-99-72, *Fluor Daniel Hanford, Inc., Integrated Safety Management System Phase I Verification.* It should be noted that project personnel are cognizant that the need to prioritize work properly is not documented.

Performance objectives, measures, and expectations are set for the budget year, which focus on the outcomes set by DOE. The FH process for monitoring the Projects is through monthly project reviews with senior management. While these reviews focus primarily on project schedule and cost status, numerous ES&H indicators are also presented (e.g., Occupational Safety and Health Lost/Restricted Workday Case Rate) as described in HNF-PRO-4294, *Performance Indicator Process.* For the current year there were no specific ES&H expectations set by DOE. FH corporate goals are being used for ES&H indicators and are reviewed by the President's Performance Assurance & Quality Council on a quarterly basis. Review of Project documentation showed the Projects considered the indicators in their planning and tracked them monthly. In addition, the business management systems and tools reviewed enabled the contractor to readily identify ES&H components of planned work; i.e., ES&H is integral and visible in work planning.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 4/27/00

Criterion 2: *FH procedures provide for DOE approval of proposed tasks and prioritization. Work planning procedures provide for feedback and continuous improvement.*

Review of FH documents and interviews with responsible personnel within the projects indicate that the existing plans, procedures, and processes provide for DOE review and approval of proposed tasks. At both the FH and project–level, procedures provide for significant upfront DOE engagement, review, and approval of work prioritization reflected in the IPL and subsequent development of the Multi-Year and Annual Work Plans. DOE formally issues the "PHMC Work Authorization" to annually approve work plans.

The work planning process provides for feedback and continuous improvement at two distinct levels of planning. At the Hanford Site level, the work plans are reviewed by the senior management team as well as external groups (e.g., RL, local/state/federal stakeholders). Second, during project execution, procedures provide for extensive employee involvement and utilization of a variety of tools and processes such as Job Hazard Analysis/Automated Job Hazard Analysis (AJHA). The change control process, HNF-PRO-533, *Change Control,* is recognized as the mechanism for adjustments to work plans as a result of new information from the feedback tools.

Criterion 3: *FH procedures provide for change control of approved tasks, prioritization, and identification of resources.*

Review of procedures and interviews indicate that FH has a comprehensive process for controlling technical, cost, and schedule changes down to the project level. Below the project level the quality of documentation is dependent on the business management staff. While no serious concerns were identified in the projects reviewed, interviews revealed that the basis of estimate is continuously updated as baseline changes occurred. HNF-PRO-585, *Cost Estimating,* requires that an audit trail be maintained between the original estimate and the revised estimate, and that the Basis of Estimate be maintained as a record until project closeout. However, discussion with project staff demonstrated that the skill of the staff incorporation of ES&H review of changes is visible at all levels.

Criterion 4: *FH procedures provide for flow-down of DEAR 970.5204-2, Integration of Environment, Safety and Health into Work Planning and Execution requirements into subcontracts involving complex or hazardous work.*

The controlling document for ensuring that ISM requirements are properly imposed on subcontractors is HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts.* This management directive is referenced in HNF-MP-003, the overall controlling document for ISMS implementation. HNF-MD-4821 specifically mandates that Department of Energy Acquisition Regulation (DEAR) clause 970.5204-2 requirements be flowed down to subcontractors involved in complex or hazardous work. The process used to accomplish this is adequately described in this management directive and cross-references to other necessary documents are included. HNF-MD-4821 contains a cancellation provision, as follows: "This MD will be cancelled after this guidance is fully incorporated into the appropriate site procedures and field implementation of this guidance is achieved." At the time of this verification,

HNF-MD-4821 was not yet completely referenced in the guiding HNF-PRO and project documents. Of the HNF-PROs referenced in HNF-MD-4821, only HNF-PRO-192, *Assignment and Duties of the Buyers Technical Representative (BTR)* provides a direct link back to HNF-MD-4821. The other PRO documents link back indirectly by referencing other documents that eventually lead to HNF-MP-003. Both the River Corridor Project (RCP) and the WMP identified flowdown weaknesses in their ISMS self–assessments. The RCP has developed a draft procedure, SI-RCP-009, *Pre–Award/Notice to Proceed Checklist for Contract Releases and Amendments*, that contains adequate ISMS flowdown direction. The WMP has just begun identifying the necessary changes they intend to make to WMH-200, *Waste Management Hanford Procedures*, Section 3.5, "Subcontractor Project and Construction Work." The WESF has an existing document, FSP-WESF-001, *WESF Project Administration*, Section CM-05, "Controlling Subcontractor Work at WESF," that contains adequate ISMS flowdown direction. The FFTF and ASP do not have project–specific documents in this area (although ASP reportedly intends to incorporate such guidance into ASP-200, *Analytical Services Procedures*, Section 3.5, "Subcontractor Project and Construction Work"), but rely on the HNF-PRO series to provide the pertinent guidance. The contractor did not present a cohesive site-wide plan to incorporate HNF-MD-4821 flowdown requirements into applicable guidance documents. Current references frequently lead to HNF-MD-4821 only through rather circuitous paths, and incorporation of the pertinent guidance is being made piecemeal, project by project. Incorporation of DEAR 970.5204-2 flowdown requirements into operating level documents remains unfinished. Specifically, implementing documents do not reference the controlling document, HNF-MD-4821, for ensuring that the flowdown of ISM requirements are properly imposed on subcontractors. **(BBC.1-2)**

The determination of flowdown requirements is made using the "ISMS Clause Flow Down Prescreening Questions" (Attachment B, HNF-MD-4821) to determine the appropriate level of ISM and/or standard ESH&Q requirements to flow down to subcontractors. All onsite services are subject to either Special Provision 5A (SP-5A) or Special Provision 5B (SP-5B). SP-5A imposes full ISMS provisions (as defined by FH) and is flowed down to all onsite subcontractors performing work considered complex or hazardous, as determined by the prescreening process. SP-5B is flowed down to all other onsite subcontractors where the work does not require the full rigor of ISMS. The AJHA may also be used to assist in the determination of the appropriate flow down requirements. Through interviews and random sampling, it was found that the prescreening questionnaire is being consistently used and the appropriate SP-5A/SP-5B decision incorporated into the Statements of Work. It should be noted that Special Provision 5A does not include the flowdown of paragraph (d) of DEAR 970.5204-2. This particular paragraph addresses performance objectives, performance measures, and commitments. The DEAR clause requires the flowdown of a clause that is substantially the same into subcontracts involving complex or hazardous work onsite at a DOE–owned or -leased facility; yet the provisions of DEAR 970.5204-2 paragraph (d) are omitted from Special Provision 5A. **(BBC.1-3)** The DOE has a policy requiring revisions to DEAR 970.5204-2 be submitted by the RL Manager (or designee) to the DOE Procurement Executive for approval before incorporation into any prime contract. FH has no similar policy for submitting proposed clause changes to the RL Manager for approval prior to inclusion into subcontracts. In certain instances, FH requires subcontractors

to submit an ISM System Description. However, there is no defined process or implementing mechanism for FH review and approval of subcontractor ISM System Descriptions. **(BBC.1-4)**

Current flowdown status to major subcontractors is as follows:

The DynCorp subcontract and the Waste Management Technical Services (WMTS) task ordering agreement have flowdown clauses that are substantially the same as DEAR 970.5204-2.

The Lockheed-Martin Services, Inc. task–ordering agreement, the Protection Technology Hanford subcontract, and the Fluor Federal Services (FFS) master agreement contain the 5A special provision. The other A&E pool members also contain the 5A special provision. The text of the clauses included into the preceding subcontracts and ordering agreements are slightly different from company to company, and from SP-5A, but the intent and meaning remain similar and in accordance with DEAR 970.5204-2, except for the omission of paragraph (d) provisions.

It should be noted that HNF-PRO-706, *PHMC Acquisition System Requirements*, sets forth the general acquisition system requirements that will govern the acquisition of goods and services and incorporates the attendant flowdown provisions of the FH prime contract. However, it currently does not mention flow down of ISMS requirements, nor does it reference all of the procurement procedures that effect the acquisition system. A proposed draft revision was reviewed that directly references the subject DEAR clause.

A document referenced in HNF-MD-4821 that strengthens the application of ISMS core functions is HNF-PRO-186, *Preparing a Statement of Work for Services,* that requires each Statement of Work satisfy the basic core functions as described in HNF-MP-003 for defining the scope of work, analyzing hazards, and implementing hazard controls.

Criterion 5: *FH has established a process that establishes documents, and implements ES&H performance objectives, performance measures, and commitments in response to DOE program and budget execution guidance. The ISMS describes how system effectiveness will be measured.*

Performance measures are established in the DOE contract with FH and are flowed down to the Projects. The annual Multi-Year Work Plan (MYWP) guidance specifically incorporates the establishment of yearly performance measures at the project–level, which are approved through FH and DOE. The FH Vice President, Performance Assurance and FH Director Occupational Safety & Health explained the FH process for establishing, documenting, and implementing the ES&H performance objectives, performance measures, and commitments. FH management directive, HNF-MD-018, *Performance Reporting* supports the FH performance measurements process. It was demonstrated through document review that ESH goals are established at the FH and project levels. A good example of a performance measurement is River Corridor Project's Corporate Management goal of Operational Safety and Health Act recordable accident rate of 25% below the FY 1999 rate as established in the MYWP.

Criterion 6: *Ensure completion of corrective actions from previous Phase I verifications.*

BBC 1.5 *HNF-PRO-533, Change Control and HNF-MD-029, Hanford Site Technical Baseline Change Control, are not linked.*

The corrective action package documentation has been reviewed and verified that its contents adequately address the concerns previously expressed by the review teams. Both HNF-PRO-533 and HNF-MD-029, *Hanford Site Technical Baseline Change Control* have references that explicitly link the two procedures together.

BBC 1.7 *ES&H considerations are not formalized and are not an integral element of the change control process. Specifically, the change control process does not explicitly address how ES&H implications of proposed changes are evaluated and addresssed.*

The corrective action package documentation has been reviewed and verified that its contents adequately address the concerns previously expressed by the review teams. HNF-PRO-533 has been modified to explicitly incorporate ES&H involvement via incorporating the Vice President of ES&H as a permanent FH Change Control Board member and notification of ES&H staff to review pending Baseline Change Requests for analysis of potential impacts.

BBC 1.9 *The integration and linkages among FDH Procedures needs to be more fully developed.*

The documentation has been reviewed and the BBC Team can not recommend closure of this corrective action package. The original corrective action package submittal did not adequately address the previous team's concern.

Based on negotiations between FH and the RL ISMS Verification Team, the closure package will be subsequently revised to fully address the concern detailed in this Opportunity for Improvement. Further discussions with appropriate FH staff concluded that adequate corrective action activities can be achieved. It was agreed that the following corrective action language should be incorporated into the FH corrective action plan. "The procedure governing the preparation and management of documentation in the Project Hanford Management System (PHMS), HNF-PRO-589, Processing Project Hanford Procedures will be revised by July 31, 2000. This revision will expand the scope of the procedure to cover all documents in the PHMS. It will require that all requirements identified in the PHMS have a source reference listed in the document in which they appear. It will also require that each document list interfacing documents so that impact of changes can be constructed with increased assurance of completeness." This revised action adequately addresses the concern previously expressed by the RL ISMS Verification Team.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 4/27/00

DOE/RL-99-73, Opportunity 2 *Implementation of ISMS flow down to construction subcontract on the SNF Project is not adequate. Procedural guidance is preliminary and needs to be more fully developed to assure that flow down of requirements are clearly understood and met. (BBC.1-5, MG.1a-1, MG.1a-2, SME.4-3)*

Closure of this corrective action is not achieved. The major portion of the corrective action package inadequacy is addressed in MG.1. The BBC portion of the corrective action package documentation has been reviewed and was found to partially address the concerns previously expressed by the RL ISMS Verification Team. The Spent Nuclear Fuel Project appendix to HNF-MP-003 now includes specific references to flowdown requirements for construction subcontracts. Contract language clause substantially the same as SP-5A has now been incorporated into the FFS master agreement. However, there still remains the issue of the omission of DEAR 970.5204-2 paragraphs (d) from SP-5A.

Conclusion

Based on the documents reviewed and the interviews conducted, two of the four corrective action packages are considered to adequately address previous concerns, and regarding this verification, no additional concerns were identified that would cause this objective to be considered not met.

This objective has been met.

Strengths:

None.

Concerns:

- The processes associated with prioritization are not fully documented. Specifically, there are no procedures that describe the process used by the contractor to ensure a proper balance among competing priorities of the organization reconciling external and internal conflicts. The procedure should explicitly state how FH ensures that safety is the top priority in the allocation of resources. **(BBC.1-1)**

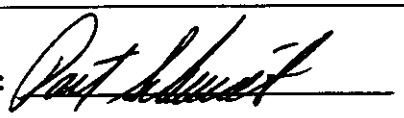
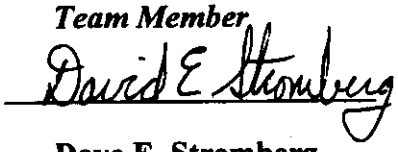
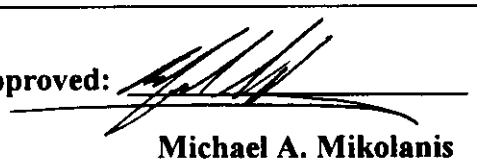
- Incorporation of DEAR 970.5204-2 flowdown requirements into operating level documents remains unfinished. Specifically, implementing documents do not reference the controlling document, HNF-MD-4821, for ensuring that the flowdown of ISM requirements are properly imposed on subcontractors. **(BBC.1-2)**

- The DEAR clause requires the flowdown of a clause that is substantially the same into subcontracts involving complex or hazardous work onsite at a DOE-owned or -leased facility; yet the provisions of DEAR 970.5204-2 paragraph (d) are omitted from SP-5A. **(BBC.1-3)**

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 4/27/00

- There is no defined process or implementing mechanism for FH review and approval of subcontractor ISM System Descriptions. **(BBC.1-4)**

Submitted:  **Bart Schmidt** ***Team Member***  **Dave E. Stromberg** ***Team Member***	**Approved:**  **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 4/27/00

OBJECTIVE

BBC.2 - FH budgeting and resource assignment procedures include a process to ensure the application of balanced priorities. Resources are allocated to address ES&H, 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 FH's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results, including commitments and agreements to DOE.

2. FH procedures allow for adequate analysis of hazards associated with the work being planned.

3. FH procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.

4. Resource allocations reflect the tailored hazard controls.

5. The incentive and performance fee structure promotes balanced priorities.

Approach

Record Review

- Review corporate/site manuals of practice that describe the budget and planning process and those documents that address the assignment of budget priority as well as the procedures for their development.

- Select several mission tasks from the DOE requirements and outyear planning documents to determine if they adequately address the assignment of resources with balanced priorities.

- Select several current year authorizations and review selected funded tasks at the individual task level to verify balanced priorities.

Interviews

- Interview responsible DOE and contractor personnel who manage the budget process to determine their understanding of the priority for assigning resources.

- Interview line managers responsible for DOE mission accomplishment.

- Interview the ES&H manager to determine the process used for integration of safety into mission tasks. Interview selected managers at each level of corporate/site organizations to determine their understanding of the allocation of resources with appropriate priority.

Record Review

- 00-MPD-048, *Contract No. DE-AC06-96RL13200 – Hanford Mission Planning Guidance (MPG) for Fiscal Year (FY)2002 – Amendment #2*, Correspondence from S. A. Sieracki, DOE-RL, to R. D. Hanson, FH, April 10, 2000
- 99-PID-054, *Contract No. DE-AC06-96RL13200 – Fiscal Year (FY) 2000 Baseline Updating Guidance (BUG)*, Correspondence from J. C. Hall, DOE-RL, to R. D. Hanson, FDH, April 7, 1999
- ASP-200, *Analytical Services Procedures*
  - Section 1.18, "Technical Procedures Group," Rev. 0, approved DRAFT April 11, 2000
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
- DE AC06-RL13200, Mod 086, *Project Hanford Management Contract*, October 1, 1999
- DE AC06-RL13200, Mod 090, *Project Hanford Management Contract*, October 28, 1999
- FDH-9955044, *FY 2000 Multi-Year Work Plan Guidance*, Correspondence from L. Hafer, FH, to Distribution, July 27, 1999
- FFTF Operations Administrative Procedure
  - A-28, *FFTF Work Management Process*, Rev. 13
  - A-33, *Work Prioritization and Scheduling*, Rev. 4
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-03, "Work Management Process," Rev. 5, December 13, 1999
  - Section EN-2, "System Engineers' Responsibilities," Rev. 6, March 13, 2000
  - Section MS-13, "Work Prioritization and Scheduling," Rev. 0, March 8, 2000
- FSP-WESF-002, *WESF Conduct of Operations*
  - Section 1.0, "Operations Organization and Administration," Rev. 1, December 8, 1999
  - Section 16.1, "Technical Procedure Process," Rev. 2, September, 8, 1999
- HNF-MD-016, *Annual Budget Submittal*, Rev. 0, March 31, 1997
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*, Rev.3, April 12, 2000
- HNF-MP-005, *Risk Management Plan*, Rev. 0, February 26, 1998
- HNF-PRO-054, *Sharing Fee With Employees*, Rev. 0, July 15, 1998
- HNF-PRO-069, *Maintenance Management*, Rev. 3, January 14, 2000
- HNF-PRO-074, *Safety Responsibilities*, Rev. 3, March 2000
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 8, 1999
- HNF-PRO-357, *Completion and Closure of Performance Agreements*, Rev. 1, September 30, 1999
- HNF-PRO-518, *Work Breakdown Structure, Index, and Dictionary*, Rev. 0, July 22, 1999
- HNF-PRO-519, *Schedule Development*, Rev. 0, March 16, 1998

- HNF-PRO-522, *Multi-Year Work Planning,* Rev. 0, September 1, 1999
- HNF-PRO-533, *Change Control,* Rev. 1, April 5, 2000
- HNF-PRO-585, *Cost Estimating,* Rev. 0, March 26, 1999
- HNF-SP-1240, *Fiscal Year 1999 Multi-Year Work Plan – Advanced Reactor Transition Program,* Rev. 1, September, 1998
- HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan,* Rev. 4, March 10, 2000
- WHC-IP-1217, *Work Management Guidance,* Rev. 0, January 19, 1996
- WMH-200, *Waste Management Hanford Procedures*
  - Section 2.1, "Organization and Administration," Rev 2, September 16, 1999
  - Section 2.16, "Technical Procedures," Rev. 8, August 23, 1999
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 7.2, "Engineering Practices," Rev. 0, April 7, 2000, approved Draft.

Interviews Conducted

Analytical Services Provider (ASP)

ISMS Coordinator.

Fast Flux Test Facility (FFTF)

- Accountant
- Project Control Analyst
- Project Office Engineer
- Project/Program Manager, Transition Project Office
- Scheduler
- Team Lead, Project Control
- Team Lead, Project Integration.

Fluor Hanford (FH)

- Acting Manager, Plan and Budget
- Director, Project Controls
- Manager, Management Control Systems
- Manager, Performance and Reporting
- Site Planning and Integration Analyst
- Vice President, Performance Assurance.

River Corridor Project (RCP)

- Director, Business Management and Integration
- Electrical Engineer
- Manager, Project Control and Business Support
- Planner/Scheduler/Estimator
- Project Manager, Project Controls and Business Support.

Waste Management Project (WMP)

- Acting Manager, Solid Waste Storage and Disposal Projects
- Activity Engineer
- Contracts Manager
- Engineer
- Engineer, Site Planning and Integration
- Engineer, Site Planning and Integration
- ISMS Coordinator
- Nuclear Safety Oversight
- Operations Manager
- Operations Supervisor Waste Receiving and Processing (WRAP) Facility
- Supervisor, Waste Sampling and Characterization Facility (WESF)
- Team Lead, Work Management Maintenance Project Support.

Discussion of Results

Criterion 1: *The FH's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results, including commitments and agreements to DOE.*

In reviewing the applicable procedures at the Project level, it was found that projects use a standard set of guidance documents and procedures written at the PHMS level for the prioritization and allocation process-planning phase of the budget. **(BBC.2-1)**

The set includes the following:

- Annual guidance that flows down from DOE in the Mission Planning Guidance and the Baseline Updating Guidance
- HNF-PRO-186, *Preparing a Statement of Work for Services*
- HNF-PRO-518, *Work Breakdown Structure, Index, and Dictionary*
- HNF-PRO-519, *Schedule Development*
- HNF-PRO-522, *Multi-Year Work Planning*
- HNF-PRO-585, *Cost Estimating*
- HNF-MP-005, *Risk Management Plan*

- HNF-MD-016, *Annual Budget Submittal.*

In addition, HNF-MP-001, *Fluor Hanford Management Plan* and HNF-MP-003, *Integrated Environment Safety and Health Management System (ISMS) Plan* delineates expectations for line management to integrate ES&H into work planning. This includes defining the scope of work, identifying the hazards and applicable ES&H requirements based on the applicable Authorization Envelope, and requiring that appropriate controls be implemented to mitigate hazards prior to performing the work. By incorporating ES&H requirements into the definition of work scope, ES&H resources are budgeted for and adequate to support Project needs.

In developing the building blocks for the budget (i.e., Basis of Estimate), it was demonstrated that line management was involved from the beginning of work scope definition. Line management continues their involvement through interim processes; this ensures that minimum safe activities are properly accounted for in final project prioritization lists. In the execution year the prioritization of work activities is maintained within the approved project schedules and detailed working schedules. The schedules are developed and maintained beginning in the budget cycle through the execution of work and range from the Projects' lower-level, detailed activity schedules that roll up to top-level summary schedules. In addition, those schedules depict DOE's commitments and agreements through the inclusion of selected Project Hanford milestones, including the following: 1) all DOE-Headquarters; 2) enforceable agreement milestones (Tri-Party Agreement major and Tri-Party Agreement major interim); 3) Defense Nuclear Facilities Safety Board (DNFSB) commitments; and 4) selected RL milestones, as agreed to by RL Project Managers. Stakeholder and regulator involvement is occurring in the development of those commitments and the creation of the project priority lists for each year's budget request.

Criterion 2: *FH procedures allow for adequate analysis of hazards associated with the work being planned.*

As evidenced through documentation review and interviews for work planning, maintaining clear, risk-informed work definition at each level of the work breakdown structure (HNF-PRO-518) is a critical element of ES&H management functions. This sets the stage for the scope and depth of hazards and environmental impact identification/analysis for known hazards. The work breakdown structure is the foundation for the budget formulation allocation process, and is the primary factor in establishing expectations and accountability mechanisms.

For the budget execution allocation process, HNF-PRO-079, *Job Hazards Analysis* (JHA) is the primary mechanism used to further identify ESH hazards and environmental impacts associated with a specific facility or project work activity and the ES&H standards and requirements that apply to the scope of work. Through interviews, it was evidenced that the JHA procedure applies to the performance of all high and medium risk work activities involving general plant maintenance, operations, and construction. Therefore, FH procedures do allow for adequate analysis of hazards starting in budget formulation through budget execution processes. However, it should be noted that although the linkage of the JHA to the allocation of funding

through change control is understood by project staff that linkage is not documented via the procedures. **(see BBC.1-3)**

Criterion 3: *FH procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.*

Through documentation review, the primary procedures and guidance that meet this criterion include the following:

- 00-MPD-048, *Contract No. DE-AC06-96RL13200 – Hanford Mission Planning Guidance (MPG) for Fiscal Year (FY)2002 – Amendment #2*
- 99-PID-054, *Contract No. DE-AC06-96RL13200 – Fiscal Year (FY) 2000 Baseline Updating Guidance (BUG)*
- HNF-PRO-533, *Change Control*
- HNF-PRO-079.

DOE guidance and Hanford Site procedures work together to ensure that resources are allocated to cover implementation of hazard controls for tasks being funded. It starts with the Mission Planning Guidance (MPG), which facilitates the determination of which tasks will be funded in the budget year, then continues with the development of the final baseline documentation in accordance with the Baseline Updating Guidance (BUG). This encompasses planning of the proper hazard controls for the known conditions.

Once the baseline is established and approved, a change mechanism that can be used as required is the Change Control procedure. This allows for any fluctuation within the allocation of resources based on further definition of work scope or applying controls to any unforeseen hazards that arise. Most fluctuations will be discovered through the application of HNF-PRO-079, as this mechanism is applied to medium and high-risk tasks. For low risk tasks, alternate methods of identifying hazards may be used. Therefore, identification of ES&H hazards is accomplished through the JHA process for medium and high-risk tasks, as well as analysis of the proper implementation of hazard controls. If the current allocation of resources needs to be adjusted, line management will proceed with a baseline change request in accordance with the Change Control procedure. This procedure is the last step in the process that allows for the implementation of adequate hazard controls for tasks being funded.

Criterion 4: *Resource allocations reflect the tailored hazard controls.*

The tailoring of hazard controls begins in the work planning process and continues through work execution. Generally, HNF-MP-001 identifies necessary requirements, policies and procedures, as appropriate to begin the tailoring process for hazard controls. HNF-MP-003 contains the implementing mechanisms, which define the criteria for the depth and rigor of the facility

hazards analysis. Known hazards are identified and appropriate controls are incorporated into the basis of estimate in accordance with HNF-PRO-533 when work scope is defined.

For work scope execution, the Job Hazard Analysis process identifies hazards and the necessary controls. The Job Hazard Analysis process also references the applicable standards and requirements. In reviewing procedures, WMP-200, *Waste Management Project Procedures*, Section 7.2, "Engineering Practices," demonstrated roles and responsibilities of staff to 1) use preliminary AJHA to make further engineering evaluations and to help establish the functional design criteria for a project or task; and 2) use engineering judgement to determine a graded approach in the documentation of the Request for Engineering Services. Interviews with projects also provided several examples where instances of work scope execution resulted in the discovery of unknown hazards that resulted in redefinition of scope, evaluated risk, and priority. All examples demonstrated that controls and procedures are in place to analyze and tailor the hazard controls to safely proceed with the execution of work via the proper allocation of resources. In addition, per the contract FH also coordinates with other site prime contractors in the performance of its work while maintaining the ES&H environment as a prime consideration.

Criterion 5: *The incentive and performance fee structure promotes balanced priorities.*

As per Clause H-41 of the contract, "The Government will develop performance objectives, measures, and expectations along with related fee distribution for the coming fiscal year which, after discussion with the contractor, will be unilaterally added to the contract." The only specific incentive procedure that pertains to documenting completion of incentives is HNF-PRO-357, *Completion and Closure of Performance Agreements*. This procedure also assigns responsibilities for ensuring completion of subject performance agreements. The Contractor's priorities are driven by the FH contract (DE-AC06-RL13200, through Modification 090) that reflects the fee structure imposed by RL. Modifications 086 and 090 contain the FY2000 performance incentives.

The flowdown of the performance incentives within the Project Hanford Management Contract (PHMC) incorporates RL's balanced priorities as reflected in the *Baseline Updating Guidance for Multi-Year Work Plans*. This determination was made through a sampling of the performance incentives contained in the cited contract modifications. The Contractor participates in the development of the performance incentives by making recommendations to RL, participating in incentive development meetings with RL staff, and proposing changes to existing incentives. Even though it is not explicitly stated, each of the individual project-specific incentives require that work be performed safely as contractually required through the comprehensive portion of the fee structure. In general, the goals of the project-specific incentives are to safely accelerate the Hanford Site work scope. This implies through the acceleration of work scope that the reductions of risk to public health and safety, worker health and safety, and the environment would ultimately be reached sooner and therefore reduce the amount of time any particular risk exists. In addition, the comprehensive incentive (FH–Comprehensive) explicitly incorporates protection of worker safety and health, public safety and health, and the environment through the clauses A and B in performance objective/measure 1.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 4/27/00

Of note is HNF-PRO-054, *Sharing Fee With Employees*; this procedure requires that each PHMC team member share 5% of earned fee with employees through merit-based programs. Each team member is directed to administer an employee recognition program "which identifies, reinforces, and promotes safe and environmentally protective work behavior, promotes quality values, or recognizes positive contributions resulting in improved employee performance." Such programs are an added incentive to complete work in such a manner as to meet the expectations of the contractual performance incentives, which represent balanced Hanford Site-wide priorities.

Conclusion

This review did not reveal any substantial gaps in documentation incorporating balanced priorities into the budget or business systems. Documentation for resource allocation indicates that safety, programmatic, and operational considerations are incorporated into these processes.

This objective has been met.

Strengths:

Projects use a standard set of guidance documents and procedures written at the PHMS level for the prioritization and allocation process-planning phase of the budget. **(BBC.2-1)**

Concerns:

None.

Submitted: Patty G. Ensign **Patty G. Ensign** ***Team Member***	**Approved:** **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.3** DATE: 4/27/00

OBJECTIVE

BBC.3 - The contractor procedures and practices ensure that personnel who define the scope of work and allocate resources have and maintain competence that is commensurate with the assigned responsibilities. (CE I-8)

Criteria

1. FH procedures ensure that the personnel, including line management who define, prioritize, and approve the scope of work and allocate resources, have and maintain competence that is commensurate with the assigned responsibilities.

2. FH 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 include defining the scope of work and allocation of resources to determine competence in prioritizing and approving work with tailored hazard controls.

Record Review

- Exempt Job Descriptions
  - Director, 324 Building Deactivation Project
  - Director, 327 Building Deactivation Project
- HNF-1275, *WRAP Dangerous Waste Training Plan*, Rev. 3, December 1999

- HNF-4554, *Integrated Environment, Safety, and Health Management System (ISMS) Implementation Project Plan*, Rev. 4, March 2000
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*, Rev. 3, April 12, 2000
- HNF-MP-011, *Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-MP-599, *Quality Assurance Program Description*, Rev. 4, January 14, 2000
- HNF-POL-EMPLOY, *Employee Training Policy*, Rev. 0, May 16, 1997
- HNF-PRO-021, *Employment and Personnel Placement*, Rev. 2, January 20, 2000
- HNF-PRO-046, *Compensating Except and Salaried Non-exempt Employees*, Rev. 0, July 15, 1998
- HNF-PRO-164, *Training Identification and Training Matrix*, Rev. 1, February 22, 2000
- HNF-PRO-168, *Employee Training*, Rev. 0, February 16, 1998
- Performance Assessment and Development Forms
  - Director, 324 Building Deactivation Project
  - Director, 327 Building Deactivation Project
- Qualification Cards
  - 222-S Shift Supervisor
  - SWSD Project Manager
  - WRAP Facility Manager
  - WSCF Support Operations Supervisor
- WMH-390, *Training Procedures*
  - Section 1.30, "Field Work Supervisor," Rev. 0, November 18, 1999
  - Section 1.41, "WRAP Operations Manager," Rev. 1, November 18, 1999
  - Section 6.2, "Developing Qualification Cards," Rev. 0, November 18, 1999.

Interviews Conducted

Analytical Services Provider (ASP)

- Manager, Maintenance
- Manager, Project Support
- Manager, Quality Assurance
- Specialist, Functional Safety Lead
- Specialist, Human Resources
- Specialist, Project Controls and Budget Lead
- Specialist, Training Lead.

Fast Flux Test Facility (FFTF)

- Manager, Fuels and Materials Examination Facility (FEMF) Maintenance
- Manager, Transition Project Office
- Manager, Work Control/Scheduling

- Specialist, Accountant
- Specialist, Financial Scheduler.

River Corridor Project (RCP)

- Manager, Business
- Manager, Training/Emergency Preparedness
- Planner, 327 Facility
- Specialist, Human Resources
- Specialist, Training
- Specialist, Training/Emergency Preparedness.

Waste Management Project (WMP)

- Manager (Acting), Low-level Burial Grounds (LLBG) Solid Waste Storage/Disposal Operations
- Manager (Acting), Waste Receiving and Processing (WRAP) Facility
- Manager, Waste Sampling and Characterization Facility (WSCF) Operations
- Manager, WRAP Operations
- Specialist, Human Resources
- Specialist, Training.

Discussion of Results

Criterion 1: *Contractor procedures ensure that the personnel who define, prioritize, and approve the scope of work and allocate resources, have and maintain competence that is commensurate with the assigned responsibilities.*

The Fluor Hanford (FH) process to ensure that there is management and staff that can define, prioritize, and approve work, plus allocate the necessary resources to accomplish the work can be applied at the institutional, facility, and activity levels. These positions can include, for example, activity work planners and schedulers, budget analysts, and supervisors up through middle and senior management positions. Essentially, this process is embodied in Guiding Principle Three (GP-3). The implementing documents that define the process have been identified in FH's HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*.

HNF-MP-003 states in Section 2.2 that GP-3 will relate to all core functions (CF) (visually depicted in Figure 3). Section 3 of the ISM System Description identifies the implementing mechanisms for each of the seven CFs. Table 3, "Implementing Mechanisms Organized by Guiding Principles and Core Functions" depicts the key mechanisms as they relate to the CFs. The mechanisms identified in the Section 3 descriptions are not consistent with the mechanisms identified in Table 3. **(BBC.3-1)** In addition, a review of the WMP, RCP, FFTF, and ASP ISM System Descriptions revealed that the Table 3 implementing mechanisms generally did not flow

down to the project level CFs. There is a lack of coordinating implementing procedures within the FH and project ISM System Descriptions. **(BBC.3-2)**

The contractor process for procuring and maintaining a competent workforce did include procedures that identified the basic qualifications of applicable staff, plus provide and maintain needed training to ensure competence is commensurate with work assignments. WMP, RCP, FFTF, and ASP all had appropriate Human Resource Hiring Procedures that identified the necessary skills, and Training Organizations that utilized Qualification Programs and Training Matrices based on training plans and procedures that ensured skills were sufficient and maintained current. However, two documents significant to this process were found to be weak in their involvement in hiring and maintaining a competent workforce. HNF-PRO-021 *Employment and Personnel Placement* fails to address coordinating the critical Knowledge, Skills and Abilities that envelope competence with Position Descriptions as they relate to the hiring process. In addition, HNF-MP-011, *Sitewide Qualification and Training Plan* does not contain language defining a process to maintain employee competence once they are hired.

In summary, the main weaknesses with the procuring and maintaining competency process can be summarized as that hiring and training documents fail to fully address competence for new hired staff. Maintaining competence is not a problem for staff already on board. In addition, there is a lack of linking these "competence" processes into a correlated workforce management system. **(BBC.3-3)** All of the tools necessary were identified, but some were weak, overall the process was fragmented and is not institutionalized; i.e., there was no common "competence" linkage between them.

Criterion 2: *Contractor 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.*

As discussed in Criterion 1, the process to define, prioritize, and approve work, plus allocate the necessary resources to accomplish the work can be applied at the institutional, facility, and activity levels. Based on interviews with selected managers and staff, there did not appear to be any problems with these personnel demonstrating their competence to prioritize and approve work with tailored hazard controls. The interviews with appropriate planning personnel indicated that "tailored" controls were identified through the application of the Automated Job Hazards Analysis system, and work was being approved within the confines of appropriate engineered, administrative, and personnel protective controls.

Conclusion

Although there is a lack of process formality to procuring and maintaining "competence," all the procedural tools needed to have and maintain staff competency are present at all of the projects. Applicable staff interviewed demonstrated their competence to define scope and allocate resources. The concept of tailored hazard controls appeared to be understood. However, because this CRAD represents a major guiding principle, it was apparent some documentation guiding the hiring and maintaining a competent workforce needs to be addressed, and that the

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.3** DATE: 4/27/00

competence principle was not being uniformly addressed within the FH ISM System Description, or was being applied across all of the Project CFs.

This objective has been met.

Strengths:

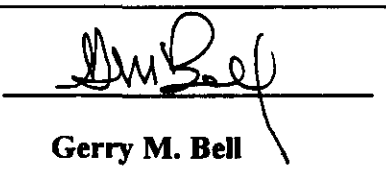
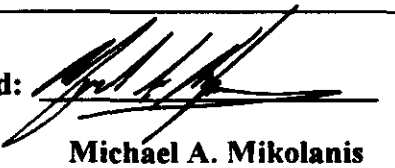
None.

Concerns:

- The mechanisms identified in Section 3 of the FH ISM System Description (HNF-MP-003) *are not consistent with the mechanisms identified in Table 3.* **(BBC.3-1)**

- There is a lack of coordinating implementing procedures within the FH and project ISM System Descriptions. **(BBC.3-2)**

- Documents guiding the process for hiring, and maintaining, of personnel competency lacks essential language. In addition, there is a lack of linking the hiring and training functions into a "competent" workforce management system. **(BBC.3-3)**

Submitted:  **Gerry M. Bell** ***Team Member***	**Approved:**  **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 4/27/00

OBJECTIVE

HAZ.1 - Hazards associated with the work are identified, analyzed, and categorized. Policies and procedures shall assure that hazards for the work to be authorized have been analyzed. (CE I-3, CE I-9)

Criteria

1. The FH ISM System Description and supporting documents assure that project/facility hazards have been identified and appropriately analyzed. FH procedures for analysis of project/facility hazards reflect accepted rigor and methodology. The resulting analyses are utilized in the selection of controls and the development of appropriate Authorization Agreements/Authorization Envelopes.

2. FH procedures require identification, analysis, and categorization of all hazards associated with planned work. Hazards that are considered are nuclear, chemical, industrial or others applicable to the work being considered.

3. The FH ISM System Description and supporting documents ensure controls are tailored to the hazards associated with the work or operations to be authorized.

4. The FH ISM System Description and supporting documents ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.

Approach

Record Review

- Review FH policies and procedures associated with identification and evaluation of potential hazards (e.g., nuclear, chemical, radiological, industrial, and other ES&H) to ensure that there is a proper flow-down of requirements.

- Review the policies and procedures to assure that they include requirements for comprehensive identification, appropriate analysis, review, and approval of hazards.

- Review the procedures on safety authorization basis documentation to verify consistency with DOE requirements.

- Review procedures to ensure accurate and effective development of Authorization Basis documentation.

- Review procedures for Automated Job Hazard Analysis (AJHA) for identification and analysis of hazards.

- Coordinate the review with the Subject Matter Expert (SME) functional area reviewers.

Interviews

Interview corporate/site personnel responsible for identification, analysis, and categorization of hazards to assess their understanding of the procedures, tools, the underlying principles and requirements.

Record Review

- ASP-200, *Analytical Services Procedures*
  - Section 4.3, "Unreviewed Safety Questions," Rev. 4, December 13, 1999
  - Section 4.5, "Safety Analysis," Rev. 0, December 30, 1997
- DOE Order 151.1, *Comprehensive Emergency Management*, Change 2, August 21, 1996
- DOE Order 5480.23, *Nuclear Safety Analysis Reports*, Change 1, March 10, 1994
- Fast Flux Test Facility (FFTF) Operations Administrative Procedure
  - A-28, , *FFTF Work Management Process*, "Appendix I-AJHA and Safety Information, Automated Job Hazard Analysis Process," Rev. 13
  - A-39, *Unreviewed Safety Questions*, Rev. 1A
- FSP-3647, *200 Area Deactivation Project Administration*, Section CM-3, "Work Management System," Rev. 2, April 3, 2000
- FSP-FSS-5-35, *Fuel Supply Shutdown Project Control Manual*
  - Section 01-01, "Responsibility and Authority," Rev. 6, December 16, 1999
  - Section 01-11, "Unreviewed Safety Questions," Rev. 4, September 15, 1999
- FSP-PFP-5-8, *Plutonium Finishing Plant Administration Manual*, Section 13.4, "Work Management Process Description and Job Control System Process," Rev. 20, Change 0, February 25, 2000
- FSP-WESF-001, *Work Management Process*, Rev. 5, December 13, 1999
- HNF-5247, *400 Area Authorization Envelope*, Rev. 0, March 6, 2000
- HNF-5608, *300 Area Authorization Envelope*, Rev. 0, March 6, 2000
- HNF-6071, *200 Area Deactivation Project Facilities Authorization Envelope Document*, Rev. 0
- HNF-6148, *300 Area Liquid Effluent Facilities Authorization Envelope*
- HNF-IP-1201, *Guidance for Conducting Emergency Preparedness Hazards Assessments*, Rev. 3, October 1, 1999
- HNF-IP-1264, *324/327 Facilities Stabilization Projects Administrative Manual*, Section 2.7, "Unreviewed Safety Questions," Rev. 7, October 29, 1999
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, February 25, 2000
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Description*, Rev. 3, April, 2000
- HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Questions*, Rev. 1, January 28, 2000
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999

- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 29, 1999
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 2, November 16, 1999
- HNF-PRO-701, *Safety Analysis Process- Existing Facilities*, Rev. 1, November 20, 1999
- HNF-PRO-702, *Safety Analysis Process- Facility Change or Modification*, Rev. 1, November 16, 1999
- HNF-PRO-704, *Hazard and Accident Analysis Process*, Rev. 1, September 2, 1999
- HNF-PRO-705, *Safety Basis Planning, Documentation, Review, and Approval*, Rev. 2, November 5, 1999
- HNF-SD-SPJ-SAR-001, *Building 324 Safety Analysis Report*, February 22, 1999
- NF-PRO-703, *Safety Analysis Process- New Project*, Rev. 0, October 1, 1997
- RCP-310, *300 LEF Project Administration Procedures*, Section 7.02, "Unreviewed Safety Questions," Rev. 4, March 15, 2000
- RCP-MD-003, *Requirements for Review and Approval of Safety Basis Documentation*, Rev. 0, April 5, 2000
- SI-327 Bldg-002, *Automated Job Hazard Analysis (AJHA)*, Rev. 0, February 9, 2000
- WMH-200, *Waste Management Hanford Procedures*
  - Section 1.6, "Operational Readiness Activities," Rev. 1, September 14, 1999
  - Section 3.1, "Work Management," Rev. 4, March 28, 2000
  - Section 4.3, "Unreviewed Safety Questions," Rev. 4, December 13, 1999
  - Section 4.5, "Safety Analysis," Rev. 4, December 30, 1997
  - Section 5.2, "Waste Management Drill Program," Rev. 1, September 17, 1998
- WMH-320, *300 Area Liquid Effluent Facilities Administration Manual*, Section 1.15, "Authorization Envelope," Rev. 0, September 23, 1999
- WMH-331, *200 Liquid Waste Processing Facility Administrative Procedures*, Section 3.12, "Authorization Bases," Rev. 1, April 9, 1999
- WMH-MD-043, *Approval Designators for Radiological Control, Nuclear Safety, and Criticality safety Activities*, Rev. 0, June 17, 1999.

Interviews Conducted

Analytical Services Provider (ASP)

- Emergency Preparedness Program Manager
- Maintenance Manager
- Nuclear Safety Oversight.

Fast Flux Test Facility (FFTF)

- Nuclear Safety Engineer
- Safety Manager.

Fluor Hanford (FH)

Occupational Safety and Health Director.

Nuclear Materials Stabilization (NMS)

- Director
- Safety Representative
- Senior Operations Advisor.

River Corridor Project (RCP)

- Chief Engineer
- Director Environmental Safety, Health and Quality
- Management and Self-Assessments
- Nuclear Safety
- Project Deputy Chief Engineer.

Waste Management Project (WMP)

- Automated Job Hazard Analysis (AJHA) Planner
- Emergency Preparedness Program Manager
- Maintenance Manager
- Nuclear Safety Oversight
- Safety Engineer
- Team Lead, Maintenance Project Support
- Waste Encapsulation and Storage Facility (WESF) Operations & Maintenance Manager.

Discussion of Results

Criterion 1: *The FH ISMS System description and supporting documents assure that project/facility hazards have been identified and appropriately analyzed. FH procedures for analysis of project/facility hazards reflect accepted rigor and methodology. The resulting analyses are utilized in the selection of controls and the development of appropriate Authorization Agreements/Authorization Envelopes.*

FH management and staff have identified procedures and mechanisms that adequately identify and analyze hazards. HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description* details the institutional procedures to identify, analyze, and classify hazards at Hanford Site facilities. The HNF-PRO-700 series procedures provide a systematic process to identify and evaluate hazards. Document reviews and interviews conducted during the ISMS Verification found that FH projects use the HNF-PRO-700 series of procedures to identify hazards and conduct safety analyses allowing for the selection of appropriate controls. Many projects have tailored institutional level procedures to identify and analyze hazards uniquely

associated with their processes. For example, the WMP and ASP use the HNF-PRO-700 series procedures to identify hazards and conduct accident analysis to ensure that safety analysis is conducted in accordance with DOE Order 5480.23, *Nuclear Safety Analysis Reports*. The WMP and ASP organizations have developed WMH-200, *Waste Management Hanford Procedures*, Section 4.5, "Safety Analysis" to ensure that hazards analysis associated with their unique processes are effectively incorporated into their Authorization Basis documents as required by the HNF-PRO-700 series. Both organizations use the procedure to conduct and document safety analysis to maintain the Authorization Basis of WMP and ASP facilities. The WMP has developed a graded approach to maintain the Auditable Safety Analysis for 200 Area Liquid Waste Processing Facilities by utilizing WMH-331, *200 Liquid Waste Processing Facility Administrative Procedures*, Section 3.12, "Authorization Basis Review for 200 Area Liquid Waste Processing Facilities." This document is used to identify and evaluate changes to facility configuration or facility operations that could impact the authorization basis. Interviews with FH project personnel found that these individuals possess a thorough understanding of the requirements contained within the HNF-PRO-700 series documents and applicable DOE Orders governing safety basis documentation.

FH has a formal process for developing Authorization Agreements (AA) and Authorization Envelopes (AE) for facilities within FH projects. FFTF and WMP AAs and AEs have been completed in accordance with the criteria contained in HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*. FH projects utilize HNF-PRO-704, *Hazard and Accident Analysis Process* to identify the safety basis for nuclear, non-nuclear, and industrial facilities. FFTF has developed HNF-5427, *400 Area Authorization Envelope* and HNF-5608, *300 Area Authorization Envelope* to define the safety basis for non-nuclear and industrial facilities in the 300 and 400 Areas as required by HNF-PRO-2701. Facility personnel conduct facility walk downs to identify hazards and document findings on worksheets contained in HNF-PRO-704. The worksheets are completed annually and used to document and update the safety basis for the AE and support the existing AA. **(HAZ.1-1)** (See **HAZ.2** for further discussion.)

HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Questions* (USQ) has been established at the institutional level to evaluate conditions or events outside of the Authorization Basis and ensure that changes or modifications to the design of facilities do not explicitly or implicitly affect existing Authorization Basis or technical safety requirements. FH projects have formulated USQ screening procedures such as FFTF Operations Administrative Procedure A-39, *Unreviewed Safety Questions*, and adopted categorical exclusions based on facility-specific activities and hazards. Similarly, RCP developed HNF-IP-1264, *324/327 Facilities Stabilization Projects Administrative Manual*, Section 2.7, "Unreviewed Safety Questions" to evaluate changes, occurrences, and discoveries within the 324 and 327 Facilities. Interviews with project personnel during the ISMS Verification revealed that FH project personnel understand the application of the USQ process within their organization and the applicable USQ screening procedures.

Interviews with personnel in WMP, ASP, and FFTF found that Emergency Preparedness Hazards Assessments (EPHA) have been conducted in accordance with HNF-IP-1201, *Guidance for Conducting Emergency Preparedness Hazards Assessments*, Rev. 3, to satisfy the

requirements found in DOE Order 151.1, *Comprehensive Emergency Management*. The EPHAs identify hazards and release scenarios used to formulate Emergency Action Levels and subsequent protective actions to protect workers and the public.

Criterion 2: *FH procedures require identification, analysis, and categorization of all hazards associated with planned work. Hazards that are considered are nuclear, chemical, industrial, or others applicable to the work being considered.*

FH has identified institutional procedures in HNF-MP-003 to identify, analyze, and categorize hazards associated with planned work. FH has institutionalized HNF-PRO-079, *Job Hazard Analysis* to integrate ISM principles into work–planning processes. Document reviews and interviews with FH Project personnel found that FH projects use HNF-PRO-079 and have also authored project-specific work control procedures to customize the requirements contained in HNF-PRO-079 to analyze project-specific activities. For example, RCP uses FSP-3647, *200 Area Deactivation Project Administration*, Section CM-3, "Work Management System" to categorize hazards, involve workers in hazard identification by using a team approach, and enables the selection and implementation of controls based on hazards identified during pre-job walk downs. Similarly, WMP developed WMH-200, *Waste Management Hanford Procedures*, Section 3.1, "Work Management" to direct WMP and ASP throughout the work management process. (See **SME M&WC** for further discussion.)

The ISMS Verification Team found that FH projects utilize HNF-PRO-079 and supporting project procedures to identify, analyze, and categorize hazards associated with planned work. This process allows the project to analyze and verify hazards and work controls for existing maintenance activities and identify hazards associated with new activities that would require additional analysis. The Building 327 Deactivation Project use SI-327 Bldg-002, *Automated Job Hazard Analysis* to analyze the risks associated with specific activities such as confined space entry, roof work, painting, and use of hand tools. (See **SME-M&WC** for further discussion.) The level of rigor that individual projects apply to the work–planning procedures varies from project to project.

Criterion 3: *FH ISMS System Description and supporting documents ensure controls are tailored to the hazards associated with the work or operations to be authorized.*

The FH ISM System Description (HNF-MP-003) identifies various procedures that are applied in an effort to ensure that controls are tailored to the hazards associated with work. Various FH procedures at the institutional level govern the following: the development and maintenance of Authorization Basis documentation as prescribed in the HNF-PRO-700 series, identification and evaluation of USQs in HNF-PRO-062, and work planning and execution processes in HNF-PRO-079, to ensure that controls are tailored to hazards associated with authorized work. Interviews with FH project personnel found that some projects utilize institutional procedures while other projects develop project-specific procedures to tailor controls to work.

Although approaches used by the various projects to tailor controls of work activities varies widely throughout FH projects, the substantive intent of the institutional requirements contained

within the various HNF-PRO documents is incorporated within FH project procedures. For example, USQ procedures for RCP vary within various RCP facilities. Buildings 324 and 327 use HNF-IP-1264, Section 2.7, "Unreviewed Safety Questions" to evaluate changes, occurrences, and discoveries within the facilities. The RCP has also customized the USQ screen flow charts contained in HNF-PRO-062 relative to programs at the building level. However, FSP-FSS-5-35, *Fuel Supply Shutdown Project Control Manual*, Section 01-11, "Unreviewed Safety Questions" for Fuel Supply Shutdown (FSS) facilities is more informal and applies less rigor than that used for the aforementioned RCP facilities. FSP-FSS-5-35, Section 01-11 does not apply the same level of rigor to the USQ process as HNF-IP-1264, Section 2.7 whereas it references use of the USQ screening flow charts contained in HNF-PRO-062 to conduct USQ screens on FSS facility changes and occurrences.

Criterion 4: *The FH ISMS System Description and supporting documents ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.*

The FH ISMS System Description (HNF-MP-003) identifies HNF-PRO-055, *Facilities Start-Up Readiness* as the process designed for attaining and verifying readiness for new or changed activities and/or operations. HNF-PRO-055 was written to implement the requirements contained in DOE Order 425.1 at FH facilities. Review of HNF-PRO-055 found that the document identifies controls, standards, and requirements prior to authorizing start-ups and restarts of facilities. HNF-PRO-055, Section 2.1 contains guidance for developing a Start-up Execution Plan. The Start-up Execution Plan uses a graded approach to identify hazards and select controls based on the complexity of the activity and the hazards associated with the activity.

WMP and FFTF have developed project procedures to implement the requirements contained in HNF-PRO-055 at the project level. For example, WMH-200, Section 1.6, "Operational Readiness Activities" utilizes a similar Criteria Review and Approach methodology as that found in HNF-PRO-055. This approach is designed to ensure that hazards are identified and that a safety program, policies, and procedures have been developed based on the hazards identified with WMP activities. Similarly, the criteria within WMH-200, Section 1.6 confirm the condition and operability of safety systems and conformance with applicable DOE Orders and standards. (See **SME-M&WC** for further discussion.)

Conclusion

Interviews with FH management and project personnel and review of FH procedures found that the FH ISM System Description references institutional and project procedures to identify, analyze, and categorize hazards associated with work. Although the level of rigor and consistency of approaches to identify, analyze, and categorize hazards associated with work at the project level varies, this verification found that the criteria have been satisfied and the objective has been met.

FH ISMSV-I ASSESSMENT FORM

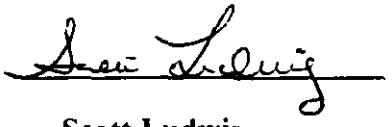
FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 4/27/00

Strengths:

FFTF has developed a formal process to maintain the Authorization Envelope that defines the safety basis for non-nuclear and industrial facilities. Facility personnel conduct annual walk downs to identify hazards and satisfy the requirements contained in HNF-PRO-2701. **(HAZ.1-1)**

Concerns:

None.

Submitted:  **Scott Ludwig** ***Team Member***	**Approved:**  **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 4/27/00

OBJECTIVE

HAZ.2 - Applicable standards and requirements are identified and agreed upon. (CE I-4, CE I-9)

Criteria

1. The FH ISM System Description and supporting documents utilize acceptable methodologies to identify adequate hazard control standards at both the site and corporate level and at the facility level to protect the public, worker, and environment. Controls at the corporate level appear in the contract while those at the facility level are reflected in the authorization basis documentation.

2. The FH ISM System Description and supporting documents utilize accepted and structured methods and processes to identify, select, and gain approval for ES&H standards and requirements commensurate with the workscope and its associated hazards.

3. FH procedures define the processes for the development, approval, and maintenance of documentation addressing the establishment of authorization protocols and authorization agreements.

4. Approved requirements are based on site-specific hazards, vulnerabilities, and risks and are sufficient to ensure protection of the public, workers, and the environment.

Approach

Record Review

- Review policies and procedures to verify methodologies and instructions provided for hazard control are acceptable and robust, and that the policies and procedures encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment.

- Review requirements and procedures at the institutional, project/facility and activity levels to ensure that the requirements flow down properly.

- Review hazard control requirements and procedures to ensure that they are appropriately tailored and graded for the diverse types of nuclear, non-nuclear, and industrial facilities and operations.

- Review requirements for developing and maintaining the applicable set of ES&H requirements, including the Standards/Requirements Identification Documents (S/RID).

- Review requirements and procedures for developing and maintaining authorization agreements/envelopes.

- Review the procedures for Unreviewed Safety Question (USQ) screening and evaluation.

- Review procedures for coordinating work-related documents with the SME functional area reviewers.

Interviews

Interview personnel responsible for developing and implementing hazard control policies and procedures. This should include personnel such as those responsible for Safety Analysis Review/Technical Safety Requirements policies and procedures, S/RID procedures and policies, Authorization Basis and Agreements, etc.

Record Review

- *242-A Evaporator Authorization Agreement Between U.S. Department of Energy Richland Operations Office and Fluor Hanford*, March 16, 2000
- 3J000-00-LWR-007, *WRAP Facility Authorization Envelope, February 2000*, Letter from L. W. Roberts, Pacific Northwest National Laboratory, to C. J. Wolfe, Waste Management Hanford, February 10, 2000.
- 3M000-00-DKS-008, *200 Area Liquid Waste Processing Facilities (LWPF) Authorization Envelope (AE)*, Letter from D. K. Smith to C. J. Wolfe, Waste Management Hanford, February 17, 2000
- 8D000-RJG-00-053, *Authorization Envelope for Analytical Services Project*, Letter from R.J. Giroir and L. F. Perkins to C. J. Wolfe, Waste Management Hanford, February 1, 2000
- ASP-200, *Analytical Services Procedures*
  - Section 4.3, "Unreviewed Safety Questions," Rev. 4, December 13, 1999
  - Section 4.5, "Safety Analysis," Rev. 0, December 30, 1997
- ASP-310, *Analytical Services Project Administration*, Section 2.3, Rev. 2, "Operational Compliance," April 11, 2000
- ASP-MD-043, *Approval Designators for Radiological Control, Nuclear Safety, and Criticality Safety Activities*, Rev. 1, February 10, 2000
- DE-AC06-96RL13200, Modification M086, *Project Hanford Management Contract, Fluor Daniel Hanford, Inc.*, October 1, 1999
- *Fast Flux Test Facility Operations Administrative Procedure*
  - A-7, "Environmental Specification Administration," March 9, 1995
  - A-28, "FFTF Work Management Process," December 31, 1997
  - A-40, "Plant Review Committee," August 30, 1996
  - A-39, "Unreviewed Safety Questions," Rev. 1A, May 22, 1998
- FS-NOP-16-003, *Fuel Supply Shutdown Project Surveillance Procedure*, March 20, 2000

- FSP-005, *B&W Hanford Facility Stabilization Project Pre-Existing Condition Assessment*, Rev. 0, September 1, 1998
- FSP-PFP-5-8, *Plutonium Finishing Plant Administration Manual*, Section 13.4, "Work Management Process Description and Job Control System Process," Rev. 20, Change 0, February 25, 2000
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-3 "Work Management Process," Rev. 5, December 13, 1999
  - Section MS-06, "S/RID Configuration Management," May 8, 1998
- HNF-5243, *FFTF Authorization Agreement*, Rev. 0, February 2000
- HNF-5247, *400 Area Authorization Envelope*, Rev. 0, March 2000
- HNF-5608, *300 Area Authorization Envelope*, Rev. 0, March 2000
- HNF-5902, *Fuel Supply Shutdown Project Facilities Authorization Envelope*, Rev. 0, April 13, 2000
- HNF-6071, *200 Area Deactivation Project Facilities Authorization Envelope Document*, Rev. 0, March 28, 2000
- HNF-6148, *300 Area Liquid Effluent Facilities Authorization Envelope*, March 30, 2000
- HNF-IP-1264, 324/327 *Facilities Stabilization Projects Administrative Manual*, Section 2.7, "Unreviewed Safety Questions," Rev. 7, October 29, 1999
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Description*, Rev. 3, April 12, 2000
- HNF-MP-015, *Requirements Management Plan*, Rev. 1, August 19, 1999.
- HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Questions*, Rev. 1, January 28, 2000
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-229, *Technical Procedure Standard*, March 4, 1999
- HNF-PRO-265, *Standards/Requirements Identification Document Process*, Rev. 4, January 19, 2000
- HNF-PRO-360, *Fire Protection/Prevention for Construction, General Occupancy and Demolition Activities*, Rev. 2, October 27, 1999
- HNF-PRO-424, *Emergency Preparedness Program*, Rev. 3, October 26, 1999
- HNF-PRO-430, *Safety Analysis Program*, December 7, 1999
- HNF-PRO-533, *Change Control*, Rev. 1, April 5, 2000
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 2, November 16, 1999
- HNF-PRO-701, *Safety Analysis Process- Existing Facilities*, Rev. 1, November 20, 1999
- HNF-PRO-702, *Safety Analysis Process- Facility Change or Modification*, Rev. 1, November 16, 1999
- HNF-PRO-703, *Safety Analysis Process- New Project*, Rev. 0, October 1, 1997
- HNF-PRO-704, *Hazard and Accident Analysis Process*, Rev. 1, September 2, 1999
- HNF-PRO-705, *Safety Basis Planning, Documentation, Review, and Approval*, Rev. 2, November 5, 1999
- HNF-PRO-2243, *Nuclear Safety Requirement Noncompliances*, Rev. 0, March 1, 1998

- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 29, 1999
- HNF-PRO-4564, *Hanford Fire Marshal Permits*, Rev. 0, August 12, 1999
- HNF-SD-MP-SRID-007, *Waste Encapsulation and Storage Facility S/RID*, January 27, 2000
- HNF-SD-MP-SRID-008, Rev. 1, *S/RID 324/327 Buildings*, January 27, 2000
- HNF-SD-MP-SRID-011, *Waste Management Hanford S/RID*, November 11, 1999
- Low-Level Burial Grounds Authorization Agreement Between U.S. Department of Energy Richland Operations Office and Fluor Hanford, March 16, 2000.
- RCP-310, *300 LEF Project Administration Procedures* , Section 7.02, "Unreviewed Safety Questions," Rev. 4, March 15, 2000
- RCP-PRO-012, *Authorization Envelope and Authorization Agreement Requirements for Industrial, Radiological, and Nuclear Facilities*, Draft (not dated)
- RCP-MD-001, *River Corridor Project (RCP) Roles, Responsibilities and Functions*, Draft, (not dated)
- RCP-MD-003, *Requirements for Review and Approval of Safety Basis Documentation*, Rev. 0, April 5, 2000
- WHC-SD-MP-SRID-006, *FFTF Standard/Requirement Identification Document*, Rev. 0, November 11, 1996
- WMH-200, *Waste Management Hanford Procedures*
  - Section 3.1, "Work Management," Rev. 4, March 28, 2000
  - Section 4.3, "Unreviewed Safety Questions," Rev. 4, December 13, 1999
  - Section 4.5, "Safety Analysis," Rev. 4, December 30, 1997
- WMH-320, *300 Area Liquid Effluent Facilities Administration Manual*, Section 1.15, "Authorization Envelope," Rev. 0, September 23, 1999
- WMH-331, *200 Area Liquid Waste Processing Facilities*, Section 3.12, "Authorization Bases Review," Rev. 1, April 9, 1999
- WMH-340, *Solid Waste Treatment Project Administrative Procedures*, Section 1.9, "Conduct Periodic Solid Waste Treatment Facility Environmental Compliance Inspections," Rev. 0, January 28, 2000
- WMH-MD-043, *Approval Designators for Radiological Control, Nuclear Safety, and Criticality Safety Activities*, Rev. 0, June 17, 1999.

Interviews Conducted

Analytical Services Provider (ASP)

- Conduct of Operations Manager
- Occupational Safety and Health Manager.

Fast Flux Test Facility (FFTF)

- Engineering Manager.
- Final Safety Analysis Review Administrator
- Safety Manager

Fluor Hanford (FH)

- Director, Nuclear Safety
- Occupational Safety and Health Manager
- Lead for Standard/Requirement Identification Documents.

Nuclear Materials Stabilization

- Safety Specialist, Environment, Safety, Health & Quality (ESH&Q) Assurance
- Director, Plutonium Finishing Plant
- Senior Operations Advisor
- Safety Representative.

River Corridor Project (RCP)

- ISMS Advisor
- Chief Engineer
- Project Deputy Chief Engineer
- Director Environmental Safety, Health and Quality
- Acting Director, Accelerated Deactivation
- Requirements Basis Manager
- Management and Self-Assessments
- Nuclear Safety.

Waste Management Project (WMP)

- AJHA Planner
- Conduct of Operations Manager
- ISMS Program Manager
- Occupational Safety and Health Manager
- Operations & Maintenance Manager, WESF
- Requirements Manager
- Safety Engineer.

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 4/27/00

Discussion of Results

Criterion 1: *The FH ISM System Description and supporting documents utilize acceptable methodologies to identify adequate hazard control standards at both the site and corporate level and at the facility level to protect the public, worker, and environment. Controls at the corporate level appear in the contract while those at the facility level are reflected in the authorization basis documentation.*

The ISM System Description, along with the referenced documents, identifies the processes at institutional, project, and facility levels, which determine the requirements and standards for controlling hazards that could endanger the public, worker, or the environment. Specifically, HNF-MP-015, *Requirements Management Plan,* describes the integrated system used to identify, document, manage, and implement requirements and standards. For Hazard Category 1 and 2 nuclear facilities (there are no Hazard Category 1 Project Hanford Management Contract [PHMC] facilities), the appropriate requirements and standards are developed and updated through the implementation of HNF-PRO-265, *Standards and Requirements Identification Document (S/RID) Process.* The facility-specific S/RID is derived from all applicable federal and state laws and regulations, DOE directives, and other applicable requirements and standards. For the low-hazard facilities, e.g., Hazard Category 3 nuclear, radiological, and non-nuclear facilities, the PHMC, Section J, Appendix C, specifies an applicable set of DOE directives. These requirements and standards flow down to subcontractors through contracts and task-order agreements; e.g., as specified in HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts* and HNF-PRO-186, *Preparing a Statement of Work for Services.*

HNF-PRO-265 imposes the requirement for facility managers to maintain S/RID compliance for all operations and activities. Facility functional area managers maintain functional area compliance for each applicable S/RID functional area. Furthermore, S/RID assessments must be updated annually. When regulatory requirements are not adequate, e.g., due to change in workscope or operations, appropriate changes must be made to the applicable set of requirements. HNF-PRO-265 recommends that facilities develop a facility-specific procedure for addressing the S/RID process. The Spent Nuclear Fuel and NMS Projects, as well as one WMP facility (Waste Encapsulation and Storage Facility), each have a facility-specific S/RID configuration control procedure. However, RCP and WMP facilities with similar level operations and hazards (e.g., Building 324 and Waste Receiving and Processing Facility) do not have such a procedure. Based on this inconsistent application, HNF-PRO-265 does not provide the necessary criteria and guidance for determining the need for a facility-specific S/RID configuration control procedure. **(HAZ.2-3)**

Facility-level requirements to control hazards are also derived through hazards and safety analyses conducted pursuant to the applicable requirements mentioned above, and these are documented as part of the Authorization Basis (AB). For example, the S/RID requirements of DOE Orders 5480.22 and 5480.23 for nuclear facilities, as implemented through HNF-PRO-700, HNF-PRO-704, and WMH-200, *Waste Management Hanford Procedures,* Section 4.5, "Safety Analysis" at the institutional, project, and facility levels, result in operational and administrative

controls specified in the AB. Furthermore, the integrity and accuracy of the AB, including the hazard controls, are maintained through the requirements of DOE Order 5480.21, *Unreviewed Safety Questions*, implemented through HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Question* (USQ), and facility-specific USQ procedures such as WMP-200, Section 4.3 (for the WMP), and FFTF Administrative Procedure A-39, "Unreviewed Safety Questions." For radiological and non-nuclear facilities, an auditable safety analysis provides the basis for the hazard controls applied. While not a requirement, WMP applies a procedure (similar to the USQ process) to all its radiological and non-nuclear facilities through WMH-331, *200 Area Liquid Waste Processing Facilities*, Section 3.12, "Authorization Basis Review." The application of such a process is a good practice, if appropriately graded. **(HAZ.2-1)** (See also **HAZ.1**.)

In addition to the requirements for hazard controls at various levels directly derived from S/RIDs, safety analyses, and hazard assessments, the Project Hanford Management System (PHMS) has other documented programs and procedures, such as HNF-PRO-2258, *Chemical Management*, HNF-PRO-533, *Change Control*, and HNF-PRO-229, *Technical Procedure Standard*, which support the effective implementation of ES&H requirements.

Criterion 2: *The FH ISM System Description and supporting documents utilize accepted and structured methods and processes to identify, select, and gain approval for ES&H standards and requirements commensurate with the workscope and its associated hazards.*

As stated under Criterion 1, the S/RID process described in HNF-PRO-265 provides the ES&H standards and requirements applied to Hazard Category 2 facilities. The process, including its Phase 1 assessment that identifies the specific procedures and standards to satisfy higher-level requirements, provides for adequate tailoring and grading of the requirements applied. All except two PHMC Hazard Category 2 facilities have approved S/RIDs. The two Hazard Category 2 facilities without S/RIDs are RCP facilities 224-T and PUREX Tunnels, for which the contractor has proposed applying the List of DOE Directives in PHMC Section J, Appendix C. This is not in conformance with HNF-PRO-265 and there is no approved variance or waiver. **(HAZ.2-4)** (See also discussion under Criterion 3). It is also noted that while the FFTF has an approved S/RID (WHC-SD-MP-SRID-006, *Fast Flux Test Facility Standards/Requirements Identification Document*), the ISM System Description for this project does not address this key documentation of contractual ES&H requirements. **(HAZ.2-5)**

PHMC, Section J, Appendix C, provides for applying Federal and state regulations, and specifies a set of DOE directives applicable to all PHMC facilities. However, the PHMC also requires a graded approach to be applied. A systematic tailoring and grading process is therefore needed to ensure that ES&H standards and requirements, applied to facilities below Hazard Category 2, are commensurate with the workscope and associated hazards at these types of facilities as well. The lower hazard facilities (to which the S/RID process is not applied) include Hazard Category 3 nuclear, radiological, non-nuclear, and industrial facilities. Presently, a systematic process that may be uniformly applied to identifying, selecting, and applying specific ES&H requirements for the lower hazard PHMC facilities is lacking. **(HAZ.2-6)** For radiological, non-nuclear, and industrial facilities, a draft institutional level procedure has been developed to meet this need, and it is currently in advanced stages of review and approval. However, it is not

clear how lower hazard nuclear facilities (Hazard Category 3) would be addressed. (WMP and ASP apply the S/RID process also to lower hazard nuclear and non-nuclear facilities.)

The entire process of ensuring that an optimum set of ES&H requirements and standards is prescribed, and that new or changed requirements are identified and integrated, relies on the roles and responsibilities of personnel associated with ES&H, in various management and other positions at the institutional, project, and facility levels. Any given ES&H functional area, such as fire protection or nuclear safety - one of 20 S/RID areas of ES&H requirements, involves Functional Area Managers at the institutional level, Discipline Leads at the project level, and Subject Matter Experts at the facility level. While these positions report to line management at their respective levels, the coordination of ES&H issues also depends on informal communications among ES&H personnel along other lines, such as periodic "Center of Expertise" meetings of the Discipline Leads with Functional Area Managers. Also, ES&H managers at the various levels communicate directly with each other.

The Discipline Lead position identified in HNF-MP-001, *Fluor Hanford Management Plan*, which is key to ensuring that ES&H needs are identified and addressed, is generally not defined or mentioned at the project level. The terminology has led to confusion, since the term Functional Area Manager is still being used by the projects. Furthermore, the interfaces and matrixed responsibilities or relationships between ES&H-related positions at the facility level with the Discipline Leads are not documented in sufficient detail. As a corrective action from FH's ISMS self-assessment, the WMP, the ASP, and the RCP have each developed descriptions of the responsibilities of key management and other personnel in their organizations; e.g., WMP-100, *Roles, Responsibilities, and Functions*, and RCP-MD-001, *River Corridor Project Roles, Responsibilities and Functions*. However, these are *draft* documents, and still do not provide the roles and responsibilities of the Discipline Lead. Based on the observations above, it is clear that the management system description and project-level documentation do not provide complete definition of the total framework of ES&H-related roles and responsibilities. **(HAZ.2-7)** (See also discussion in **MG.2**)

Criterion 3: *FH procedures define the processes for the development, approval, and maintenance of documentation addressing the establishment of authorization protocols and authorization agreements.*

Each PHMC facility, whether nuclear, radiological, non-nuclear, or industrial, is required to establish, document, and maintain its Authorization Envelope (AE) according to HNF-PRO-2701, *Authorization Agreement and Authorization Envelope*. For Hazard Category 2 nuclear facilities, the AE, along with other terms and conditions, is contained in the Authorization Agreement (AA). The AA is approved and signed both by the President, Fluor Hanford Inc. and the RL Manager. The establishment of an AE for each PHMC facility is a good practice that extends application of the ISMS guiding principles 4 and 5 to the entire spectrum of facilities, from the highest to the least hazardous. **(HAZ.2-2)**

The AE consists of the safety basis, the environmental protection basis, and the ES&H requirements basis of the facility. These AE components are, in turn, based on processes and

procedures that are sufficiently defined within the PHMS. For example, the safety basis is developed in accordance with HNF-PRO-704; the environmental protection basis includes environmental assessment and permits, which are developed and approved in accordance with FH procedures; and the requirements basis is developed according to the processes and procedures mentioned in the discussion of Criteria 1 and 2 above.

In establishing the process for developing and maintaining an AE, HNF-PRO-2701, provides considerable flexibility in terms of its review, approval, update, and update schedule. It recommends that the AE be updated at least annually. The various PHMC Projects have developed and maintained the AE for their facilities in different ways. All AEs that are contained in an AA, and all AEs developed by the RCP provide the review and update the schedule within the AE itself. The RCP has developed a lower-tier implementing procedure, RCP-PRO-012 (Draft), *Authorization Envelope and Authorization Agreement Requirements for Industrial, Radiological, and Nuclear Facilities*, for establishing, maintaining, and managing the AE for its facilities. This procedure delineates the responsibilities of key individuals; and provides for internal self-assessments, annual review, update, and configuration control. It also provides guidance on how multiple classifications within facility groupings should be handled.

All PHMC Hazard Category 2 facilities have successfully established their AA, except two RCP Hazard Category 2 facilities, 224-T and PUREX Tunnels. The AA for these two facilities presently is under review within RL. Therefore, the statement in the ISM System Description for the RCP (HNF-MP-003, Appendix F) that all its Hazard Category 2 nuclear facilities have established AA between FHI and RL is incorrect. **(HAZ.2-8)**

Criterion 4: *Approved requirements are based on site-specific hazards, vulnerabilities, and risks and are sufficient to ensure protection of the public, workers, and the environment.*

The ISM System Description and its associated supporting documents adequately describe how standards and requirements pertaining to protecting the environment, safety and health are determined by the work to which they apply, and how they are incorporated into the governing work procedures at the appropriate level. For example, appropriate fire protection and criticality safety requirements will be applied, when they are identified to control hazards identified in facility-level safety analyses. At the activity level, HNF-PRO-079, *Job Hazard Analysis*, serves as the primary vehicle to integrate ES&H requirements into work management processes. For example, the analysis may identify a requirement to protect human health and the environment, which in turn, may necessitate analyzing environmental impacts of an activity.

As facility conditions change, there is potential for new or different types of hazards and therefore, new or different hazard control requirements may have to be identified. Project-level procedures provide for inspection and surveillance to identify facility conditions that may endanger health and safety of the public or the worker, or the environment. The following are examples of such project-level procedures: ASP-310, Section 2.3, "Operational Compliance"; WMP-340, Section 1.9, "Conduct Periodic SWT Facility Environmental Compliance Inspections"; and FFTF Administrative Procedures A-28, "Work Process Management," and A-7, "Environmental Specification Administration."

PHMC Projects also have management and administrative mechanisms that support identifying and applying appropriate requirements and standards when ES&H issues are identified. These range from the charter of a facility's Plant Review Committee (e.g., Fast Flux Test Facility Administrative Procedure A-40) to a directive that identifies additional approval requirements; e.g., ASP-MD-043, *Approval Designators for Radiological Control, Nuclear Safety, and Criticality Safety Activities*, which implements HNF-PRO-233, *Review and Approval of Documents*.

Facility-specific safety or environmental risks include situations when PHMC facilities have interfaces with facilities operated or maintained by other PHMC projects, contractors, or organizations. Examples include interfacing walls with penetrations; underground pipe or trench connections between facilities; inaccessible tanks within a facility operated by another contractor; and operations or conditions outside the facility fence. In such circumstances, facility management may not have control over a condition or an assumption relied upon for the control of a significant hazard; and safety could be compromised by activities, actions (or non-actions) at the other facility. For nuclear facilities, HNF-PRO-701, *Safety Analysis Process – Existing Facilities*, provides a procedure for identifying and controlling interfaces with other facilities, contractors, and organizations, where the facility's authorization basis could be potentially affected. For other types of lower hazard facilities, such as radiological, non-nuclear, and industrial facilities, the risks would be lower. However, such interfaces, especially with other contractors and organizations, are greater in number. Limited aspects of this concern, such as fire hazard potentially introduced during interfacing construction activities may be addressed through HNF-PRO-360, *Fire Protection/Prevention for Construction, General Occupancy and Demolition Activities*. Also, certain hazards due to interfaces may be identified in hazards assessments conducted in support of HNF-PRO-424, *Emergency Preparedness Program*. In implementing DOE 5481.1B, *Safety Analysis and Review System*, for non-nuclear and radiological facilities, the procedure HNF-PRO-702, *Safety Analysis Process – Facility Change or Modification*, also addresses conditions under the control of other organization. However, the procedure then refers to HNF-PRO-701, where the requirements for interface concerns apply only to nuclear facilities. Thus, there appear to be inadequacies and gaps in the overall system for identifying and controlling interfaces for radiological or non-nuclear facilities, which could pose radiological, chemical, and other hazards. **(HAZ.2-9)**

Another issue identified here concerns the unique facility-specific risk when an inactive, inadequately characterized nuclear facility with unknown hazards, and without an adequate safety basis, is transitioned to another organization. The workscope of 200 Area Accelerated Deactivation Project within the River Corridor Project involves accepting such facilities for deactivation. Presently, its inventory of facilities includes three nuclear facilities, 224-T, PUREX Tunnels, and 231-Z, with the characteristics mentioned above. The integration of hazard controls and applicable ES&H requirements into the conduct of work at such facilities requires significant amount of data and information about the facility, including pertinent design and historical operational information. For example, operational history and process knowledge enables making assumptions about radiological contamination and fissile materials in inaccessible areas. The River Corridor Project is utilizing a B&W Hanford procedure, FSP-005, *Facility Stabilization Project Pre-Existing Condition Assessment*, for obtaining information

about a facility to be accepted for deactivation and transitioning. It is also developing a revised procedure (FSP-3647) similar in requirements to FSP-005. However, the Fluor Hanford Management Plan and River Corridor Project System Description do not include any discussion of this important mission of the Accelerated Deactivation Project; nor does it include a reference to either of the procedures. Furthermore, neither procedure is adequate for ensuring that the type of essential historical data and information mentioned above is obtained. The procedures describe the assessment process, report format, and administrative details; and refer to lines of inquiry that are not part of the procedure, but "will be provided" by other organizations. Importantly, there are no criteria or guidelines in the procedure for conditions requiring further evaluations and for the nature of information to be obtained. Thus, the River Corridor Project does not currently have an adequate procedure to ensure that pertinent data and information about the facility are obtained from the transferring organization, and thereby to establish facility conditions properly. **(HAZ.2-10)**

For facilities, such as those considered above, historical data and any information from a pre-existent condition assessment may not be adequate to make reasonable assumptions for conducting a safety analysis, and thus to establish adequate operational controls for deactivation activities to be conducted within the facility. The River Corridor Project does not currently have a procedure that describes an approach to establishing the necessary safety basis for those facilities with inadequate safety basis, characterization data, or past information. **(HAZ.2-11)** In the case of 231-Z, a step-wise approach was developed as part of its interim safety basis, which will guide the additional activities needed to conduct further characterization and establish the safety basis necessary for deactivation. However, the approach has not been documented such that it could be applied to other Accelerated Deactivation Project nuclear facilities in a similar situation.

Conclusion

The FH ISM System Description adequately describes the processes and procedures utilized to apply ES&H requirements to all PHMC facilities and operations. It also reflects adequate mechanisms to identify the need for new or different requirements. The process for tailoring and grading the application of requirements and standards to lower hazard nuclear, radiological, non-nuclear, and industrial facilities is presently inadequate. Furthermore, there appear to be inadequacies in the procedures (a) to identify and control "interface" hazards to radiological, non-nuclear and industrial facilities; and (b) to provide the approach for transitioning and preparing inactive, inadequately characterized nuclear facilities for deactivation.

This objective has been met.

Strengths:

- The safety basis of WMP/ASP radiological and non-nuclear facilities is maintained through a procedure similar to the USQ process. **(HAZ.2-1)**

- The Project Hanford Management System requires the entire spectrum of its facilities — nuclear, radiological, non-nuclear, and industrial — to develop and maintain an Authorization Envelope. **(HAZ.2-2)**

Concerns:

- Criteria and guidance for determining the need for a facility-specific S/RID configuration control procedure is lacking. **(HAZ.2-3)**

- Two RCP Hazard Category 2 nuclear facilities (224-T and PUREX Tunnels) do not have S/RIDs as required by HNF-PRO-265, nor approved variances. **(HAZ.2-4)**

- The ISM System Description for the FFTF does not address its S/RID, which is the documentation of contractual ES&H requirements. **(HAZ.2-5)**

- A process for tailoring and grading the application of ES&H requirements and standards to Hazard Category 3 nuclear, radiological, non-nuclear, and industrial facilities is lacking. **(HAZ.2-6)**

- ES&H-related roles and responsibilities presented in the FH Management Plan (HNF-MP-001) are not fully defined at the project level. **(HAZ.2-7)**

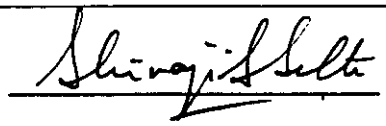
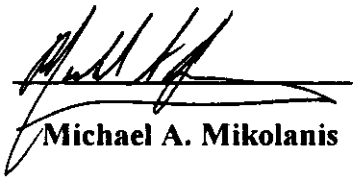
- Statement in the ISM System Description that AAs have been established for all RCP Hazard Category 2 nuclear facilities is incorrect, since AAs for two such facilities (224-T and PUREX Tunnels) are in the review and approval process. **(HAZ.2-8)**

- For radiological, non-nuclear, and industrial facilities and activities, there are inadequacies in the system for identifying and controlling hazards posed by interfaces with other contractors and organizations. **(HAZ.2-9)**

- The FH Management Plan (HNF-MP-001) and System Description (HNF-MP-003) for the RCP do not discuss the significant mission and processes for transitioning inactive facilities with inadequate characterization or safety basis. The procedure for assessing the pre-existing condition of such facilities is inadequate for ensuring that pertinent and available information about the facility is obtained from the transferring organization. **(HAZ.2-10)**

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 4/27/00

- There is no procedure that describes an approach to establishing the necessary safety basis for those facilities with inadequate safety basis, characterization data, or past information. **(HAZ.2-11)**

Submitted:  **Shivaji S. Seth** ***Team Member***	**Approved:**  **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Hazard Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 4/27/00

OBJECTIVE

HAZ.3 - Contractor procedures and policies ensure that contractor personnel responsible for analyzing the hazards and developing, reviewing, or implementing the controls have competence that is commensurate with their responsibilities. Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities (CE I-7, CE I-8).

Criteria

1. The FH ISM System Description and supporting documents have clearly defined roles and responsibilities to oversee, review, approve the analysis of hazards, and establish controls associated with facility activities.

2. The FH ISM System Description and supporting documents require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.

3. FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.

Approach

Record Review

- Review FH organization documentation to identify personnel, including technical personnel and first levels of management, to whom this objective applies.

- Review the position descriptions for those personnel to determine the required competencies.

- Review cooperate/site training manuals and qualification and competency procedures.

- Review selected training and qualification records for those personnel identified above to determine how the required competency has been gained, retained, and validated.

Interviews

Interview managers responsible for analyzing hazards and developing and implementing controls and/or Authorization Basis Documentation at the site and project levels. These included personnel such as those responsible for Safety Analysis Review/Technical Safety Requirements preparations and implementation, As Low as Reasonably Achievable (ALARA) review requirements, AJHA's, Process Hazard Analysis activities, etc.

FUNCTIONAL AREA: **Hazard Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 4/27/00

Record Review

- DOE-RL 0223, *Emergency Plan Implementation Procedure*, Rev. 3, September 1, 2000
- FFTF Performance Assess and Development Plan for employee (Scientist II, ES&H Safety Manager) 1999-2000 performance period
- Fluor Hanford Job Code Table (December 1, 1999) and corresponding Job Descriptions (April 20, 2000)
  - General Engineers
  - Safety Engineers
  - Technical Safety
  - Health Physics Analysts
  - Health Physicist personnel
- FSP-FFTF-POL-6-14, *FFTF Plant Policy Manual*, Section 18.0, "Qualification Requirements for FFTF Project Personnel," Rev. 2, December 31, 1998
- FSP-FFTF-TRNG-0329, *400 Area Training Plans*, Section 2.0, "FFTF Operations Training Program," Rev.1, December 18, 1999
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-3, "Work Management Process," Rev. 5, December 13, 1999
  - Section CM-5, "Controlling Subcontractor Work at WESF," Rev. 3, March 29, 2000
  - Section EN-2, "System Engineers Responsibilities," Rev. 6, March 13, 2000
  - Section MS-13, "Work Prioritization and Scheduling," Rev. 0, March 8, 2000
- FSP-WESF-002, *WESF Conduct of Operations*, Section 16.1, "Technical Procedure Process," Rev. 2, September 8, 1999
- HNF-4361, *PHMC Expectations for Worker Involvement*, Rev. 0, April 28, 1999
- HNF-5053, *Policy for Environmental Safety and Health*, Rev. 2, October 18, 1999
- HNF-IP-1264, *324/327 Facilities Stabilization Projects Administrative Manual*, Section 2.16, "Administrative Manual," Rev. 3, November 22, 1999
- HNF-IP-1281, *River Corridor Training Project Training Plan*, Rev. 2, February 29, 2000
- HNF-MP-011, *Project Hanford Management Contract Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-POL-EMPLOY, *Employee Training Policy*, Rev. 0, May 16, 1997
- HNF-PRO-021, *Employment and Personnel Placement*, Rev. 2, January 20, 2000
- HNF-PRO-046, *Compensating Exempt and Non-exempt Employees and Personnel Placement*, Rev. 0, July 15, 1998
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-078, *Subcontractor Safety & Health Management*, Rev. 2, August 10, 1999
  HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-168, *Employee Training*, Rev. 0, February 16, 1998
- HNF-PRO-176, *Preparing Qualification Programs at Nuclear Facilities*, Rev.0, September 29, 1997

- HNF-PRO-177, *Preparing Certification Programs at Nuclear Facilities*, Rev. 0, September 29, 1997
- HNF-PRO-1819, *PHMC Engineering Requirements*, Rev.4, January 24, 2000
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 8, 1999
- HNF-PRO-357, *Completion and Closure of Performance Agreements*, Rev. 1, September 22, 1999
- HNF-PRO-430, *Safety Analysis Program*, Rev. 2, December 7, 1999
- HNF-PRO-533, *Change Control*, Rev. 1, April 5, 2000
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 2, December 2, 1999
- HNF-PRO-704, *Hazard and Accident Analysis Process*, Rev. 1, September 2, 1999
- HNF-PRO-705, *Safety Basis Planning, Documentation, Review, and Approval*, Rev. 2, November 5, 1999
- Qualification Cards
  - Waste Management Project, Industrial Hygiene, Sample, Rev. 0, December 31, 1998 and Position Training Report (printout April 8, 2000)
  - Waste Management Project, Safety Engineer, Sample, Rev. 0, December 31,1998 and Position Training Report (printout April 8, 2000)
  - Waste Management Project, Radiological Control Technician, Sample, Rev. 0, November 3, 1999 and Position Training Report (printout April 8, 2000)
  - 300 Area Technical Staff, Nuclear Safety, Rev. 1, June 8, 1998 and Summary of Training History (printout April 19, 2000)
  - 300 Area Technical Staff, Safety Engineer, Rev. 1, June 8, 1998 and Summary of Training History (printout April 19, 2000)
  - 300 Area Technical Staff, Industrial Hygiene, Rev. 1, June 8, 1998 and Summary of Training History (printout April 19,2000)
  - FFTF-400 Area Training Staff Technician Plan, Safety Engineer, Plan Number 071946
- WMH-200, *Waste Management Hanford Procedures*
  - Section 2.1, "Organization and Administration," Rev. 2, September 19, 1999
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 2, September 30, 1999
  - Section 7.2, "Engineering Practices," Rev. 0, April 7, 2000
  - Section 1.41, "Training Procedures, " (WRAP), November 18, 19999
  - Secttion 5.1, "Waste Management Project Procedures," Rev. 4, February 29, 2000.

Interviews Conducted

Analytical Services Provider (ASP)

- Functional Safety Lead
- Training Lead.

Fast Flux Test Facility (FFTF)

- Project Control Analyst
- Safety Lead.

Fluor Hanford (FH)

Occupational Safety and Health (OS&H) Director.

River Corridor Project (RCP)

- 327 Facility Planner
- Business Manager and Integration Director
- Human Resources Representative
- Training/EP Engineer
- Training/EP Manager.

Waste Management Project (WMP)

- Health and Safety Program Lead
- Human Resources Specialist
- Training and Qualification Manager
- Waste Receiving and Processing (WRAP) Facility Manager
- Work Control and Scheduling Manager
- WRAP Facility Operations Manager.

Discussion of Results

Criterion 1: *The FH ISM System Description and supporting documents have clearly defined roles and responsibilities to oversee, review, approve the analysis of hazards, and establish controls associated with facility activities.*

The upper-tier documents in Table 3 of HNF-MP-003, *Integrated Environmental Safety and Health Management System Description* contain a listing that identifies roles and responsibilities and the corresponding procedures for the analysis of hazards and establishing controls. HNF-PRO-430, *Safety Analysis Program*, HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, HNF-PRO-704, *Hazard and Accident Analysis Process*, HNF-PRO-705, *Safety Basis Planning, Documentation, Review, and Approval*, and HNF-PRO-074, *Safety Responsibilities*, state the manager's and supervisor's roles and responsibilities relative to facility hazard analysis. Regarding the selection of personnel for analyzing hazards and controls, the upper documents are HNF-POL-EMPLOY, *Employee Training Policy*, HNF-PRO-021, *Employment and Personnel Placement*, HNF-MP-011,

Contract Sitewide Qualification and Training Plan, and HNF-PRO-168, *Employee Training*. For further discussion, see **BBC.3**, **MGO.2**, and **SME-M&WC**.

Appendix B of HNF-MP-003 identifies expectations that are further defined as roles coupled with a responsibility assigned to an organization or an individual. It does not appear that this appendix is being used to define roles and responsibilities in the contractor's ISMS.

Interviews with managers and supervisors indicate a clear understanding of their roles and the roles of those involved in hazard identification and analysis, as well as for establishing controls. One indication that these supervisors understood their roles was their knowledge of the Job Hazard Analysis (JHA)/Automated Job Hazard Analysis (AJHA) process, AJHA screening, and other facets of the JHA procedure (HNF-PRO-079, *Job Hazard Analysis*). Interviews indicated that managers and supervisors knew which technical personnel were needed for given hazard conditions and facilities. Further evidence of their understanding of their responsibilities was their familiarity with applying the process of screening at appropriate levels. Most managers and supervisors reiterated the high- and medium-risk identification process that prompted the full AJHA process with no or very limited tailoring of the process.

There was no consistent procedural flow down of specific technical roles and responsibilities for controls or identification of hazards. Additionally, there was not a unified system to describe how the tailoring process was to be applied. A similar situation was identified in the area of **SME-M&WC** relating to a variety of work control procedures applied across the Hanford Site. Although this is not ideal, it is not viewed as detrimental to completion of this criterion, and therefore, not identified as a concern.

Criterion 2: *The FH ISM System Description and supporting documents require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.*

The main documents that satisfy these competency requirements are HNF-PRO-021, HNF-POL-EMPLOY, HNF-MP-011, and HNF-PRO-168. These procedures establish qualification, selection, and training requirements. Human Resources records, project/facility qualification cards, performance review records, and training review records are used to verify that individuals have the necessary competency to perform hazard identification and analysis. Training records typically include the Training Information Matrix, Training Staff Tech Plans, Individual Development Plans, FH qualification and certification program procedures, summary of training history printouts, position training reports, etc. Human Resources records typically included such items as job code tables and corresponding job descriptions (for General Engineers, Safety Engineers and tech safety, Health Physics Analysts and Health Physicist personnel) which identified responsibilities and skills/qualifications necessary for each position, etc.

Managers and supervisors interviewed were aware they must ensure their workforce is qualified and annual workforce training updates are required. They also knew which personnel had the

expertise to bring in for help or advice on specific hazards. Several interviewees cited specific project or company level training documents used. Likewise, they were equally versed in assuring these same or similar qualified personnel were identifying adequate controls to assure a safety interface.

The procedures and methods used for subcontracted workers are much simpler and involve the upper-tier procedures HNF-PRO-078, *Subcontract Safety and Health Management* and HNF-PRO-186. HNF-PRO-186, Appendix A provides a procurement request form ("Sample (Simplified) Statement of Work") which requires a description of the individual's qualifications necessary to perform the assigned scope of work, including identification of hazards and work controls. Procurement managers verify these qualifications.

The procedures used to establish subcontractor qualifications do describe a process that is understood, used, and followed. Managers or supervisors interviewed were satisfied and comfortable with the application. However, there is no FH company-level system that describes a method to consistently achieve qualification verification for subcontractors at the same level as applied to the FH workforce. Although this is not an ideal situation, in this context it is not viewed as detrimental to completion of this criterion and therefore is not identified as a concern.

Criterion 3: *FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.*

The FH ISM System Description, policies, and procedures appropriately describe a plan for worker involvement in hazard identification, analysis, and establishment of controls. HNF-4361, *PHMC Expectations for Work Involvement* generally speaks to worker involvement in the ES&H process, and ES&H policy HNF-5053, *Policy for Environmental, Safety and Health* clearly expresses worker involvement as fundamental. HNF-PRO-079 emphatically states the workers and ES&H professionals must be included in "... hazard/impact identification, analysis, and control phases of job hazard analysis." Those involved in this process are further aided by the AJHA User's Guide, the ISMS/AJHA Implementation Information Screen, and the AJHA Help screens in developing and establishing the controls for safe work.

The managers and supervisors interviewed demonstrated a good understanding of these procedures and their application. All interviewed were very positive about applying them and assuring workers and ES&H professionals are involved. Again, the examples these managers and supervisors cited within their facilities substantiate the application of this criterion.

In the first Fluor Daniel Hanford ISMS Phase I Verification conducted in October 1999, one issue identified was that the HNF-4361 could be misinterpreted. The issue stated "...one with a management background may interpret this high level policy as referring to craftsman only." The October 1999 Phase I Verification concluded otherwise based on the interviews. During this Phase I Verification, the managers and supervisors interviewed corroborated this conclusion. They related involvement of an all-inclusive scheme of workers; employees at all levels were encouraged to supply any input that could help the process. Further, the stop work policy was

FUNCTIONAL AREA: **Hazard Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 4/27/00

often part of this area of discussion and recognized at all levels, as was the benefit of worker involvement.

Conclusion:

Roles and responsibilities for technical positions rely mostly on upper-tier documents. Interviews with management and supervisors of FH and the projects demonstrated an understanding of the importance of these criteria and a good working knowledge of the procedures. Training documentation was consistent, although the tailoring process varied with the use of the procedures. Nonetheless, the responsibilities and qualifications were adequately applied and worker involvement was included in the process of hazard identification, hazard analysis, and in the developing controls for safe work.

As identified by **SME-M&WC**, which related to work control procedures, there was not consistent procedural flow down of specific technical roles and responsibilities for identification or control of hazards. Also, there is no unified system to describe how the tailoring process was to be applied. Additionally, there is no FH company-level system describing a method to consistently achieve qualification verification for subcontractors at the same level as applied to the FH workforce. These items are not viewed detrimental to satisfying their specific criterion, and therefore, are not considered a concern for these criteria.

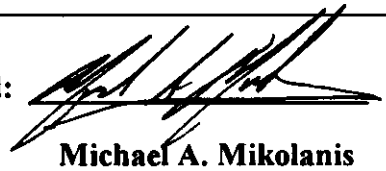
This objective has been met.

Strengths:

None.

Concerns:

None.

Submitted:  **August Maniez** ***Team Member***	**Approved:**  **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert – Environmental Protection/Chemical Management**	OBJECTIVE: **SME-EP** DATE: 4/27/00

OBJECTIVE

SME-EP: Environmental Protection/Chemical Management - Within the Environmental Protection/ Chemical Management area, the planning of work includes an integrated analysis of hazards and development and specification of necessary controls and opportunities for feedback and continuous improvement. Line managers are responsible for safety, that clear roles and responsibilities have been established, and there is a satisfactory level of competence.

Criteria

1. The FH ISM System Description and supporting documents are established for allocating resources for environmental regulatory and chemical management required provisions (BBC.2).

2. The FH ISM System Description and supporting documents ensure that environmental and hazardous material controls are adequate to mitigate all identified hazards associated with the planned work.

3. The FH ISM System Description and supporting documents for environmental protection and chemical management contain clear roles and responsibilities and specify that the line management is responsible for environmental protection/requirements.

4. FH mechanisms are established to communicate environmental requirements and chemical management to employees at all levels.

5. The FH ISM System Description and supporting documents are established to ensure that environmental protection and chemical management personnel are required to have competence commensurate with the assigned responsibility.

6. The FH ISM System Description and supporting documents are established to ensure that the contractor and subcontractors are held accountable for environmental regulations and chemical management requirements through appropriate contractual and appraisal mechanisms (MGO.2).

7. The FH ISM System Description and supporting documents for environmental protection and chemical management require that within the subject area, feedback and continuous improvement occurs.

8. Ensure completion of corrective actions from previous Phase I verifications.

FUNCTIONAL AREA: **Subject Matter Expert – Environmental Protection/Chemical Management**	OBJECTIVE: **SME-EP** DATE: 4/27/00

Approach

Record Review

- Review the policies and procedures that define the procedures and interactions required for environmental protection at the site level.
- Assess the adequacy of the documents to meet the criteria above and determine that the environmental protection procedures flow down to subcontractor levels.
- Review assessment and feedback mechanisms to assess the effectiveness within the environmental protection area.
- Review training records of personnel in the Environmental Protection group to determine whether they meet competency standards.

Interviews

- Interview personnel and responsible managers assigned to Environment Protection.
- Interview line managers to assess the establishment of clear roles and responsibilities and the understanding of the support provided to line managers.
- Interview personnel assigned to Environmental Protection to assess level of competence.

Corrective Action Plan Closures

See Attachment SME-EPa - PHMC CAP, SME EP-4, SME RP.2 and PFP CAP, PFP-6.

Record Review

- ASP-GD-001, *Analytical Services Desk Instructions for Environmental Reviews*, Rev. 0, April 20, 2000
- ASP-100, *Analytical Services Policies*
  - Section 4.0, "Analytical Services Charter Description," Rev. 1, Draft
  - Section 4.1, "Analytical Services Charters," Rev. 1, Draft
  - Section 4.2, "Analytical Services Laboratory Charters," Rev. 1, Draft
  - Section 4.3, "Analytical Services Programs and Functional Support Charters," Rev. 1, Draft
  - Section 4.6, "Analytical Services (AS) Integrated Safety Management Roles and Responsibilities and Functions," April 2000, Rev. 0, Draft

- ASP-200, *Analytical Services Procedures*
  - Section 1.13, "Health and Safety Self-Inspection Program," Rev. 3, January 1, 2000
  - Section 1.18, "Technical Procedure Process," Rev. 0, Draft
  - Section 1.2, "Assessments Program," Rev. 3, October 28, 1999
  - Section 1.3, "Corrective Action Management," Rev. 4, July 15, 1999
  - Section 1.6, "Operational Readiness Activities," Rev. 1, September 14, 1999
  - Section 2.1, "Organization and Administration," Rev. 2, September 16, 1999
  - Section 2.14, "Required Reading," Rev. 1, June 13, 1999
  - Section 2.16, "Technical Procedures," Rev. 8, August 23, 1999
  - Section 2.6, "Abnormal Events-Investigation, Notification and Occurrence Reporting," Rev. 3, June 2, 1999
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 2, October 28, 1999
- ASP-310, *Analytical Services Project Administration*, Section 1.8, "Laboratory Procedures," Rev. 2, January 14, 2000
- *Fast Flux Test Facility Operations Administrative Procedure*
  - A-28, "FFTF Work Management Process," Rev. 13
  - A-47, "FFTF Hazard Communication and Chemical Management," Rev. 1
- Chemical Management Program Stakeholder Newsletter for the Project Hanford Management Contractor, November 18, 1999
- Chemical Management Program Stakeholder Newsletter for the Project Hanford Management Contractor, December 17, 1999
- Chemical Management Program Stakeholder Newsletter for the Project Hanford Management Contractor, April 13, 2000
- FSP-FFTF-EI-080, FFTF Engineering Instructions, *Corrective Maintenance and Modification Work Packages*, Rev. 6, September 28, 1999
- FSP-FFTF-POL-6-14, *FFTF Plant Policy Manual*, Section 2.0, "Organization, Responsibilities, and Authority," Rev. 2, November 20, 1998
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-3, "Work Management Process," Rev. 5, December 13, 1999
  - Section CM-5, "Controlling Subcontractor Work at WESF," Rev. 3, March 29, 2000
  - Section MS-02, "WESF Administration," Rev. 4, February 17, 2000
- FSP-WESF-002, *WESF Conduct of Operations*
  - Section 1.1, "Self-Assessment Program," Rev. 1, December 8, 1999
  - Section 14.0, "Required Reading," Rev. 0, September 30, 1998
  - Section 16.1, "Technical Procedure Process," Rev. 2, September 8, 1999
  - Section1.0, "Operations Organization and Administration," Rev. 1, December 12, 1999
- G015, *FFTF Operations Guide G015, 400 Limited Area Hazardous Material/Waste Training Plan*, Rev. 1A
- G019, *FFTF Operations Guide G019, 400 Area Waste Minimization*, Rev. 0
- HNF-3244, *324/327 Facilities Environmental Effluent Specifications*, Rev. 1, August 30, 1999

- HNF-IP-1264, 324/327 *Facilities Stabilization Projects Administrative Manual*
  - Section 1.2, "Hazard Communication Program," Rev. 2, December 22, 1999
  - Section 2.1, "324 and 327 Facilities Chemical Management System," Rev. 1, December 22, 1999
  - Section 2.2, "Administrative Procedure Development and Control," Rev. 4, November 22, 1999
  - Section 2.3, "Technical Procedure Development and Control," Rev. 5, November 22, 1999
  - Section 4.1, "Job Control System Implementation," Rev. 9, November 22, 1999
  - Section 6.1, "Waste Generation Management Plan," Rev. 2, November 12, 1999
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environmental, Safety, and Health Management System Description.* Rev. 3, April 12, 2000
- HNF-PRO-058, *Critique Process*, Rev. 3, Draft
- HNF-PRO-069, *Maintenance Management*, Rev. 3, Draft
- HNF-PRO-154, *Responsibilities and Procedures, for all Hazardous Material*, Rev. 1, April 15, 2000
- HNF-PRO-156, *Nonradioactive Hazardous Materials/Hazardous Waste (HM/HW) Shipments*, Rev. 1, April 15, 2000
- HNF-PRO-157, *Radioactive Material / Waste Shipments*, Rev. 1, April 15, 2000
- HNF-PRO-166, *Transportation Safety Training Requirements*, Rev. 1, April 15, 2000
- HNF-PRO-1793, *Building Management*, Rev. 1, Draft
- HNF-PRO-1794, *Facility Shutdown, Standby, and Transfer*, Rev. 1, Draft
- HNF-PRO-2258, *Chemical Management*, Rev. 0, August 31, 1998
- HNF-PRO-229, *Technical Procedure Standard*, Rev. 4, Draft
- HNF-PRO-2595, *Air Quality Program - Nonradioactive Emissions*, Rev. 0, October 20, 1998
- HNF-PRO-450, *Air Quality -- Radioactive Emissions*, Rev. 0, March 18, 1999
- HNF-PRO-455, *Solid Waste Management*, Rev. 1, March 7, 2000
- HNF-PRO-456, *Water Quality Program*, Rev. 0, October 22, 1998
- HNF-PRO-473, *Performing Excavation Activities*, Rev. 1, Draft
- HNF-PRO-474, *Core Drilling/Tie-in Permit*, Rev. 1, Draft
- HNF-PRO-489, *Third Party Inspections*, Rev. 2, Draft
- HNF-PRO-490, *Calibrations Management Program*, Rev. 3, Draft
- HNF-PRO-5121, *Waste Designation and Land Disposal Restrictions*, Rev. 0, March 8, 2000
- HNF-PRO-5122, *Dangerous Waste Generator Activities*, Rev. 0, March 8, 2000
- HNF-PRO-5123, *Mixed Waste*, Rev. 0, March 8, 2000
- HNF-PRO-5124, *Nonradioactive, Nondangerous* Waste, Rev. 0, March 9, 2000
- HNF-PRO-5125, *Radioactive Waste*, Rev. 0, March 9, 2000
- HNF-PRO-5126, *Waste Recycling and Reclamation*, Rev. 0, March 9, 2000
- HNF-PRO-5127, *Treatment, Storage, and/or Disposal Units*, Rev. 0, March 9, 2000
- HNF-PRO-696, *Conduct of Operations Policy*, Rev. 1, Draft

- SI-300 Area-028, *300 Area Stabilization Project, Standing Instructions, 300 Area Stabilization Project to River Corridor Project Reorganization*, Rev. 1, October 12, 1999
- SI-324 Bldg-001, *324 Building Deactivation Project Standing Instructions, Automated Job Hazard Analysis (AJHA)*, Rev. 0, November 11, 1999
- WMH-100, *Waste Management Hanford Policies*
  - Section 1.0, "General Policy Statement," Rev. 0, May 19, 1997
  - Section 2.3, "Policy and Procedures System," Rev. 2, October 31, 1999
  - Section 4.0, "Analytical Services Charter Description," Rev. 1, Draft
  - Section 4.1, "Waste Management Charters," Rev. 1, Draft
  - Section 4.2, "Waste Management Charters," Rev. 1, Draft
  - Section 4.3, "Waste Management Programs and Functional Support Charters," Rev. 1, Draft
  - Section 4.6, "Waste Management Integrated Safety Management Roles and Responsibilities and Functions," Rev. 0, April 2000, Draft
- WMH-200, *Waste Management Hanford Procedures*
  - Section 1.13, "Health and Safety Self-Inspection Program," Rev. 3, January 1, 2000
  - Section 1.18, "Technical Procedure Process," Rev. 0, Draft
  - Section 1.2, "Assessments Program," Rev. 3, October 28, 1999
  - Section 1.3, "Corrective Action Management," Rev. 4, July 15, 1999
  - Section 1.6, "Operational Readiness Activities," Rev. 1, September 14, 1999
  - Section 2.1, "Organization and Administration," Rev. 2, September 16, 1999
  - Section 2.14, "Required Reading," Rev. 1, June 13, 1999
  - Section 2.16, "Technical Procedures," Rev. 8, August 23, 1999
  - Section 2.6, "Abnormal Events-Investigation, Notification and Occurrence Reporting," Rev. 3, June 2, 1999
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 2, October 28, 1999
- WMH-310, *Waste Management Laboratory Administration*, Section 5.1, "On-the-Job Training," Rev. 2, January 7, 1999

Interviews Conducted

Analytical Services Provider (ASP)

- 222-S Laboratory Chemical Management Coordinator
- Environmental Manager
- Waste Sampling and Characterization Facility (WSCF) Environmental Compliance Officer.

Fast Flux Test Facility (FFTF)

- Regulatory Compliance, Acting Environmental Compliance Officer
- Safety Manager.

FUNCTIONAL AREA: **Subject Matter Expert – Environmental Protection/Chemical Management**	OBJECTIVE: **SME-EP** DATE: 4/27/00

Fluor Hanford (FH)

- Environmental and Regulation, Senior Director
- Environmental and Regulations, Policies and Procedures Senior technical Advisor
- Environmental Center of Excellence Facilitator.

River Corridor Project (RCP)

- 324/327 Facilities Chemical Management Program Clerk
- 324/327 Facilities Environmental Compliance Officer
- 324/327 Facilities Hazardous Material Specialist
- Environmental Program Manager.

Waste Management Project (WMP)

- Environmental Manager
- Environmental Services, Compliance Filed Services, Manager
- Environmental Services, Deputy Project Manager
- Environmental Services, Project Manager
- Transportation and Packaging Technical Lead
- Treatment Facility Chemical Management Coordinator
- Treatment Facility Environmental Compliance Officer
- Waste Services, Deputy Project Manager.

Discussion of Results

Criterion 1: *The FH ISM System Description and supporting documents are established for allocating resources for environmental regulatory and chemical management required provisions (BBC.2).*

The FH Environmental and Regulations, WMP, RCP, FFTF, and ASP Environmental Protection/Chemical Management programs use standard mechanisms for developing multi-year work planning for allocating resources. All personnel interviewed indicated a comprehensive understanding of the process as it relates to the organization structure listed in HNF-MP-001, *Fluor Hanford Management Plan*. Specific review of the policies and procedures are covered under BBC.2

FUNCTIONAL AREA: **Subject Matter Expert – Environmental Protection/Chemical Management**	OBJECTIVE: **SME-EP** DATE: 4/27/00

Criterion 2: *The FH ISM System Description and supporting documents ensure that environmental and hazardous material controls are adequate to mitigate all identified hazards associated with the planned work.*

HNF-PRO-2258, *Chemical Management*, is outdated and does not reflect the current organization, contains references to procedures no longer implemented, and describes roles and responsibilities and requirements that are no longer applicable under the restructured Project Hanford Management Contract. **(SME-EP-1)** This was identified through a self-assessment. A waiver has been issued deleting the inventory database system, without providing specific direction on what the project and facilities should be using in the interim. The FH point-of-contact has been issuing newsletters, but there is no document control or management system in place to make project, facility, and subcontractors comply with these requirements.

WMP, ASP, RCP, and FFTF and associated facilities under these projects use their respective work control planning process to identify hazards and ensure that environmental and hazardous material controls are adequate to mitigate identified hazards associated with planned work. The project facility-level procedures reviewed use the Automated Job Hazard Analysis (AJHA) process from HNF-PRO-079, *Job Hazard Analysis*, to involve Environmental Protection/Chemical Management professionals in the work-planning process. Interviews with project and facility personnel demonstrated a clear understanding of the process and confidence in its ability to ensure their involvement in the work planning. Some of the facilities personnel interviewed stated that as the AJHA is implemented and used, recommendations for improvements are needed to add specific facility requirements. These recommendations and improvements have been implemented through their work-planning procedures.

WMP, ASP, RCP, and FFTF do not have a specific procedure for environmental technical document reviews; however, these projects use several other implementing mechanisms such as qualifications and job descriptions to perform the requirement. These responsibilities are assigned to the Environmental Compliance Officer, equivalent, and/or designee. The organizational structure at each of the project's facilities is simple in that the environmental organization consists of an Environmental Compliance Officer and one or two environmental engineers. Environmental personnel are trained to the same level as the Environmental Compliance Officer and have the same job description and responsibilities assigned for their duties as an engineer or scientist working within the Environmental Protection/Chemical Management organization.

Criterion 3: *The FH ISM System Description and supporting documents for environmental protection and chemical management contain clear roles and responsibilities and specify that the line management is responsible for environmental protection/requirements.*

HNF-MP-001 lists Environmental Services in Table 1, "Fluor Hanford Organization, Functions, Roles and Responsibilities" under the Project Support organization as a functional area. HNF-MP-003, *Integrated Environmental, Safety, and Health Management System Description*,

FUNCTIONAL AREA: **Subject Matter Expert – Environmental Protection/Chemical Management**	OBJECTIVE: **SME-EP** DATE: 4/27/00

Appendix D, "Waste Management Project Integrated Environmental, Safety, and Health Management System Description" describes the same organization (Environmental Services) as a project. Interviews with the Environmental and Regulations Manager and Environmental Services Manager indicated that the organization is performing its functional area responsibilities under the WMP organization. Clarification of management organizational structure and functional area responsibilities for Environmental Services in HNF-MP-001 and HNF-MP-003 is needed. **(SME-EP-2)**

HNF-PRO-455, *Solid Waste Management*, Rev. 1, does not contain clear roles and responsibilities. The eight new procedures issued as a revision to HNF-PRO-455, Rev. 0, do not indicate line managements, service organizations or facilities' roles and responsibilities for properly characterizing, handling, storing, and treatment of hazardous and radioactive waste. **(SME-EP-3)**

The WMP, ASP, and RCP do not have the project-level roles and responsibilities completely institutionalized. **(SME-EP-4)** These projects have developed Draft procedures and are currently in the process of approving and publishing these prior to the FH ISMS Phase II Verification. This was identified during the self-assessment in preparation for this Phase I ISMS Verification. A common observation with these Draft documents and implementing mechanisms in use is that terminology used for positions as it relates to HNF-MP-001, HNF-PROs, and other project/facility procedures is that the same responsibilities are listed for different job titles/positions and several are not integrated with the functional area manager and discipline lead. At the project level, the same observation can be said for personnel working jobs such as a Line Manager, Facility Manager, Project Manager, Environmental Manager, Environmental Engineer, Environmental Compliance Officer, and Hazardous Material Coordinator or specialist. Because SME-EP.4 demonstrates there is no institutionalization document in place, a concern is not derived from these observations; however, when evaluating the final implementation of corrective actions, terminology should be standardized and consistent with existing programs and documentation.

Criterion 4: *FH mechanisms are established to communicate environmental requirements and chemical management to employees at all levels.*

HNF-MP-003, Appendix D (WMP) does not describe the transportation and packing services functions, how integrated safety management is implemented under the core functions, nor does it list any implementing mechanisms for the organization. **(SME-EP-5)** The HNF-PROs used to ensure safe shipments of hazardous and radioactive material were not listed under the applicable core functions of the system description. These procedures contain the roles and responsibilities, mechanism for proper packaging, and shipping material onsite and offsite.

WMP, ASP, RCP, and FFTF use various tools to flow down Environmental Protection/Chemical Management requirements from the integrated system description. The required reading programs, training programs, and procedures all had requirements for identification and

communicating Environmental Protection/Chemical Management requirements to Hanford Site employees.

Criterion 5: *The FH ISM System Description and supporting documents are established to ensure that environmental protection and chemical management personnel are required to have competence commensurate with the assigned responsibility.*

WMP, ASP, RCP, and FFTF implement the training requirements for Environmental Protection/Chemical Management, and transportation and packaging using the HNF-PROs. The projects and facility line management use the site Training Matrix to manage and ensure that personnel are trained for the responsibilities and tasks they are involved with at the project or facility.

Criterion 6: *The FH ISM System Description and supporting documents are established to ensure that the contractor and subcontractors are held accountable for environmental regulations and chemical management requirements through appropriate contractual and appraisal mechanisms (MGO.2).*

The WMP and ASP-level procedures for Chemical Management do not have a process to ensure that subcontractors comply with their Chemical Management program. This was identified through worker self-assessments with other gaps concerning the full implementation of a Chemical Management System for the facilities under the WMP. The mechanism, along with the corrective actions identified in the Deficiency Tracking System, ensures that ISMS criteria are implemented. The Waste Encapsulation and Storage Facility (WESF) Draft procedure for chemical management does contain subcontractor language and is being evaluated for use for the WMP-level procedure.

Criterion 7: *The FH ISM System Description and supporting documents for environmental protection and chemical management require that within the subject area, feedback and continuous improvement occurs.*

WMP, ASP, RCP, and FFTF all have strong assessment programs. The requirements are managed through project-level and/or facility-level procedures for assessments and self-assessment programs, along with Environmental Protection/Chemical Management specific requirements for inventory, inspections, and surveillances. The documents reviewed include sufficient language to ensure that issues, concerns, findings, etc. are evaluated against the corrective actions management program for determining deficiencies and tracking the actions until closure. Specific concerns with the feedback and corrective action program at the site, project and/or facility level are covered under MGO.3.

FUNCTIONAL AREA: **Subject Matter Expert – Environmental Protection/Chemical Management**	OBJECTIVE: **SME-EP** DATE: 4/27/00

Criterion 8: *Ensure completion of corrective actions from previous Phase I verifications.*

SME-EP-4 *Environmental controls are not being adequately integrated within Operations and Maintenance FDH level policies and procedures.*

A review of the FH Phase I Integrated Safety Management Corrective Action Package for SME-EP-4 contained the following procedures:

- HNF-PRO-058, *Critique Process*, Rev. 3
- HNF-PRO-069, *Maintenance Management*, Rev. 3
- HNF-PRO-1793, *Building Management*, Rev. 1
- HNF-PRO-1794, *Facility Shutdown, Standby, and Transfer*, Rev. 1
- HNF-PRO-229, *Technical Procedure Standard*, Rev. 4
- HNF-PRO-473, *Performing Excavation Activities*, Rev. 1
- HNF-PRO-474, *Core Drilling/Tie-in Permit*, Rev. 1
- HNF-PRO-696, *Conduct of Operations Policy*, Rev. 1.

Environmental controls language was added that required ES&H reviews and approvals on tasks involving activities that may impact the public, environment, and/or safety of the worker. In addition, the ES&H, Environmental and Regulations, Policies and Procedure Technical Advisor was added to the procedures as a point of contact. All of the procedures have been approved. The changes incorporate the fundamental principles of integrated safety management into the Operations and Maintenance FH-level procedures. The corrective actions taken for SME-EP-4 were reviewed and found to be adequate.

SME-RP.2 *Radiological controls and use of ALARA practices are not integrated and needs to be established in the FDH Operations and Maintenance Program procedures.*

A review of the FH Phase I Integrated Safety Management Corrective Action Package for SME-RP.2 contained the following procedures:

- HNF-PRO-058
- HNF-PRO-069
- HNF-PRO-229
- HNF-PRO-473
- HNF-PRO-474
- HNF-PRO-489, *Third Party Inspections*, Rev. 2
- HNF-PRO-490, *Calibrations Management Program*, Rev. 3
- HNF-PRO-696.

The changes to these procedures include the use of radiological sources and the control requirements for entry into radiological contamination areas. In addition, the procedure changes

from SME-EP.4 (above) are part of the corrective actions for this Opportunity for Improvement. The review by the radiological organization indicate, along with addition of safety reviews and protection of the worker, that the work planning and review process should ensure that radiological controls and requirements are integrated into the work planning task using these procedures. The corrective actions taken for SME-RP.2 were reviewed and found to be adequate.

PFP-6 *PFP has integrated Environmental Compliance/Chemical Management into work Planning to ensure hazard identification and controls are evaluated and in place. However, there is no documented process for a consistent, systematic approach for performing and tracking internal environmental reviews for facility procedures and documents.*

A review of the FH Phase I Integrated Safety Management Corrective Action Package for PFP-6 contained the desk instruction DI-PFP-ENV-002-00, dated April 10, 2000. DI-PFP-ENV-002-00 requires the use of a standard approach for conducting the environmental technical reviews. However, based on roles and responsibilities at the facility, sufficient guidance is not provided on the distribution of documents within the Plutonium Finishing Plant (PFP) Environmental Team. The desk instruction allows a single person to perform the environmental technical review; however, to ensure personnel with specific competence commensurate with responsibilities within the PFP Environmental Team, more guidance is needed to clarify the coordination process for environmental technical reviews. Based on a phone conversation with the Environmental Compliance Officer at PFP, DI-PFP-ENV-002-00 would allow for implementation of the corrective actions (systemic approach) while the final reorganization was implemented at the facility. This goal has been met. The desk instruction will be revised to reflect the roles and responsibilities of the PFP Environmental Team and to clarify the coordination process used for environmental technical reviews. The corrective actions taken for PFP-6 were reviewed and found to be adequate.

Conclusion

Within the scope of the Environmental Protection/Chemical Management, the core functions and guiding principles associated for defining scope and roles and responsibilities is not integrated throughout the site, project, and facility levels. The ISM System Description concerns described below with Environmental Services and transportation and packaging, although administrative in nature, are examples of not consistently documenting organizations, functions, and roles and responsibilities using terminology that is understood at all levels within FH. The Chemical Management and Solid Waste Management procedure concerns described below are an example of the lack of maturity of the new management structure, ISMS, and the volume of work needed to get documents in place and potential problems with overloading the procedure review and approval process.

With the strength coming from the training, corrective action, assessments and work control programs, the Hanford Site should be able to build on its implementation and continuous

improvement while ensuring the goals and objectives listed within their policies for protecting the work, environment, and public are met.

This objective has been met.

Strengths:

None.

Concerns:

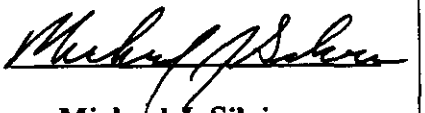
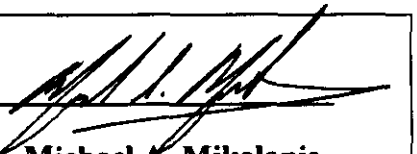
- HNF-PRO-2258 is outdated and does not reflect the current organization; contains references to procedures no longer implemented; and describes roles and responsibilities and requirements that are no longer applicable under the restructured PHMC. This was identified during a self-assessment. **(SME-EP-1)**

- Clarification of management organizational structure and functional area responsibilities for Environmental Services is needed in HNF-MP-001 and HNF-MP-003. **(SME-EP-2)**

- Eight new procedures issued as a revision to HNF-PRO-455, Rev. 0, do not indicate line managements, service organizations or facilities' roles and responsibilities for properly characterizing, handling, storing, and treatment of hazardous and radioactive waste. **(SME-EP-3)**

- WMP, ASP, and RCP do not have the project-level roles and responsibilities completely institutionalized. This was identified during the self-assessment in preparation for this Phase I Verification. **(SME-EP-4)**

- HNF-MP-003, Appendix D (WMP) does not describe the transportation and packing services functions, how integrated safety management is implemented under the core functions, nor does it list any implementing mechanisms for the organization. **(SME-EP-5)**

Submitted: 	**Approved:** 
Michael J. Silvia	**Michael A. Mikolanis**
Team Member	***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert – Maintenance & Work Controls**	OBJECTIVE: **SME-M&WC** DATE: 4/27/00

OBJECTIVE

SME - Maintenance and Work Control (M&WC) - Within M&WC, the planning of work includes an integrated analysis of hazards and development and specification of necessary controls. There is an adequate process for the authorization and control of work and a process for identifying opportunities for feedback and continuous improvement. Within M&WC, line managers are responsible for safety, that clear roles and responsibilities have been established, and that there is a satisfactory level of competence (CE I/II-3, CE I/II-5, CE I/II-6, CE I/II-7, CE I/II-8).

Criteria

1. The FH ISM System Description and supporting documents for M&WC require adequate planning of individual work items to ensure that hazards are analyzed and controls are identified.

2. Procedures and/or mechanisms for M&WC contain clear roles and responsibilities. M&WC is effectively integrated with line support managers to ensure that line managers are responsible for safety.

3. Procedures and/or mechanisms for M&WC require controls to be implemented, that these controls are effectively integrated, and that readiness is confirmed prior to performing work.

4. Procedures and/or mechanisms for M&WC require that personnel who are assigned to the subject area have a satisfactory level of competence.

5. Procedures and/or mechanisms for M&WC require that within the subject area, feedback and continuous improvement occurs.

6. Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work and start-up activities 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.

7. FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.

FUNCTIONAL AREA: **Subject Matter Expert – Maintenance & Work Controls**	OBJECTIVE: **SME-M&WC** DATE: 4/27/00

Approach

Record Review

- Review the manuals of practice and selected records that define the procedures and interactions required for M&WC at the facility or activity.

- Assess the adequacy of the documents to meet the criteria above and determine that M&WC is effectively integrated into the facility or activity procedures. In particular, note the methods of maintaining configuration management and the documentation during the execution of the facility work. Be alert to worker involvement in the processes reviewed.

- Review any lessons learned that provide an opportunity to assess that lessons learned have been effectively used within M&WC.

- Review training records of personnel in M&WC to determine whether they meet competency standards.

- Review performance indicators used to gauge effectiveness or the work control system; i.e., how many packages get worked to completion when they are originally scheduled, how many procedures require changes, how many changes per procedure, etc.

Interviews

- Interview personnel and responsible managers assigned to M&WC.

- Interview line managers to assess the establishment of clear roles and responsibilities and the understanding of the support provided to line managers.

- Interview personnel assigned to M&WC to assess the level of competence.

Record Review

- ASP-200, *Analytical Services Project Procedures*
  - Section 3.1, "Work Management," Rev. 3, February 22, 2000
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 2, September 30, 1999
  - Section 3.8, "Enhanced Radiological Work Planning," Rev. 3, January 31, 2000
  - Section 4.10, "Occupational Medical Qualification and Monitoring," Rev. 0, April 6, 2000
  - Section 5.1, "Training Plan," Rev. 4, February 29, 2000
  - Section 5.3, "Training Implementation Matrix," Rev. 2, May 27, 1998

FUNCTIONAL AREA: **Subject Matter Expert – Maintenance & Work Controls**	OBJECTIVE: **SME-M&WC** DATE: 4/27/00

- DOE/RL-99-72, *Fluor Daniel Hanford, Inc., Integrated Safety Management System Phase I Verification*, October 1999
- FFTF *Administrative Procedure*
  - A-3, *Operations Organization and Responsibilities*, Rev. 6A, April 29, 1998
  - A-28, *FFTF Work Management Process*, Rev. 13, September 31, 1997
  - A-33, *Work Prioritization and Scheduling*, Rev. 4, March 24, 1998
- FSP-3647, *200 Area Deactivation Project Administration*
  - Section CM-2, "Work Management Preventative Maintenance and Surveillance," Rev. 2, February 23, 1999
  - Section CM-3, "Work Management System," Rev. 2, April 3, 2000
- FSP-FFTF-POL-6-14, *FFTF Plant Policy Manual*, Section 5.0, "FFTF Readiness Review," Rev. 1, July 1, 1998
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-2, "Work Management Preventative Maintenance and Surveillance," Rev. 0, April 13, 1999
  - Section CM-03, "Work Management Process," Rev. 2, April 3, 2000
  - Section CM-05, "Controlling Subcontractor Work at WESF," Rev. 2, August 13, 1999
  - Section OH-01, "Safety Program," Rev.2, February 22, 1999
  - Section TN-01, "WESF Training Program," Rev. 5, March 21, 2000
- HNF-IP-1264, *324/327 Administrative Procedures Manual*
  - Section 2.3, "Technical Procedure Development and Control," Rev. 5, November 22, 1999
  - Section 2.15, "Training Development and Administration," Rev. 1, October 29, 1999
  - Section 2.16, "Facility Worker Training," Rev. 9, November 22, 1999
  - Section 4.1, "Job Control System Implementation," Rev. 9, November 22, 1999
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*, Rev. 3, April 12, 2000
- HNF-MP-011, *Site Wide Qualification and Training*, Rev. 1, April 6, 1999
- HNF-POL-EMPLOY, *Employee Training Policy*, Rev. 0, May 16, 1997
- HNF-PRO-055, *Facilities Startup Readiness*, Rev. 2, December 16, 1999
- HNF-PRO-058, *Critique Process*, Rev. 2, July 20, 1999
- HNF-PRO-067, *Lessons Learned*, Rev. 2, November 24, 1998
- HNF-PRO-069, *Maintenance Management*, Rev. 3, January 14, 2000
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-164, *Training Matrix Capabilities and Access*, Rev. 1, February 28, 2000
- HNF-PRO-168, *Employee Training*, Rev. 0, February 16, 1998
- HNF-PRO-4616, *Supervision of Field Work Activities*, Rev. 3, January 23. 2000
- SI-324 Bldg-001, *324 Building Deactivation Project Standing Instruction, Automated Job Hazard Analysis (AJHA)*, Rev. 0, November 11, 1999
- WMH-100, *Waste Management Hanford Policies*, Section 2.10.2, "Safety Councils," Rev. 2, September 9, 1999

- WMH-200, *Waste Management Hanford Procedures*
  - Section 1.6, "Operational Readiness Activities," Rev. 1, August 17, 1999
  - Section 2.16, "Technical Procedures," Rev. 8, August 19, 1998
  - Section 3.1, "Work Management," Rev. 3, February 22, 2000
  - Section 3.5, "Subcontractor Project and Construction Work," Rev. 5, September 30, 1999
  - Section 3.8, "Enhanced Radiological Work Planning," Rev. 3, January 31, 2000
  - Section 4.10, "Occupational Medical Qualification and Monitoring," Rev. 0, April 7, 2000
  - Section 5.1, "Training Plan," Rev. 4, February 29, 2000
  - Section 5.3, "Training Implementation Matrix," Rev. 2, May 27, 1998.

Interviews Conducted

Analytical Services Provider (ASP)

- Manager, Maintenance
- Team Lead, Maintenance Project Support and Work Management.

Fast Flux Test Facility (FFTF)

- Manager, Maintenance
- Manager, Safety
- Manager, Work Control and Scheduling.

River Corridor Project (RCP)

- Job Control Administrator (JCA), 324
- Manager, Engineering and Maintenance, 324
- Manager, Engineering and Work Control, 324
- Manager, Projects, 324
- Manager, Work Control, 327.

Waste Management Project (WMP)

- Manager, Maintenance
- Manager, Maintenance and Operations, Waste Encapsulation and Storage Facility (WESF)
- Planner and Automated Job Hazard Analysis (AJHA) Coordinator
- Team Lead, Maintenance Project Support and Work Management.

FUNCTIONAL AREA: **Subject Matter Expert – Maintenance & Work Controls**	OBJECTIVE: **SME-M&WC** DATE: 4/27/00

Discussion of Results

Criterion 1: *The FH ISM System Description and supporting documents for M&WC require adequate planning of individual work items to ensure that hazards are analyzed and controls are identified (GP-5,6; CF-3).*

HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description* and supporting documents for M&WC do require adequate planning of individual work items to ensure that hazards are analyzed and controls are identified. This is done through the use of the AJHA. HNF-PRO-079, *Job Hazard Analysis*, provides the minimum requirements for integrating environmental, safety, health, and quality into work planning process. The AJHA tool is an automated system that is used early in the planning process to ensure hazard analysis and control identification and involves teams of personnel from the crafts, engineering, subject matter experts, and other applicable disciplines. The application of the AJHA varies from project–to–project, but as a minimum is applied to medium/high–risk and complex planned work items. WESF through FSP-WESF-001, *WESF Project Administration*, Appendix H of Section CM-03, "Work Management Process," utilizes an AJHA screening process to ensure the applicable maintenance items fall under the AJHA tool. This procedure appendix also discusses how the AJHA tool is applied to maintenance and operation procedures. The 324 Building Deactivation Project performs maintenance per HNF-IP-1264, *324/327 Administrative Procedures Manual*, Section 4.1, "Job Control System Implementation." This procedure provides links to SI-324 Bldg-001, *Automated Job Hazard Analysis*, which augments the HNF-PRO-079. SI-324 Bldg-001 applies the AJHA tool across the board from planned work to operations procedures. SI-324 Bldg-001 provides examples of what low-, medium-, and high-risk activities are. The 327 Facility utilizes the same work control procedures and institute their own Standing Instructions regarding the use of the AJHA tool. Other RCP Facilities and Projects have maintenance procedures that address the application of the AJHA tool. WMP and ASP use identical work management procedures that address the use of the AJHA tool for a given task or work activity. WMP and ASP, for pre-approved, low-risk simple work activities use a Work It Now (WIN) process. For no-planning-required work activities, standing AJHAs are used. FFTF through Administrative Procedure A-28, *FFTF Work Management Process*, applies the AJHA tool to all planning-required work packages and tasks. At FFTF, planning-required work includes medium and high–risk work items. Appendix H of A-28 provides instructions for the application of the AJHA and for items not specifically addressed, allows the Work Control Scheduling Manager to determine if an AJHA will be utilized.

The ASP ISM System Description states under Section 3.3 that ASP-200, *Analytical Services Project Procedures*, Section 3.5, "Subcontractor Project and Construction Work" provides supplemental guidance on implementation of the AJHA tool. ASP-200, Section 3.5 does not provide any guidance regarding the implementation of the AJHA tool. **(SME M&WC-3)**

Criterion 2: *Procedures and/or mechanisms for M&WC contain clear roles and responsibilities. M&WC is effectively integrated with line support managers to ensure that line managers are responsible for safety (GP-1; CF-1).*

HNF-PRO-074, *Safety Responsibilities*, provides the basic outline of roles and responsibilities of managers, supervisors, and nonsupervisors for safety and health. WMP, WESF, RCP, FFTF, and ASP have M&WC procedures and mechanisms in place that contain clear roles and responsibilities for the conduct of maintenance activities. The procedures used for work control integrate with line support to ensure line managers are responsible for safety. For example, ASP-200, Section 3.1, "Work Management" addresses the duties and responsibilities of the Operations Manager, Maintenance Manager, and Work Control Manager to ensure the integration between line support and line managers regarding safety responsibility. At FFTF, Administrative Procedure A-3, *Operations Organization and Responsibilities*, provide clear safety roles and responsibilities for line and line support managers. FFTF through A-28 the integrating of the Facility Manager, Maintenance Manager, and other applicable manager's roles and responsibilities is clear and precise in terms of line management responsibility for safety. WMP procedures are identical to ASP procedures in this area. One common thread for all work performed is the Person in Charge (PIC)/Field Work Supervisor (FWS). HNF-PRO-4616, *Supervision of Field Work Activities* is the base document that defines the roles and responsibilities of the FWS. The PIC/FWS is the activity/task-level line management representative that through the M&WC procedures has clearly defined safety responsibilities.

Criterion 3: *Procedures and/or mechanisms for M&WC require controls to be implemented, that these controls are effectively integrated, and that readiness is confirmed prior to performing work (GP-5,6; CF-4,5).*

WMP, WESF, RCP, FFTF, and ASP have procedures and mechanisms in place that implement and integrate controls and confirm readiness prior to performing work. For facility and activity startup/restart, the common procedure used is HNF-PRO-055, *Facility Startup Readiness* to ensure that the appropriate level of assessment is performed ensuring that controls are implemented, integrated and readiness is confirmed. WMP and ASP have a lower-tier document, WMH-200, *Waste Management Hanford Procedures*, Section 1.6, "Operational Readiness Activities," which augments HNF-PRO-055. FFTF also uses a facility–specific procedure, FSP-FFTF-POL-6-14, *FFTF Plant Policy Manual*, Section 5.0, "FFTF Readiness Review" to further augment HNF-PRO-055.

As described in the discussion under criterion 1, the AJHA tool along with the applicable M&WC procedures provide the process that require controls be implemented, integrated and that readiness is confirmed prior to performing medium, high, and complex work at WMP, WESF, ASP, FFTF, and RCP. A graded approach is used for simple, routine, low-risk work. For example, WMP and ASP utilize standing AJHAs for no–planning–required work and use the WIN process described in criterion 1. Both 324/327 and FFTF utilize the J-3, pre-approved, work process for low-risk, simple task. A table in their work control documents provides a list of those tasks along with the associated criteria to determine if an item can be worked under the J-3 process.

of those tasks along with the associated criteria to determine if an item can be worked under the J-3 process.

At the 324 and 327 facilties, HNF-PRO-1264, Section 4.1 had two separate entities involved with the authorization of operations activities and release of planned work. Operations did not release work packages. A Work Release Coordinator releases the work package independent of Surveillance Operations Manager. **(SME M&WC-4)** RCP took action to correct this deficiency immediately after it was brought to their attention. At 324, a Standing Instruction was issued requiring the Surveillance Operations Manager to be the single point of contact to release work and direct plant operations. RCP Management indicated that similar action is being taken to fix the same condition at 327.

Criterion 4: *Procedures and/or mechanisms for M&WC require that personnel who are assigned to the subject area have a satisfactory level of competence (GP-3).*

For M&WC, procedures and/or mechanisms are in place that ensure personnel assigned to a given subject area have a satisfactory level of competence. At the FH–level procedures and mechanisms such as HNF-PRO-168, *Employee Training*, HNF-PRO-164, *Training Matrix Capabilities and Access*, HNF-POL-EMPLOY, *Employee Training Policy*, and HNF-MP-011, *Site Wide Qualification and Training* provide guidance and roles and responsibilities regarding the processes used to ensure satisfactory level of competence. WMP, WESF, RCP, ASP, and FFTF implement the HNF-PROs described above via their own project or facility-specific procedures.

WMH-200, Section 5.1, "Training Plan" and Section 5.3, "Training Implementation Matrix" provide this process. For ASP, the same procedures under the title of ASP-200, Section 5.1, "Training Plan" and Section 5.3, "Training Implementation Plan," do the same. RCP utilizes procedures HNF-IP-1264; and 324/327 utilize procedure HNF-IP-1264, Section 2.15, "Training Development and Control" and Section 2.16, "Facility Worker Training." At WESF, the FSP-WESF-001, Section TN-01, "WESF Training Program" performs this function. Interviews with facility work control management show that the above is true. Similar procedures and process exist at FFTF and other RCP facilities/projects.

See **HAZ.3**, **BBC.3**, and **MGO.2** for further discussion on competence commensurate with responsibility.

Criterion 5: *Procedures and/or mechanisms for M&WC require that within the subject area, feedback and continuous improvement occurs (GP-10; CF-6)*

For M&WC, procedures are in place that incorporate feedback and continuous improvement. In the WMP, RCP, WESF, ASP, and FFTF work control procedures the AJHA tool is a major component in the feedback and improvement process for planned work. Reportedly the AJHA tool provides for the incorporation of lessons learned from past work items. The AJHA tool also (through job planning meetings) allows engineers, ES&H, radiological personnel, and crafts to

provide feedback to the work planning and control process for a given work item or activity. Additionally, in the work control process, mechanisms are provided for the personnel performing the work to provide feedback during the actual performance of work. WMP, RCP, WESF, FFTF, and ASP work control procedures address the use of pre–job briefings and post–job reviews for work that provides additional avenues for feedback and continuous improvement.

WMP, RCP, ASP, FFTF, and WESF implement HNF-PRO-067, *Lessons Learned*. WMH and WESF utilize a Safety Council as described in WMH-100, *Waste Management Hanford Policies*, Section 2.10.2, "Safety Councils," and FSP-WESF-001, Section OH-01, "Safety Program" as a part of the feedback and continuous improvement process. The critique process described in HNF-PRO-058, *Critique Process*, provides yet another means for feedback and continuous improvement.

FH has established a Maintenance Management Board similar to the Conduct of Operations Council. This Board provides a forum for WMP, RCP, WESF, FFTF, ASP and other maintenance managers, crafts, and interested personnel to share information and provide feedback to improve M&WC at the Hanford Site.

The 324/327 management has instituted a Safety Book where all personnel assigned to work at those facilities can write down their specific concerns and issues. Upon notification of employee concerns/issues, 324/327 management works with the individual to resolve the concern/issue and update the Safety Book as is necessary. Entries can also be anonymous. **(SME M&WC-2)**

Criterion 6: *Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work and start-up activities 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 (GP-7; CF-4, 5).*

Contractor procedures are in place that provides a method to ensure controls are implemented during preparation for work initiation and start-up activities. See the discussion in criterion 3 regarding the start-up and restart functions.

WMP, ASP, RCP, WESF, and FFTF work control procedures (WMH-200, Section 3.1, "Work Management" and Section 3.5, "Subcontractor Project and Construction Work;" ASP 200, Section 3.1 and 3.5; HNF-IP-1264, Section 4.1; and A-28) provide the methods to ensure controls are implemented prior to work initiation of planned and routine (unplanned, low risk, and simple task). These same procedures provide a process to ensure that controls are identified to mitigate identified hazards and that they are effectively implemented. WMP, ASP, RCP, WESF, and FFTF work control procedures provide a process to ensure that controls will remain in effect so long as the hazards are present. This process utilizes plans of the day meetings, daily release sheets, and work suspension procedures to ensure that controls are in place, conditions are in effect to allow the work to proceed, and that the appropriate operations personnel control these activities. See **SME-M&WC-4** for a discussion on a deficiency that existed at the 324/327

facilities. For items that cannot be worked or if a delay in the work will occur, the work control procedures provide for work suspension. Except for WESF, the work suspension procedures provided criteria for when a suspension should occur. WESF procedure FSP-WESF-001, Section CM-03 does not provide any work suspension criteria. **(SME-M&WC-5)**

Criterion 7: *FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls (GP-8).*

FH work planning procedures provide a process to ensure appropriate involvement of worker and ES&H professionals in hazard analysis and control selection. For WMP, RCP, FFTF, WESF, and ASP the AJHA tool is the mechanism that provides this function and ensures the involvement of worker and ES&H professionals. The AJHA tool is used for planned medium and high–risk work packages. A graded approach is used for routine, simple, and low–risk work items to ensure the appropriate level of involvement of worker and ES&H personnel. For this type of work, various processes are utilized. All of the work control procedures address, in one form or another, what constitutes routine, low risk, and simple tasks. WMP and ASP utilize a WIN process for such tasks/work items. A deficiency regarding HNF-PRO-079 concerning risk versus complexity was identified in DOE/RL-99-72, *Fluor Daniel Hanford, Inc., Integrated Safety Management System Phase I Verification* (October 1999) in HAZ.3, criterion 1. A draft update to HNF-PRO-079 is still in the review and approval cycle to provide guidance regarding the definition of risk and complexity. **(SME-M&WC-6)** For high-risk radiological work, WMP and ASP follow WMH-200, Section 3.8, "Enhanced Radiological Work Planning" and ASP-200, Section 3.8, "Enhanced Radiological Work Planning," respectively in addition to following the AJHA process.

At FFTF, a Fix It Now (FIN) Team has been established for work to keep the reactor systems and support systems online. The FIN Team is a multi-disciplined team whose purpose is to walk–down, troubleshoot, and repair identified equipment/system problems in a timely manner to support facility operations. The FIN Team is described in the FFTF A-28. **(SME-M&WC-1)**

Conclusion

For WMP, WESF, ASP, RCP and FFTF, the planning of work includes an integrated analysis of hazards and development and specification of necessary controls. The AJHA tool and process is used for medium and high–risk work. A graded approach is used for simple, low risk, and routine work.

For WMP, WESF, ASP, RCP, and FFTF, there is an adequate process for the authorization and control of work and a process for identifying opportunities for feedback and continuous improvement. At the 324/327 facilities, a deficiency existed in the area of authorization of work. See discussion in criterion 3 and **SME-M&WC-4** for details. RCP took immediate action to correct this deficiency.

FUNCTIONAL AREA: **Subject Matter Expert – Maintenance & Work Controls**	OBJECTIVE: **SME-M&WC** DATE: 4/27/00

For WMH, WESF, ASP, RCP, and FFTF, procedures and mechanisms are in place that ensure line managers are responsible for safety, provide clear roles and responsibilities, and ensure a satisfactory level of competence.

Projects under the FH umbrella, in the area of M&WC, do not implement the requirements of the upper tier HNF-PROs (HNF-PRO-079, HNF-PRO-069, *Maintenance Management*, HNF-PRO-4616, etc.) consistently across the site. This could lead to confusion of the nomadic Hanford workforce as they perform work from facility to facility. Although an opportunity for improvement exists in this area it is not viewed detrimental to the meeting of this objective and is not identified as a concern. See **HAZ 3**, criterion 1, for an additional discussion of this subject as related to hazard identification.

The objective has been met.

Strengths:

- At FFTF, a FIN Team has been established for work to keep the reactor systems and support systems online. The FIN Team is a multi-disciplined team whose purpose is to walk-down, troubleshoot, and repair identified equipment/system problems in a timely manner to support facility operations. The FIN Team is addressed in their A-28. **(SME-M&WC-1)**

- The 324/327 management has instituted a Safety Book where all personnel assigned to work at those facilities can write down their specific concerns and issues. Upon notification of employee concerns/issues, 324/327 management works with the individual to resolve the concern/issue and update the Safety Book as is necessary. Entries can also be anonymous. **(SME-M&WC-2)**

Concerns:

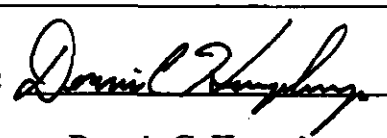
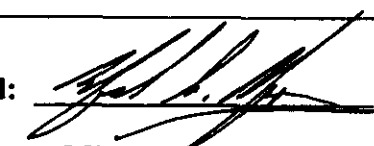
- The ASP ISM System Description stated under Section 3.3 that ASP-200, Section 3.5 provided supplemental guidance on implementation of the AJHA tool. ASP-200, Section 3.5 does not provide any guidance regarding the implementation of the AJHA tool. **(SME-M&WC-3)**

- At the 324 and 327 facilities, HNF-PRO-1264, Section 4.1 had two separate entities involved with the authorization of operations activities and release of planned work. Operations did not release work packages. A work release coordinator releases the work package independent of Surveillance Operations Manager. **(SME-M&WC-4)**

- WESF procedure FSP-WESF-001, Section CM-03 does not provide any work suspension criteria. **(SME-M&WC-5)**

FUNCTIONAL AREA: **Subject Matter Expert – Maintenance & Work Controls**	OBJECTIVE: **SME-M&WC** DATE: 4/27/00

- A deficiency regarding HNF-PRO-079 concerning risk versus complexity was identified in DOE/RL-99-72 (October 1999) in HAZ.3, criterion 1. A draft update to HNF-PRO-079 is still in the review and approval cycle to provide guidance regarding the definition of risk and complexity. **(SME-M&WC-6)**

Submitted:  **Dennis C. Humphreys** ***Team Member***	**Approved:**  **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 4/27/00

OBJECTIVE

MGO.1 - The contractor's ISM System 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's policies and procedures ensure that the ISM System Description is maintained and implemented, and that implementation mechanisms result in integrated safety management. (CE I-1).

Criteria

1. The FH ISM System 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. FH has assigned responsibilities and established mechanisms to direct, monitor, verify, evaluate, maintain, and improve the integrated implementation of the ISMS as described in the ISM System Description. Implementation and integration expectations and mechanisms are evident throughout all corporate/site organizational functions.

3. Ensure completion of corrective actions from previous Phase I verifications

Approach

Record Review

- Review the FH ISM System Description and the direction concerning the guidance on the preparation, content, review, and approval of the ISMS.

- Review corporate/site procedures for the implementation review and maintenance of the ISM System Description and associated items, including provisions for the annual review and update to DOE. Review charters and "output documentation" from any ISMS coordinating committees.

- Review contractor assessment activities incident to determination of the adequacy of implementation of ISMS.

- Review implementation planning efforts and any corrective action plans that may have been developed.

- Review the process established 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.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 4/27/00

Interviews

- Interview contractor managers who are responsible for the development and maintenance of the ISM System Description.
- Interview contractor line mangers that are or will be responsible for administering the mechanisms of the ISMS.
- Interview chairpersons and key members of any ISMS coordinating committees, if established.

Corrective Action Plan Closures

See PHMC CAP, Attachment MGO-1a, MGO 1.1, 1.2 and 1.3; and PFP CAP, PFP-1, PFP-2, and DOE/RL-99-73, #2.

Record Review

- 9953690/99-ESH-025, *Guidance for Preparation and Content and Review and Approval of Integrated Environment, Safety and Health Management System Description (ISMSD) in Accordance with Clause H.5.E (DEAR 970.5204-2)*, Correspondence from S. A. Sieracki, RL, to President, FDH, May 28, 1999
- DE-AC06-96RL13200, Mod O86, *Project Hanford Management Contract*, October 1, 1999
- DOE-G-450.1A, *Integrated Safety Management System Guide*, Chapter IV, "Maintaining an Approved ISMS," March 28, 2000
- Electronic Mail message from Vice President, Environmental Safety and Health (ES&H), et al., *ISMS*, October 19, 1999
- FDH-2188, *Management Assessment*, Rev. 2, August 16, 1999
- FDH-5096, *Feedback and Improvement Process*, Rev. 0, October 25, 1999
- Fluor Hanford ISMS Implementation Project Integrated Schedule, April 18, 2000
- HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, Rev. 5, April 2000
- HNF-MD-016, *Annual Budget Submittal*, Rev. 0, March 31, 1997
- HNF-MD-018, *Performance Reporting*, Rev. 0, March 31, 1997
- HNF-MD-019, *Project Work Authorization*, Rev. 0, March 31, 1997
- HNF-MD-032, *Presidents and Employee Zero Accident Councils*, Rev. 0, July 1, 1997
- HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts*, Rev. 0, July 30, 1999
- HNF-MD-5260, *Use of the Project Hanford Management System in the Streamlined Project Hanford Organization*, Rev. 0, October 13, 1999
- HNF-MP-001, *Management and Integration Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan*, Rev. 3, April 12, 2000
- HNF-MP-013, *Configuration Management Plan*, Rev. 0, October 31, 1997

- HNF-MP-599, *Project Hanford Quality Assurance Program Description*, Rev. 4, January 14, 2000
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-052, *Corrective Action Management*, Rev. 4, April 15, 2000
- HNF-PRO-055, *Facilities Startup Readiness*, Rev. 2, December 16, 1999
- HNF-PRO-058, *Critique Process*, Rev. 2, July 20, 1999
- HNF-PRO-060, *Reporting Occurrences and Processing Operations Information*, Rev. 2, September 1, 1999
- HNF-PRO-067, *Managing Lessons Learned*, Rev. 1, November 24, 1998
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-075, *Safety Communications*, Rev. 2, December 31, 1997
- HNF-PRO-077, *Reporting, Investigating, Managing Events*, Rev. 2, March 31, 1999
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 8, 1999
- HNF-PRO-1929, *Requirements Management*, Rev. 0, November 23, 1999
- HNF-PRO-224, *Document Control Program Standards*, Rev. 2, June 7, 1999
- HNF-PRO-246, *Management Assessment*, Rev. 3, Draft
- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 29, 1999
- HNF-PRO-357, *Completion and Closure of Performance Agreements*, Rev. 1, September 30, 1999
- HNF-PRO-4294, *Performance Indicator Process*, Rev. 1, December 1, 1999
- HNF-PRO-453, *Spill and Release Reporting*, Rev. 1, October 13, 1999
- HNF-PRO-519, *Schedule Development*, Rev. 0, March 16, 1998
- HNF-PRO-522, *Multi-Year Work Planning*, Rev. 0, September 1, 1999
- HNF-PRO-589, *Processing Project Hanford Procedures*, Rev. 2, December 1, 1999
- HNF-PRO-653, *Deficiency Tracking System*, Rev. 2, February 3, 2000
- Project Hanford Management Contract (PHMC) Environment, Safety, Health and Quality Performance Indicator Plan (no document number or date).

Interviews Conducted

Analytical Services Provider (ASP)

- Functional Group Manager
- ISMS Coordinator
- Operations Engineer
- Project Support Manager.

Fast Flux Test Facility (FFTF)

- Engineer, Project Office
- Maintenance Manager
- Plant Engineer

- Project Engineer
- Project Office, ISMS Coordinator
- Team Lead, Planning and Scheduling Integration
- Team Lead, Project Integration
- Team Lead, Quality Assurance
- Work Control and Scheduling Manager
- Work Control Engineer.

Fluor Hanford (FH)

- ES&H Planning and Performance Project Manager
- ES&H Vice-President
- Executive Vice President and Chief Operating Officer
- ISMS Implementation Project Manager
- ISMS Team Member (2)
- Management Systems Manager
- Program Manager, Operations and Maintenance
- Senior Director, Project Support.

Nuclear Materials Stabilization (NMS)

Project Director.

River Corridor Project (RCP)

- Project Director
- Technical Support (2).

Spent Nuclear Fuel (SNF) Project

ISMS Coordinator.

Waste Management Project (WMP)

- Project Director
- ISMS Coordinator
- Project Support Director
- Support Team Lead.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 4/27/00

Discussion of Results

Criterion 1: *The PHMC 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.*

HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan* added two core functions (Establish ES&H Policy and Management Review) and added four guiding principles (Worker Involvement, Communication and Stakeholder Involvement, Continuous Improvement, and Senior Management Involvement) to those required by DOE Policy 450.4, *Safety Management System Policy*.

Since the last Phase I Verification was conducted (October 1999), FH has moved from an Integrating-Contractor-with-Major-Subcontractors organization to an all-FH organization with projects and service providers.

The subteam reviewed the FH ISM System Description (HNF-MP-003) and compared it with DOE Policies 450.4, 450.5, and 450.6; the Department of Energy Acquisition Regulations (DEAR) clauses 970.5204-2 and 970-5204-78, and direction to the contractor from DOE. The Vice President, ES&H, when interviewed, stated that HNF-MP-003 was prepared consistent with DOE Policies 450.4, 450.5, and 450.6, the DEAR clauses, and direction to FH from the RL Approval Authority. The Vice President identified several examples throughout HNF-MP-003 that aligned directly with the DOE Policies.

PHMC (DE-AC06-96RL13200) clause I.99 contains specific requirements for the integration of ES&H into work planning and execution. Subparagraph (i) states, "The contractor shall include a clause substantially the same as this clause in subcontracts involving complex or hazardous work on site..." This requirement was derived from the DEAR clause 970.5204-2.

This review indicated that this revision of the FH ISM System Description, HNF-MP-003, Rev. 3, has improved the program crosswalks' institutional mechanisms to the project implementing documents. This version of the crosswalk identifies both HNF-PRO documents and specific project implementation documents in the cases where projects use them. Additional comments regarding consistency in implementing mechanisms are referenced in Criterion 2.

The FH ISM System Description (HNF-MP-003) contains an abbreviated version of the FH senior management roles and responsibilities, which aligns with the current FH organization. Review of HNF-MP-001, *Fluor Hanford Management Plan* defines the set of roles and responsibilities for the top-level management structure and a description of the current organization.

The descriptions for the subordinate project ISM Systems (HNF-MP-003 appendices) match reasonably well with the overall FH ISM System Description. The overall description of how ISMS is to be conducted at FH has been simplified from the last revision, largely due to the new organizational structure. The FH ISM System Description and the project ISM System

Descriptions are contained in one document, with the project descriptions listed as Appendices to the FH ISM System Description.

In addition, HNF-MP-003, Appendix A provides additional information regarding integration of the International Organization for Standardization environmental management system as prescribed in ISO 14001 and the DOE Safety Management System as prescribed in DOE P 450.4.

Each Appendix within HNF-MP-003 was reviewed for adequacy in describing the project–specific ISMS program. However, key positions called out in HNF-MP-003 are not consistent between projects. The following discrepancies were identified. **(MGO.1-2) NOTE:** These are not all inclusive.

Appendix C – Spent Nuclear Fuel Project

Figure 1 is outdated.

ISMS implementing mechanisms relating to the SNF Construction Projects (e.g., Canister Storage Building, Cold Vacuum Drying Facility, etc.) are not all inclusive. For example, it is not clear if the Automated Job Hazard Analysis (AJHA) process is or should be used for these construction projects. (Section 3.6.1) **NOTE:** Further discussion is provided under Criterion 3.

Appendix E – Nuclear Material Stabilization Project

The Activity Based Startup Review is not described in HNF-PRO-055, *Facilities Startup Readiness*, is outdated, and is no longer used at the Plutonium Finishing Plant. (Section 3.3)

Appendix F – River Corridor Project

The RCP description does not identify a process for facility transition from other projects (known state) for transfer to the Environmental Restoration Contractor.

HNF-MP-003, Appendix F (RCP) describes how they implement and comply with the FH ISMS within the RCP organizations and operations to ensure ES&H are integrated into work performed. The RCP Administrative Procedure Transition Plan (as noted in the plan) should provide the guidance and schedule for establishing the necessary set of administrative documents to support safe and effective operations of RCP both at the project and facility level. This draft plan was completed during the week of the ISMS Verification. The plan is noted within HNF-MP-003, Appendix F, Section 3.0 and states that, "Through a planned and carefully implemented procedure transition plan, RCP will establish common level procedures while allowing for alignment of facility-specific procedures." This led the team to believe that the Administrative Procedure Transition Plan should be accounted for as a part of the ISMS System Description. Interviews, with personnel at both the institutional and project level, found there is unawareness as to whether the RCP procedure transition plan is included in the FH ISM System Description.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 4/27/00

The introduction does not describe the existing condition for deactivation projects or the "orphan" facilities. (Section 1.0)

An approved "transition" plan does not exist for establishing common project-level procedures. (Section 3.0)

Criterion 2: *FH has assigned responsibilities and established mechanisms to direct, monitor, verify, evaluate, maintain, and improve the integrated implementation of the ISMS as described in the ISM System Description. Implementation and integration expectations and mechanisms are evident throughout all corporate/site organizational functions.*

Through interviews and review of the FH ISM System Description, the mechanisms within FH to direct, verify, evaluate, maintain, and improve the integrated implementation of the ISMS were identified. The FH ISM System Description states that the ES&H functional organization is responsible for the Project Hanford ISM System Description and for establishing the environmental, occupational safety and health, nuclear and criticality safety, and radiological protection requirements described therein. The FH ISM System Description also states that Project Directors ensure projects are executed in accordance with all applicable policies and procedures, the project–specific ISM System Descriptions, and project–specific plans and procedures.

Each FH manager interviewed described the integrated implementation of ISMS in accordance with their ISM System Description. All senior managers that were interviewed demonstrated an awareness and dedication to the FH ISMS and to the principles of ISM. These interviews included line managers as well as support managers. All understood the principle that the line manager had responsibility for safety and that first–line supervision and worker involvement supported the identification and development of safety controls. (See **MGO.2** for further discussion of roles and responsibilities.) All managers recounted the benefits of employee involvement in that same safety process of hazard identification and development of hazard controls. Each manager interviewed was focused on results. **(MGO.1-1)**

The FH ISM System Description is under configuration control within the Project Hanford Management System (PHMS) as described by HNF-PRO-589, *Processing Project Hanford Procedures*. The PHMS contains the FH institutional set of requirements and standards that apply to the PHMC scope of work. Roles and responsibilities for implementation of requirements are defined in HNF-MP-001. HNF-MP-001 describes functional responsibilities for Functional Area Managers, Discipline Leads, and Technical Authorities to ensure requirements are adequately implemented. HNF-PRO-589 requires that the Functional Area Managers provide adequate resources for development, publication, and maintenance of PHMS procedures, including HNF-MP-003. HNF-PRO-589 identifies Technical Authorities as responsible for ensuring PHMS procedures are technically correct. HNF-PRO-1929, *Requirements Management*, defines the process for integrating new requirements into the PHMS, including the ISMS. Additionally, HNF-MP-013, *Configuration Management*, Section 3.2.4.1 states "Owners of configuration information shall be identified. The "owner" is the person (e.g.,

Design Authority, cognizant engineer, responsible organization, responsible person) responsible for establishing, verifying, and maintaining control and traceability of the technical content of assigned information and ensuring CM information and records are continuously correct." The Vice President, ES&H is the owner of the ISM System Description and has these responsibilities for this document. Although the FH system description is under configuration control through normal PHMS processes, and roles and responsibilities are defined for maintenance of the document, HNF-MP-003 is unique among all PHMS procedures. The inclusion of project-level implementing mechanisms in the system description appendices presents a configuration control challenge unlike any other PHMS document. FH has not fully addressed how this configuration control challenge will be addressed. **(MGO.1-3)**

During interviews, FH personnel referred to efforts in progress to implement the new Chapter IV, "Maintaining an Approved ISMS," of DOE-G-450.1A, *Integrated Safety Management System Guide*. This new chapter of the ISMS guide was issued just prior to commencement of this Phase I review, and had not yet been implemented. Personnel interviewed said that plans had been developed using the draft Chapter IV, and would be implemented using the final version. In particular, Section 4.1.2, "Contractor Activities to Sustain, Measure, and Update a Satisfactory ISM," was referenced by the interviewees. Review of the FH ISMS Implementation Project Integrated Schedule showed activities supporting this effort would be complete by September 14, 2000.

HNF-MP-003 describes feedback and opportunities for continuous improvement as being obtained through worker, management, and independent assessments; lessons learned; performance indicator trending analysis; corrective action management and commitment tracking; causal factor analysis; and inspections by external agencies. Also, as part of the Project Hanford ISMS, performance indicators are established to measure implementation progress and the effectiveness of ISMS implementation. The development and update of the ES&H performance indicators are conducted in accordance with HNF-PRO-4294, *Performance Indicator Process*.

HNF-PRO-246, *Management Assessment,* was under revision during the review. The new revision (draft revision 3) states "The Management Assessment program is essential to successful implementation of all aspects of the Fluor Hanford (FH) Integrated Safety Management System (ISMS). The Management Assessment program implements, in part, ISMS core functions 'Management Review' and 'Feedback and Improvement,' and ISMS guiding principles 'Continuous Improvement' and 'Senior Management Involvement.' FH organizations use the management assessment process to assess ISMS implementation within their organizations. The FH Environment, Safety, and Health organization annually assesses the adequacy of the FH ISM system description."

Within the FH ISM System Description, there are statements related to how FH communicates the ES&H policy to the workforce and lower-tier subcontractors. This is communicated through the use of FH policies and implementing procedures, staff meetings, employee briefings, check-in procedures, and training programs (e.g., Hanford General Employee Training).

HNF-PRO-074, *Safety Responsibilities*, and HNF-PRO-075, *Safety Communications* describe employee and manager responsibilities with respect to safety and methods of communication. HNF-PRO-074 includes the "Master Safety Rules" and the "Worker Bill of Rights," which are required by HNF-PRO-075 to be posted in the work place. Employee Zero Accident Council meetings, pre-job safety briefings, and periodic employee safety meetings were found to be several methods of communicating this safety policy.

Implementation and integration expectations and mechanisms were evident throughout most of HNF-MP-003. However, there were several instances in which the implementing mechanisms were inconsistent or not listed across the project appendices. The FH mechanisms not listed bring into question if the flowdown of the FH implementing mechanisms is optional at the project level. The adaptation of an implementing mechanism not included in the FH ISM System Description by several projects denotes the need for a contract–wide mechanism for the FH ISMS. For example, the mechanisms for transportation and packaging were not included or have not been developed for the WMP (Appendix D) who provides this cross-cutting support service. Through interviews, some core mechanisms (HNF-PROs) are waived at FFTF (Appendix G) and are not included or referenced. Other examples (not all-inclusive) are listed in the following table: **(MGO.1-4)**

Core Func.	FH	SNFP	WMP	NMSP	RCP	FFTF	ASP
1	HNF-PRO-074 Not listed	HNF-PRO-074 HNF-PRO-075	HNF-PRO-074 HNF-PRO-075	Not listed Not listed	HNF-PRO-074 HNF-PRO-075	HNF-PRO-074 HNF-PRO-075	HNF-PRO-074 Not listed
2	HNF-MD-019	Not listed	Not listed	HNF-MD-019	HNF-MD-019	Not listed	Not listed
3	HNF-PRO-111	HNF-PRO-111	Not listed	Not listed	HNF-PRO-111	Not listed	Not listed
4	HNF-PRO-430	Not listed	Not listed	Not listed	HNF-PRO-430	Not listed	Not listed
5	HNF-PRO-055	HNF-PRO-055	HNF-PRO-055	Not listed	HNF-PRO-055	Not listed	Not listed
6	HNF-PRO-060 HNF-PRO-052	HNF-PRO-060 HNF-PRO-052	HNF-PRO-060 HNF-PRO-052	Not listed HNF-PRO-052	HNF-PRO-060 HNF-PRO-052	Not listed Not listed	Not listed Not listed
7	FH-5096	Not listed	FH-5096	FH-5096	FH-5096	Not listed	FH-5096

Criterion 3: *Ensure completion of corrective actions from previous Phase I verifications*

Fluor Hanford

The following three Opportunities for Improvement in the Management Oversight functional area were identified during the first ISMS Phase I review of FH:

MGO.1.1 *FDH System does not clearly identify FDH line management with respect to defined functions, roles, and responsibilities.*

MGO.1.2 *FDH Plans, procedures, and roles and responsibilities do not reflect the current FDH organization.*

MGO.1.3 *Facility-specific procedures have not been mapped to the FDH ISMS Plan.*

Closure documentation for each of the aforementioned Opportunities for Improvement were reviewed and found to be adequate. For MGO.1.1 and MGO.1.2, FH revised both HNF-MP-001

and HNF-MP-003. For MGO.1.3, FH revised HNF-MP-003 and included separate appendices for each project that includes, where appropriate, project and/or facility–specific procedures.

Plutonium Finishing Plant (PFP)

Two Opportunities for Improvement were identified in the Management Oversight functional area for the PFP ISMS Phase I review.

PFP-1 *While all of the ISMS core functions are addressed, other policy and procedure documents must be accessed to get the complete understanding of the PFP ISM System Description. Integration of the work process across all operations was not readily demonstrated. Ties to most ISM elements were observed through a review of a multitude of policies and procedures, but some outdated documentation was encountered and several expected connections to higher-order procedures were not found. When the anticipated change to the FH company-level ISM System Description occurs, reconciliation with the PFP ISM System Description will be necessary.*

PFP-2 *The PFP Project has established the necessary base procedures and mechanisms to support work planning and execution; however, not all of these documents reflect the current organization or field work team practices. Documentation has lagged implementation. Additionally, the tools available to the teams (procedures regarding Automated Job Hazards Analysis [AJHA] applicability, scheduling, release and suspension of work, feedback and improvement) are not mature or integrated within the plant ISMS.*

The NMS ISM System Description (HNF-MP-003, Appendix E) was revised to correspond to the context, content, and structure of HNF-MP-003. It also eliminated all references to BWHC, describes the new Westinghouse Safety Management Solutions management structure, and provided up-to-date references. In addition, work control procedures at the PFP were reviewed, noted improvements were scheduled, and the procedures revised as pre-phase 2 ISMS correction. The corrective actions taken for PFP-1 and PFP-2 were reviewed and found to be adequate.

Spent Nuclear Fuel Project

Two Opportunity for Improvements were identified in the Management Oversight functional area for the Spent Nuclear Fuel Project ISMS Phase I/II Verification. These two were captured along with two other SNF Opportunities for Improvement as stated: Objective evidence of the required ISMS DEAR clauses flowdown to the construction contractor. Approved revision to the SNF ISM System Description with specific inclusion of the construction projects.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 4/27/00

DOE/RL-99-73, #2

Implementation of ISMS flow down to construction subcontracts on the SNF Project is not adequate. Procedural guidance is preliminary and needs to be more fully developed to assure that flow down of requirements are clearly understood and met.

Subtask 03

Revise the SNF ISM System Description to incorporate the SNF Project construction projects.

The SNF ISM System Description (HNF-MP-003, Appendix C) was revised (Rev. 1) on March 14, 2000. The record of revision states, in part... "Update to address corrective actions identified during November, 1999 ISMS Phase I/II Verification. Changes included updates for new contract structure and language, deleted "Expectations"; updated references, included applicable descriptions of construction activities."

A thorough review was performed for the SNF ISM System Description (HNF-MP-003, Appendix C) with particular emphasis placed on the incorporation of construction–related activity implementation mechanisms. Although the revised SNF Project ISM System Description contains descriptions and identifies some mechanisms unique to construction "Greenfield" projects, the description does not describe or list those key mechanisms by ISMS functional area for construction projects. Therefore, the corrective actions taken for DOE/RL-99-73, Subtask 03 are not complete. **(MGO.1-5)**

Conclusion

The current FH ISM System Description (HNF-MP-003) was found to contain the basic attributes for a safety management system as outlined in DOE Policies 450.4, 450.5, 450.6, and the DEAR clauses. However, the incompleteness of the corrective actions for the SNF (HNF-MP-003, Appendix C) coupled with the fact that the FH ISM System Description did not describe construction projects at the institutional level will need to be addressed by FH.

This objective has been met.

Strengths:

Each FH manager interviewed described the integrated implementation of ISMS in accordance with their ISM System Description. All senior managers that were interviewed demonstrated an awareness and dedication to the FH ISMS and to the principles of ISM. **(MGO.1-1)**

Concerns:

- Several discrepancies were identified in the project–specific ISM System Descriptions. **(MGO.1-2)**

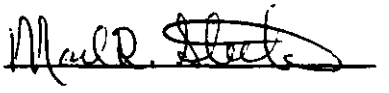
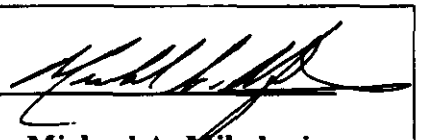
FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 4/27/00

- FH has not fully addressed configuration control of HNF-MP-003. **(MGO.1-3)**

- There were several instances in which the implementing mechanisms were inconsistent or not listed across the project appendices in HNF-MP-003. The FH mechanisms not listed bring into question if the flowdown of the FH implementing mechanisms is optional at the project level. The adaptation of an implementing mechanism not included in the FH ISM System Description by several projects denotes the need for a contract-wide mechanism for the FH ISMS. **(MGO.1-4)**

- The corrective actions taken for DOE/RL-99-73, Subtask 03 are not complete. **(MGO.1-5)**

Submitted: 	**Approved:** 
Mark R. Steelman	**Michael A. Mikolanis**
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FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 4/27/00

OBJECTIVE

MGO.2 - 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. The FH ISM System Description defines clear roles and responsibilities of all personnel to ensure that safety is maintained at all levels. ISMS procedures and implementing mechanisms specify that line management is responsible for ES&H.

2. The FH ISM System Description identifies supporting documents that identify line management as responsible for ensuring that the implementation of hazard controls is adequate. Line management ensures that work is planned, approved, and conducted safely. FH 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. FH procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.

4. FH projects, facilities, and subcontractors are held accountable for ES&H through appropriate appraisal/verification mechanisms.

5. Ensure completion of corrective actions from previous Phase I verifications.

Approach

Record Review

- Review facility or activity manuals of practice that define roles and responsibilities of personnel responsible for safety.

- Review position descriptions and other documentation that describe roles and responsibilities related to ensuring safety is maintained.

- The review should consider personnel in line management and staff positions and should evaluate whether line managers are responsible for safety.

- Review the procedures established to ensure that managers and the work force are competent to safely perform work. Review the records of qualification and certification as applicable.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 4/27/00

Interviews

- Interview selected personnel at all levels of facility or activity management that are identified by the record review above.

- Verify their understanding and commitment to ensuring that safety is maintained for all work at the facility or activity.

- Interview a selected number of supervisors and workers (see definition) to determine their understanding of competency requirements and their commitment to performing work safely.

Corrective Action Plan Closures

See Attachment MGO.2a - PFP CAP, PFP-3.

Record Review

- 300 Area Stabilization Project Manager/Supervisor Qualification Card Course#324049, Rev. 1, June 8, 1998
- A-6000-286, WEF007, *Exempt Job Descriptions*, May 1997
- A-6001-539, *Training Completion Record*, February 1998
- ASP-100, *Analytical Services Policies*, Section 4.6, "Analytical Services (AS) Integrated Safety Management Roles and Responsibilities and Functions" Rev. 0, Draft, April 2000
- ASP-200, *Analytical Services Project Procedures*, Section 5.1, "Training Plan," Rev. 4, February 29, 2000
- FSP-PFP-5-8, *Plutonium Finishing Plant Administration Organizational Structure*, Section A
- FSP-PFP-5-8, *Plutonium Finishing Plant Administration Roles and Responsibilities*, Section B
- HNF-5053, *Policy for Environment, Safety and Health*
- HNF-MD-4821, *Guidance for the Flow Down of ISMS Requirements to Lower Tier Subcontractor*, Rev.0, July 30, 1999
- HNF-MD-5237, *Other Hanford Contractor Interface*, Rev. 0, October 22, 1999
- HNF-MD-5260, *Use of the Project Hanford Management System in the Streamlined Project Hanford Organization*, October 13, 1999
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Description*, Rev. 3, April 12, 2000
- HNF-MP-011, *Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-MP-599, *Project Hanford Quality Assurance Program Description*, Rev. 3, March 10, 1999
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999

- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-164, *Training Matrix Capabilities and Access*, Rev. 1, February 28, 2000
- HNF-PRO-168, *Employee Training*, Rev. 0, February 16, 1998
- RCP-MD-001, *River Corridor Project (RCP) Roles, Responsibilities and Functions*, April 21, 2000
- RCP-MD-007, *River Corridor Project Administrative Procedure Transition Plan*, April 21,2000
- RCP-PLN-002, *River Corridor Project Administrative Procedure Transition Plan*, Draft
- WMH-200, *Waste Management Hanford Procedures*, Section 5.1, "Training Plan," Rev. 4, February 29, 2999
- WMH-100, *Waste Management Project Policies*, Section 4.6, "Integrated Safety Management Roles and Responsibilities and Functions," Rev. 0, Draft, April 2000.

Interviews Conducted

Analytical Services Provider (ASP)

- ISMS Coordinator
- Operations Engineer
- Project Support Manager.

Fast Flux Test Facility (FFTF)

- Maintenance Manager (2)
- Plant Engineer
- Project Engineer
- Project Office ISMS Coordinator
- Quality Assurance Team Lead.

Fluor Hanford (FH)

- ES&H Planning & Performance Project Manager
- ES&H Vice President
- ISMS Project Manager
- ISMS Team Member (2)
- Management Systems
- Management Systems Manager
- Senior Director, Project Support.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 4/27/00

River Corridor Project (RCP)

- FH Human Resource Manager
- RCP Human Resource Manager
- Waste Management Human Resource Manager
- ISMS Coordinator
- Planner, FH/327 Facility
- Project/Program Manager
- Technical Support
- Training/EP.

Spent Nuclear Fuel (SNF) Project

ISMS Coordinator.

Waste Management Project (WMP)

- ISMS Coordinator
- Project Support Director
- Waste Management Project/Analytical.

Discussion of Results

Criterion 1: *The FH ISM System Description defines clear roles and responsibilities, of all personnel to ensure that safety is maintained at all levels. ISMS procedures and implementing mechanisms specify that line management is responsible for ES&H.*

The FH ISM System Description section 1.3 references HNF-MP-001, *Fluor Hanford Management Plan* for detailed roles and responsibilities. HNF-MP-001 introduces the FH project–focus approach for managing and performing work. At the institutional level HNF-MP-001 focuses on execution of the Project Hanford Management Contract (PHMC), including the specific roles, responsibilities, and authorities for the FH organizations. HNF-MP-001, Sections 2.6 through 2.9 define the functional responsibilities for Functional Area Managers, Discipline Leads, Technical Authorities and Interpretive Authorities. These functional responsibilities describe how requirements are incorporated into procedures. Procedures form the basis for how to "Do Work Safely." HNF-MP-001, Part 4, Table 1 defines the core responsibility for employees to do work safely, comply with procedures, and to ensure requirements are adequately implemented. In various interviews, senior management clearly demonstrated their understanding of roles and responsibilities and the Management Plan (HNF-MP-001). **(MGO.2-1)**

Line Managers in Line Organizations are responsible and accountable for safe facility operations. Line management responsibility for safety and environmental performance is stated in top–level documents such as Project Hanford plans and polices and reflected in Project

Hanford and facility procedures. HNF-MP-001 and HNF-MP-003, *Integrated Environment, Safety and Health Management System Description* define line management as being any management level within the line organization, including contractor management that is responsible and accountable for directing and conducting work; however, neither HNF-MP-003 nor HNF-MP-001 clearly define line organization. **(MGO.2-3)** HNF-MP-003, Appendix B defines roles and responsibilities but is not recognized as a mechanism to communicate roles and responsibilities. Some confusion was observed in interviews relative to who is responsible and accountable for safe operations between FH functional groups and the FH projects and service providers (i.e., who is a line manager in a line organization). Interviews with various FH institutional–level and Project/facility–level staff confirm they understood procedures and their responsibility for safety. However, the responsibility and accountability of flowdown relative to the line management is not clear.

Based on interviews with Project Directors, roles and responsibilities for Discipline Leads are communicated to employees in their position descriptions. Position descriptions reviewed for Discipline Leads were found to describe the **project** roles and responsibilities, but did not include the matrix responsibilities to functional groups as defined in HNF-MP-001. **(MGO.2-4)**

At the Project–level, procedures that specify personnel such as Facility Managers, Discipline Leads, and Functional Area Managers roles and responsibilities are not consistent with those same titles described in the Management Plan (HNF-MP-001). Table 1 of HNF-MP-001 is difficult to follow, in that some of the titles listed within the functional area responsibilities are being used on some projects as direct job titles and not on others. Through interviews, the Verification Team found the intent of the chart is, to flow down roles and responsibilities regardless of the title. .The terminology for roles and responsibilities is not consistent between the Project and the FH Organization, Function, Roles and Responsibilities Table 1 in the HNF-MP-001 and how the functions relate to who is line management/line organization. **(MGO.2-5)**

WMP/ASP Self-assessments identified several problems with institutionalizing roles and responsibilities. Although this was assigned a priority, to be completed before the Phase I ISM verification of the ISMS, it has not yet been completed. **(MGO2-6)** The self-identified corrective action is to update WMP-001 level organizational charters and roles and responsibilities guidance. The Integrated Safety Management Roles, Responsibilities and Functions Procedures for ASP and WMP were developed to correct the opportunity for improvement but are in draft form. **(MGO2-7)** However, during an interview it was indicated that RCP, unlike other projects, does not intend to identify implementing mechanisms within its system description. **(MGO.2-8)**

The need to institutionalize roles and responsibilities for projects was self-identified as an action required to be completed prior to performing a Phase I ISM verification. However, as discussed in the above paragraph, these roles and responsibilities were not completed. **(MGO.2-9)** This is an example typical of those problems observed in the Corrective Acton Management System and is further discussed in **MGO.3**.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 4/27/00

Criterion 2: *The FH ISM System Description identifies supporting documents that identify line management as responsible for ensuring that the implementation of hazard controls is adequate. Line management ensures that work is planned, approved, and conducted safely. FH procedures require that line managers are responsible for the verification of adequate implementation of controls to mitigate hazards prior to authorizing work to commence.*

FH procedures such as HNF-PRO-079, *Job Hazard Analysis* and HNF-PRO-074, *Safety Responsibilities* are supporting documents that identify line management responsibility relating to hazard control implementation. These procedures describe line management roles and responsibilities regarding the safe performance of work, and require that line managers are responsible for the verification of adequate implementation hazard controls prior to work commencement. For additional discussion on this subject see **SME-M&WC**.

The Project Hanford ES&H policy is stated in HNF-5053, *Policy for Environmental, Safety and Health* and HNF-5054, *PHMC Team Environmental Policy*. These policies establish line management responsibility for ensuring the quality and safety of work performed. Every manager and employee has a prime responsibility to carry out assigned tasks consistent with the FH ES&H policy to reduce accidents, exposure, and non-compliance.

Criterion 3: *FH procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.*

FH has procedures that ensure that personnel who supervise work have competence commensurate with responsibilities. HNF-MP-011, *Sitewide Qualification and Training Plan* provides site-wide requirements concerning worker training and qualification. HNF-MP-011 establishes the framework and standards to ensure that training provided to workers meets applicable contractual and regulatory requirements. HNF-MP-011 defines the mechanisms to meet the Project Hanford ISMS guiding principle ensuring that FH workers have competence commensurate with responsibility.

Interviews found the management team to be competent and in possession of the experience, knowledge, skill, and ability necessary to discharge their responsibilities. Position descriptions defined the requirements for those who supervise work. The appropriate training and qualification can be found in the Training Implementation Matrices and Training Matrix (HNF-PRO-164, *Training Matrix Capabilities & Access*). Managers and supervisors interviewed were aware that they must assure their workforce is qualified and trained to conduct work in a safe manner.

Criterion 4: *FH projects, facilities, and subcontractors are held accountable for ES&H through appropriate appraisal/verification mechanisms.*

The Manager of FH Human Resources discussed the performance appraisal process that ensures that FH personnel are held accountable for ES&H through appropriate appraisal mechanisms. The process is an accountability tool to ensure that safety is maintained at all levels. The PHMC Safety/Quality Performance Review Addendum, a part of the employee's performance appraisal,

reviews the employee's overall work safety performance–based on the ISMS guiding principles (form A-6002-710). **(MGO.2-2)** Management includes specific examples of successful safety performance from projects completed during the evaluation period. A description of areas where improvement is necessary and improvement actions that will be taken to enhance safety performance in these areas in the future is given. Another section of the form requires management to collaboratively establish at least one measurable individual safety improvement objective for the employee. Objectives are based on enhancing knowledge, understanding, and application of one or more of the ISMS guiding principles and directly relevant to the employee's current job and present work. The Human Resources Integrated System provides management with a help list describing each guiding principle to support them in the evaluation process.

During interviews, management discussed responsibility for periodically evaluating worker skills against the job requirements. HNF-PRO-079, HNF-PRO-111, *Occupational Medical Qualification and Monitoring*, and HNF-PRO-1623, *Radiological Work Planning Process* provide requirements to ensure worker health and safety training is adequate for tasks assigned. The Employee Job Task Analysis (EJTA) described in HNF-PRO-111 is the primary mechanism that identifies the appropriate medical qualification, training, and exposure monitoring based on assigned job functions and the hazards to which workers might be exposed. Subcontractors may also be required to use the EJTA process.

HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts*, and HNF-PRO-186, *Preparing Statement of Work for Services* provide direction for assigning work to subcontractors. This delegation of ES&H responsibility can be explicit, such as in the case of construction management, or implicit, such as in design engineering where it is expected the design will meet applicable codes. For further discussion relative to the flowdown process and its consistency in application see **BBC.1**.

Criterion 5: *Ensure completion of corrective actions from previous Phase I verifications.*

One Opportunity for Improvement was identified in the Roles and Responsibilities area for the Plutonium Finishing Plant (PFP) ISMS Phase I review.

PFP-3 *Roles and responsibilities have not been clearly defined and were spread widely among various documents, some of which were obsolete. In addition changes pending the introduction of the new management team at the PFP were shown to affect the current representation of assignments. The newly created Authorization Basis Team could not identify where their roles and responsibilities had been defined and documented. Position descriptions for several key Subject Matter Experts could not be found. Of particular concern, due to past issues, was the lack of defined qualifications for Criticality Safety Engineers.*

Documentation of the roles and responsibilities in the Nuclear Material Stabilization Project has been updated to reflect the redesigned project organization, the Westinghouse Safety Management Solutions (WSMS) restructuring, and key individual positions. The organization

structures and roles and responsibilities section (Introduction Attachments A and B) in the FSP-PFP-5-8, *Plutonium Finishing Plant Administration Manual* was updated to reflect the redesigned project organization and the WSMS restructuring. Position descriptions are in place for all Subject Matter Experts and that qualification formally documented for Criticality Safety Engineers. The corrective actions taken for PFP-3 were reviewed and found to be adequate.

Conclusion

All senior managers that were interviewed demonstrated awareness and dedication to the FH ISM System Description and to the principles of ISM. All understood the principle that the line managers had responsibility for safety and that first–line supervision and worker involvement supported the identification and development of safety controls. However, clarification is needed between the FH ISM System Description (HNF-MP-003) and the FH Management Plan (HNF-MP-001) in relation to Functional Responsibilities and how these functions relate to who is FH line management/line organization. Roles and responsibilities are addressed down to the Project Manager level, but are not addressed in HNF-MP-001 at the facility–level. The team found several draft project procedures relative to roles and responsibilities that would address concerns regarding to this issue.

FH has procedures that ensure that personnel who supervise work have competence commensurate with responsibilities. Roles and responsibilities for technical positions rely mostly upon upper tier documents. Management and supervisors demonstrated knowledge of procedures and process that ensure worker competency.

This objective has been met.

Strengths:

- Senior management clearly demonstrated their understanding of roles and responsibilities and the management program. **(MGO.2-1)**

- FH performance appraisal process reviews the employee's overall work safety performance based on the ISMS guiding principles (form A-6002-710). **(MGO.2-2)**

Concerns:

- Neither HNF-MP-003 nor HNF-MP-001 clearly defines line organization. **(MGO.2-3)**

- Positions descriptions reviewed for Discipline Leads at the project–level were found to describe the project roles and responsibilities of personnel in the position, yet did not include those defined in HNF-MP-001. **(MGO.2-4)**

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 4/27/00

- The terminology for roles and responsibilities is not consistent between the Project and the Flour Hanford Organization, Function, Roles and Responsibilities Table 1 in the HNF-MP-001 and how the functions relate to who is line management/line organization. **(MGO.2-5)**

- WMP/ASP Self-assessments identified several problems with institutionalizing roles and responsibilities. Although this was assigned a priority, to be completed before the Phase I ISM verification, it has not yet been completed. **(MGO2-6)**

- The ISM Roles, Responsibilities, and Functions procedures for ASP and WMP were developed to correct the opportunity for improvement but are in draft form. **(MGO2-7)**

- RCP, unlike other projects, does not intend to identify implementing mechanisms within its ISM System Description. **(MGO.2-8)**

- The need to institutionalize roles and responsibilities for projects was self-identified as an action required to be completed prior to performing a Phase I ISM verification and was not completed. **(MGO.2-9)**

Submitted: Carrie Swafford-Chube **Carrie Swafford-Chube** ***Team Member***	**Approved:** **Michael A. Mikolanis** ***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 4/27/00

OBJECTIVE

MGO.3 - Contractor 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. FH procedures describe clear roles and responsibilities to provide feedback and continuous improvement including line management responsibility for ES&H.

2. FH procedures ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.

3. FH procedures ensure that priorities are balanced to ensure feedback is provided and continuous improvement results.

4. FH 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. FH 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. FH procedures ensure that performance measures or indicators and performance objectives are developed in coordination with DOE as required. Contractor ISMS procedures require effective management and use of performance measures and objectives to ascertain the status of the ISMS.

7. FH procedures provide for regulatory compliance and enforcement as required by rules, laws, and permits such as PAAA, NEPA, RCRA, CERCLA, etc.

8. FH procedures establish an employee concerns program to provide a mechanism for employees to raise and follow up on ES&H concerns, including safety-related issues.

9. The FH ISM System Description and supporting documents adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting.

10. Ensure completion of corrective actions from previous Phase I verifications.

11. FH procedures ensure that oversight for safety systems have the appropriate review for maintenance and functionality (DNFSB 2002-observation).

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 4/27/00

Approach

Record Review

- Review corporate/site manuals of practice 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 results and schedules of self and independent assessments.

- Review procedures for scheduling and tracking routine assessments. Track issues identified during assessments to completion. Assess the effectiveness of the assessment and feedback process to achieve process improvement.

- Review the issues management program 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.

Corrective Action Plan Closures

See Attachment MGO.3a - PFP CAP, PFP-7.

Record Review

- 00-A&E-031, *Deficiency Tracking System*, Letter from K. A. Klein, RL to R. D. Hanson, FH, January 18, 2000
- 16000-99-BO-080, *Expectations for Corrective Action Management Process*, B. Oldfield, WESF, to distribution, November 18, 1999
- 3N500-2000-JLP-021, *WESF Performance Indicators –February 2000*, J,L, Pennock, WESF, to B. Oldfield, WESF, March 13, 2000

- 3N500-2000-JLP-024, *WESF Performance Indicators –March 2000*, J.L. Pennock, WESF, to B. Oldfield, WESF, April 13, 2000
- DMB-99-018, *Action Request to Identify /Initiating Documents Requiring a Price-Anderson Amendments Act Evaluation for Reportability*, Interoffice Correspondence D. M. Busche, FH, to Distribution, March 8, 2000
- DOE O 414.1A, *Quality Assurance*, September 29, 1999
- EA-1999-04, *USDOE Compliance Order*, May 27, 1999
- FDH-5096, *Feedback and Improvement Process*, Rev. 0, October 25, 1999
- FH-0001333, *Environmental, Safety and Health, and Quality Assurance Performance Indicator Report*, Letter from D. L. Jackson, FH to K. A. Benguiat, RL, March 15, 2000
- FSP-WESF-001, *WESF Project Administration*
  - Section CM-3, "Work Management Process," Rev. 5, December 13, 1999
  - Section CM-5, "Controlling Subcontractor Work at WESF," Rev. 3, March 29, 2000
  - Section EN-2, "Systems Engineers' Responsibilities," Rev. 6, March 13, 2000
  - Section MS-13, "Work Prioritization and Scheduling," Rev. 1, April 12, 2000
  - Section MS-2, "WESF Administration," Rev. 4, February 17, 2000
  - Section MS-6, "S\RID Configuration Management," Rev. 1, May 8, 1998
  - Section MS-7, "Identifying, Reporting , and Tracking Nuclear Safety Rule Potential Noncompliance," Rev. 3, December 30, 1999
  - Section OH-1, "Safety Program," Rev. 2, February 22, 1999
  - Section OP-1, "WESF Drill Program," Rev. 2, April 28, 1999
  - Section OP-4, "WESF Management Observations Program," Rev. 3, January 25, 2000
  - Section QA-2, "Project Assessment Program," Rev. 3, December 14, 1999
  - Section QA-3, "QA Surveillance Program," Rev. 1, April 6, 1999
- FSP-WESF-002, *WESF Conduct of Operations*
  - Section 1.0, "Operations Organization and Administration," Rev. 1, December 8, 1999
  - Section 1.1, "Self Assessment Program," Rev. 1, December 8, 1999
  - Section 14.0, "Required Reading," Rev. 0, September 30, 1998
  - Section 16.1, "Technical Procedure," Rev. 2, September 8, 1999
- *FY2000 First Quarterly Feedback and Improvement Process Report (October 1999-December 1999)*, Correspondence from J. VanArsdale, FH, to B. Hill, FH
- HNF-4467, *Feedback and Improvement Policy*, Rev. 0, May 7, 1999
- HNF-4554, *Comprehensive Performance Incentives*, Rev. 5, Draft
- HNF-5053, *Policy for Environment, Safety and Health*, Rev. 2, October 18, 1999
- HNF-5054, *PHMC Team Environmental Policy*, Rev. 0, August 19, 1999
- HNF-MD-016, *Annual Budget Submittal*, March 31, 1997
- HNF-MD-018, *Performance Reporting*, Rev. 0, March 31, 1997
- HNF-MD-032, *Presidents and Employee Zero Accident Councils*, Rev. 0, July 1, 1997
- HNF-MP-001 *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *ISMS Description*, Rev. 3, April 12, 2000
- HNF-MP-011, *PHMC Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-MP-599, *Quality Assurance Program Description*, rev. 4, 1/14/00

- HNF-MP-xx, *Fluor Hanford Center of Expertise Operations Management Plan*, Rev. 0, Draft
- HNF-POL-CRIT-SFT, *Nuclear Criticality Safety Policy*, Rev. 0, September 30, 1998
- HNF-POL-OPEN, *Open Door Policy*, Rev. 0, May 16, 1997
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-052, *Corrective Action Management*, Rev. 4, April 16, 2000
- HNF-PRO-055, *Facilities Start-up Readiness*, Rev. 2, December 3, 1999
- HNF-PRO-058, *Critique Process*, Rev. 2, July 20, 1999
- HNF-PRO-060, *Reporting Occurrences and Processing Operations Information*, Rev. 2, September 1, 1999
- HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Questions*, Rev. 1, January 24, 2000
- HNF-PRO-067, *Managing Lessons Learned*, Rev. 1, November 24, 1998
- HNF-PRO-069, *Maintenance Management*, Rev. 3, January 14, 2000
- HNF-PRO-074, *Safety Responsibilities*, Rev.1, July 8, 1997
- HNF-PRO-076, *Safety Inspections*, Rev. 2, September 15, 1998
- HNF-PRO-078, *Subcontractor Safety & Health Management*, Rev. 3, October 10, 1999
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-097, *Engineering Design and Evaluation*, Rev. 0, July 30, 1997
- HNF-PRO-155, *Operations Management Fundamental Training Program*, Rev. 0, September 23, 1997
- HNF-PRO-164, *Training Identification and Training Matrix*, Rev. 1, February 28, 2000
- HNF-PRO-168, *Employee Training*, Rev. 0, February 11, 1998
- HNF-PRO-1819, *PHMC Engineering Requirements*, Rev. 4, January 24, 2000
- HNF-PRO-192, *Buyer's Technical Representative Assignment and Duties*, Rev. 2, December 3, 1999
- HNF-PRO-2243, *Nuclear Safety Requirement Noncompliances*, Rev. 0, March 1, 1998
- HNF-PRO-246, *Management Assessment*, Rev. 2, October 25, 1999
- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 26, 1999
- HNF-PRO-340, *Fire Protection Program Overview & Responsibilities*, Rev.1, August 17, 1999
- HNF-PRO-350, *Fire Hazard Analysis Requirements*, Rev. 3, September 21, 1999
- HNF-PRO-357, *Completion and Closure of Performance Agreements*, Rev.1 , September 30, 1999
- HNF-PRO-410, *Resolving Employee Concerns*, Rev. 0, March 2, 1998
- HNF-PRO-4294, *Performance Indicator Process*, Rev. 1, November 29, 1999
- HNF-PRO-430, *Safety Analysis Program*, Rev. 2, December 7, 1999
- HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, Rev.1, February 2, 1999
- HNF-PRO-4616, *Supervision of Field Work Activities*, Rev. 3, January 24, 2000
- HNF-PRO-490, *Calibration Management Program*, Rev. 3, March 15, 2000
- HNF-PRO-522, *Multi-Year Work Planning*, Rev. 0, September 1, 1999
- HNF-PRO-533, *Change Control*, Rev. 1, April 5, 2000

- HNF-PRO-543, *Fissionable Material Storage*, Rev. 0, July 11, 1997
- HNF-PRO-546, *Criticality Alarm System*, Rev. 0, August 7, 1997
- HNF-PRO-653, *Deficiency Tracking System*, Rev. 2, February 3, 2000
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 2, November 16, 1999
- HNF-PRO-704, *Hazard and Accident Analysis*, Rev. 1, August 24, 1999
- HNF-SD-WM-QAPP, *QA Program Plan for WM*, Rev. 3, October 27, 1999
- WMH-100, *Waste Management Hanford Policies*
  - Section 2.10.1, "Accountability for Safety," Rev. 1, September 10, 1999
  - Section 2.10.3, "Safety Councils," Rev. 2, September 9,1 999
  - Section 4.6, "WMP Integrated Safety Management Roles, Responsibilities and Functions," April 2000, Draft
- WMH-200, *Waste Management Hanford Procedures*
  - Section 1.10, "Safety Idea/Issue Program," Rev. 1, February 24, 1999
  - Section 1.12, "Safety STARZ (Participation) Program," Rev. 1, June 28, 1999
  - Section 1.13, "Health and Safety Self-Inspection Program," Rev. 3, January 20, 2000
  - Section 1.18, "Technical Procedure Process," Rev. 0, April 11, 2000
  - Section 1.2, "Assessment Program," Rev. 3, October 28, 1999
  - Section 1.3, "Corrective Action Management," Rev. 4, July 15, 1999
  - Section 1.9, "Trending Program," Rev. 2, March 1, 1999
  - Section 2.1, "Organization and Administration," Rev.2, September 16, 1999
  - Section 2.14, "Required Reading," Rev. 1, May 13, 1999
  - Section 2.6, "Abnormal Events – Investigation, Notification, and Occurrence Reporting," Rev. 3, June 28, 1999
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 3.5, "Subcontractor Project and Construction Work," Rev 2, October 28,1999
  - Section 3.8, "Enhanced Radiological Work Planning," Rev. 3, January 31, 2000
  - Section 5.2, "Drill Program," Rev. 1, September 17, 1998.

Interviews Conducted

Analytical Services Provider (ASP)

- Environmental Compliance Officer, Waste Sampling and Characterization Facility (WSCF)
- Environmental Discipline Lead
- Environmental Technical Specialist
- Instrument Specialist/Planner
- Instrument Technician, 222-S Laboratory
- ISMS Team Lead
- Maintenance Lead
- Maintenance Lead, 222-S Laboratory
- Maintenance Manager
- Manager, Project Support
- Manager, Quality Assurance

- Manager, WSCF
- Manager, WSCF Operations
- Specialist, Management Assessments.

Fast Flux Test Facility (FFTF)

Quality Control Engineer.

Fluor Hanford (FH)

- Director, Price Anderson Amendments Act (PAAA)
- Engineering Resource Management, Engineering Management, Project Support
- Manager, Occurrence Reporting and Emergency Operating Center, Emergency Preparedness – Site Services
- Program Manager, Corrective Action Management
- Project Hanford Management Contract (PHMC) Lessons Learned Coordinator, Operations and Maintenance, Project Support
- Team Lead, Management Assessments
- Vice President, Performance Assurance.

Nuclear Materials Stabilization (NMS)

Director.

River Corridor Project (RCP)

- Engineer, Technical Support
- Operations Specialist, Technical Support.

Spent Nuclear Fuel (SNF) Project

- Chemical Management Point of Contact
- ISMS Coordinator, Deputy Manager, K-East Operations
- Manager, Operations Support
- Program manager, Subproject Contracts.

Waste Management Project (WMP)

- Engineer
- Manager, Operations
- Program Manager (2)
- Quality Control Engineer, Project Support.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 4/27/00

Discussion of Results

Criterion 1 and Criterion 2: *FH procedures describe clear roles and responsibilities to provide feedback and continuous improvement including line management responsibility for ES&H. FH procedures ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.*

The reorganization of the contract in October 1999 has led to significant restructuring within individual projects and between the FH integrator and the projects. Current transition plans exist for some of the projects at a high level (WESF and RCP). The new governing ISM System Description has significantly improved the interface points between central FH processes and the individual projects as evidenced by the project–specific appendices (see **MGO.1**). Roles and responsibilities are also in transition (see **MGO.2**). Although the project has formally adopted HNF-PRO-052, *Corrective Action Management* as the governing procedure, based on interviews, WESF roles and responsibilities in this area appear not to be clear. **(MGO.3-3)**

With respect to feedback and improvement, review of training procedures (HNF-PRO-155, *Operations Management Fundamental Training Program*, HNF-PRO-164, *Training Identification and Training Matrix*, and HNF-PRO-168, *Employee Training*) and position descriptions such as FSP-WESF-001, *WESF Project Administration*, Section EN-2, "Systems Engineers' Responsibilities, indicated that management and staff have received appropriate guidance and have been appropriately selected for their positions. Additionally, the Corrective Action Management (CAM) procedure (HNF-PRO-052) requires that specific courses be provided to the deficiency evaluation chairpersons and CAM representatives.

Criterion 3*: FH procedures ensure that priorities are balanced to ensure feedback is provided and continuous improvement results.*

The current PHMC approach for balancing priorities is undergoing revision. Additional procedures and processes have been created to strengthen the management decision cycle. A draft procedure, HNF-MP-XX, *Fluor Hanford Center of Expertise Operations Management Plan*" provides scope, authority, and responsibility for Centers of Expertise. These are decision-making bodies that provide direction for various functional areas. Additionally, interviews indicated that ad hoc committees and boards will be consolidated under this concept. FDH-5096, *Feedback and Improvement Process* provides upper level management with a process to review broad trends across the organization and to take action on these issues. HNF-MD-032, *The Presidents and Employee Zero Accident Councils* provides for safety concerns to receive feedback from the worker.

The language within various business and line management processes does not provide guidance or criteria regarding balancing priorities. The ISM program is addressed as a whole by reference within many documents but no detail is added (i.e., HNF-PRO-533, *Change Control*). Further, the function of providing resources to support the balance between mission need and corrective action management (balanced priorities) is generalized. Within HNF-4467, *Feedback and Improvement Policy*, the generalized statement appears as "Within the context of ISMS,

monitoring, measuring, evaluating, and making decisions for improvement occur at multiple levels across the site. These processes are continuous and dynamic." There are no implementing mechanisms below the policy level that provide for the balancing of priorities (there is no implementation of the policy). (See **BBC.1-1** for further discussion.)

Criterion 4: *FH 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.*

Existing procedures and mechanisms that control the PHMC self-assessment processes are governed by the HNF-MP-599, *Quality Assurance Program Description*. This document provides the overall strategy for conducting assessments at various levels. Detailed procedures such as HNF-PRO-246, *Management Assessment*, flowdown from HNF-MP-599 and in some cases additional detail is added by project–level documentation (i.e., WMH-200, *Waste Management Hanford Procedures*, Section 1.2, "Assessment Program"). The various self-assessment processes are procedurally linked to HNF-PRO-052. HNF-PRO-052 uses reports generated by these processes as initiating documents for prioritizing and assigning corrective actions. Additionally, quarterly reports from HNF-PRO-246 and other assessment processes such as the Facility Evaluation Board are used as input to the FDH-5096 program and database.

The comprehensive, thorough self-assessments performed by each of the FH projects in preparation for the ISMS Phase I verification identified several issues including appropriate corrective actions for those self-identified issues. **(MGO.3-1)**

Criterion 5: *FH 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.*

HNF-PRO-052 implements the requirements promulgated by HNF-MP-599 regarding the identification and analysis of conditions adverse to quality, safety and health, the environment or to plant operability. Once a condition has been identified as a deficiency, the CAM process is initiated. Findings and conditions identified by numerous feedback processes such as self-assessments and occurrence reporting are entered into the CAM process as initiating documents. However, there is no specific definition for deficiency noted in the procedure directly or by reference. Due to the lack of definition, it is unclear what issues are covered by the CAM process. **(MGO.3-4)**

The CAM process evaluates these initiating documents by forming Deficiency Evaluation Groups (DEG) that are comprised of subject matter experts, a line management point of contact, a representative from the CAM organization and others as appropriate. However, it is not mandatory for the originator of an issue to attend or concur in the conclusion. The DEG determines the Risk Rank Value (RRV) for each finding based on degree of non-compliance to regulations, law, orders, or impacts to safety, the environment, or mission. The RRV is a determination of consequence and probability presented in table form that ranges numerically

from 1 (low) to 5 (high). A value of zero can be assigned if no consequence can be determined or postulated. The step in the procedure where this action takes place may allow reviewers to screen findings without conducting full analysis against the RRV table. Additionally, the table is limited, may not be all-inclusive and is subject to interpretation. **(MGO-3-5)**. Findings that are assigned an RRV of zero are remanded to management attention.

Findings evaluated to a RRV of 1-5 are considered a "deficiency" and receive further attention in the form of root cause analysis and causal code assignment (includes ISMS designations), review of the PAAA evaluation (HNF-PRO-2243, *Nuclear Safety Requirement Noncompliances*), documentation of compensatory measures, and determination of appropriate corrective actions. Corrective actions are assigned to a responsible party. Simple issues may receive a corrective action in the DEG. More complicated issues may require development of a corrective action plan. As a final step, the deficiency and corresponding corrective action are loaded into the Deficiency Tracking System (DTS) per HNF-PRO-653, *Deficiency Tracking System*. The CAM process identifies the responsible party for correction of a deficiency. This individual is expected to use the appropriate operational and business processes to resolve the issue on the appointed schedule. DTS is used as a tool to provide a tracking database and status management and staff on identified deficiencies. Data maintained by DTS is used to generate various reports for management attention, including trending data that in part feeds the feedback and improvement process governed by FDH-5096.

The CAM process continues once the corrective action has been appropriately dispositioned. Closure documentation is generated that provides the justification for terminating the action, and verification by the CAM organization is conducted based upon the original RRV. Values of 4 and 5 receive independent verification or validation (values of 3 receive random sampling). There is no independent closure for RRVs of 1 or 2. With the appropriate documentation and review, the deficiency is closed on DTS.

Findings that are evaluated by the DEG and assigned a RRV of zero are dropped from further consideration by the CAM process, not considered a deficiency, and are remanded to the responsible management for resolution. There are no further formal expectations for developing and managing corrective actions for these findings. Although issues with an RRV of zero are not considered as deficiencies, many may have significant safety and mission implications and are not captured by a formal system. **(MGO.3-6)** Management of these systems is discussed further under criterion 7.

Management level processes for the prioritization and management of the feedback process have been recently developed or are being developed. FDH-5096 governs the overall feedback and improvement process. FDH-5096 provides a mechanism for presenting management with opportunities derived from trending of a variety of feedback processes such as the DTS and the Management Assessment process (HNF-PRO-246).

The PHMC has recognized that the management level feedback processes are immature and require additional development and support. FDH-5096 does not provide a formal mechanism to

ensure that management decisions are included in business and line management processes. **(MGO.3-7)**

The top level Lessons-Learned Program has been established through procedure HNF-PRO-067, *Managing Lessons Learned*. This document sets forth the roles and responsibilities for an overall PHMC lead for maintaining and promoting lessons learned. Each project is required by this procedure to formally assign a point of contact to be: tasked with appropriate dissemination of items received by the PHMC lead; to actively participating in a Center of Expertise designed to maintain and improve the on-site process; and, to collect issues from their respective organizations. Revision to this document is expected as part of the corrective action as an opportunity for improvement from the October 1999 ISMS Phase I verification.

Lessons learned processes are required by numerous procedures. For example, within the Job Hazards Analysis (JHA) process (HNF-PRO-079, *Job Hazard Analysis*), lessons learned are solicited as a part of each JHA and are entered into a single database. This data can then be accessed in preparation for new work. Use of this information is not automatic. Lessons learned must be actively pursued by the JHA lead during each session. Additionally, no formal mechanism was found that provided for trending of the Automated Job Hazard Analysis (AJHA) data. (see MGO.3-9)

The closure package for Plutonium Finishing Plant opportunity for improvement, PFP-7, did not provide a subtask to resolve a segment of the original statement: No procedure was identified for assuring that newly identified hazards are prioritized in such a manner that they are carried forward to the feedback, management review, and work scope definition functions of the ISM process. **(MGO.3-8)**

The FH feedback processes provide mechanisms for the dissemination of information to the originator of an issue including final resolution. A noteworthy practice within this area is the use within the Waste Management and Analytical Services Projects of the "Safety Ideas and Issues" program, which requires the initiator of an issue to agree in writing with its resolution. **(MGO.3-2)**

Criterion 6: *FH procedures ensure that performance measures or indicators and performance objectives are developed in coordination with DOE as required. Contractor ISMS procedures require effective management and use of performance measures and objectives to ascertain the status of the ISMS.*

Performance incentives have been created at several levels within the PHMC. Overall measures have been set by contract with DOE. (**BBC.1** describes those processes that establish ES&H performance measures). Lower-level processes have or will (currently in draft) contain elements of direct measure for ISM core functions and guiding principles. The feedback and improvement process, FDH-5096, collects performance measures and trends information from the CAM and other feedback and assessment mechanisms to assess overall well-being.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 4/27/00

Criterion 7: *FH procedures provide for regulatory compliance and enforcement as required by rules, laws, and permits such as PAAA, NEPA, RCRA, CERCLA, etc.*

FH has institutionalized the procedures that provide for enforcement and regulatory compliance. For example HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, HNF-PRO-430, *Safety Analysis Program*, HNF-PRO-078, *Subcontractor Safety & Health Management*, and HNF-PRO-2243 cover specific functional areas related to compliance and enforcement. Functional area managers manage these procedures.

As a more detailed example, FH has established an office governing Nuclear Safety and Regulatory Compliance (NSRC). The functions of this office include those governed by HNF-PRO-2243. This procedure provides for the use of compliance officers in evaluating findings for potential PAAA content. The compliance officers are managed centrally by NSRC, but are assigned with each project. All items that enter the CAM process (HNF-PRO-052) are required to undergo PAAA review. In many cases, although not formally required, the compliance officers participate in the DEG reviews. The DEG process identifies the results of the PAAA evaluation for each deficiency. The process includes ranking criteria specific to the PAAA evaluation.

The NSRC should have full access to all potential issues that might be subject to PAAA requirements. Not only must all deficiencies, as defined by HNF-PRO-052, be tracked, but all non-deficiencies, occurrence events, and continuous improvement items must be reviewed. The previous ISMS Phase I Verification of FH, concern (MGO.3-8) concluded "Performance analysis and corrective action is not taken for events and conditions below the event level (i.e., NCRs, RPRs)". In response to this concern, FH committed to "evaluate the existing programs and processes" with a scheduled completion date of May 29, 2000. Initial data gathered for this analysis indicates that a large number of systems not captured by the formal CAM process exist currently (interoffice correspondence DMB-99-018). Approximately 26 independent processes with myriad of sublevel activities were documented by this study. These numerous database systems are not connected to DTS and many are not institutionalized. **(MGO.3-9)**

Criterion 8: *FH procedures establish an employee concerns program to provide a mechanism for employees to raise and follow up on ES&H concerns, including safety-related issues.*

HNF-PRO-052 states that the Employee Concern Program (ECP) is exempt from consideration except when safety concerns have been identified. The ECP, governed by HNF-PRO-410, *Resolving Employee Concerns* does not provide for inclusion of identified safety concerns into the CAM process described by HNF-PRO-052. These two procedures are in conflict. **(MGO.3-10)**

Criterion 9: *The FH ISM System Description and supporting documents adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting.*

The occurrence reporting process has not made any changes in the recent past and was found to be appropriately documented during the previous Phase I Verification (October 1999). The procedural ties of the program to the CAM process were examined during this review and were found to be in place.

Criterion 10: *Ensure completion of corrective actions from previous Phase I verifications.*

One Opportunity for Improvement was identified in the Management Oversight functional area for the PFP ISMS Phase I Verification.

PFP-7 *PFP has established feedback mechanisms to gather, analyze, and close out issues. While it is evident that programs are in place to provide feedback and improvement, PFP procedures do not provide sufficient requirements to ensure that such input is evaluated and applied during future work activities. Also, procedures governing the feedback process do not provide acceptable process definitions. Concerns were identified in PFP procedures governing the post-job review process, training and qualification, and generation of lessons learned.*

The tie between feedback processes and the business cycle was not fully developed. No documented, required procedure was identified for assuring that newly identified hazards are prioritized in such a manner that they are carried forward to the feedback, management review, and work scope definition loops of the ISM process.

This has been completed.

Criterion 11: *FH procedures ensure that oversight for safety systems have the appropriate review for maintenance and functionality (DNFSB 2002-observation).*

Formal processes and procedures are in place that govern the reliability and maintainability of vital equipment systems. Examples of this include HNF-PRO-704, *Hazard and Accident Analysis;* HNF-PRO-1819, *PHMC Engineering Requirements;* and HNF-PRO-097, *Engineering Design and Evaluation.* PHMC maintains a formal position for a "design authority" which appears procedurally (HNF-PRO-1819) to meet the Defense Nuclear Facilities Safety Board (DNFSB) expectation for a systems engineer. PHMC is currently engaged in preparing for a self-assessment that will more fully explore DNFSB 2000-2.

Conclusion

Significant work remains within the feedback system. Numerous independent systems are used to track issues. These systems are not associated with the CAM process and many are not institutionalized. These systems should be formalized and integrated such that their interrelationships are more fully understood. There is no clear definition of deficiency within the CAM process. Instead, a matrix table provides examples that may not be all-inclusive and is subject to interpretation. Further, the CAM process allows issues to be screened out based on

postulated consequences without analysis, which may result in eliminating an issue with safety or environmental impact from the CAM process.
This objective has not been met.

Strengths:

- The comprehensive, thorough self-assessments performed by each of the FH projects in preparation for the ISMS Phase I verification identified several issues including appropriate corrective actions for those self-identified issues. **(MGO.3-1)**

- Use of the WMP/ASP "Safety Ideas and Issues" program, which requires the initiator of an issue to agree in writing with its resolution is a noteworthy practice for providing worker involvement and feedback. **(MGO.3-2)**

Concerns:

- Although the project has formally adopted HNF-PRO-052 as the governing procedure, WESF roles and responsibilities in this are not clear. **(MGO.3-3)**

- There is no specific definition for deficiency noted in the procedure directly or by reference; thereby, potentially eliminating a finding from the CAM process. **(MGO.3-4)**

- HNF-PRO-052 may allow reviewers to screen findings out based on postulated consequences without conducting full analysis against the RRV table. Additionally, the table may not be all-inclusive (pertinent to compliance and impact) and is subject to interpretation. **(MGO.3-5)**

- Although issues with an RRV of zero are not considered as deficiencies, many may have significant safety and mission implications and are not captured by a formal system. **(MGO.3-6)**

- FDH-5096 does not provide a formal mechanism that ensures the management decisions are included in the business and line management processes. **(MGO.3-7)**

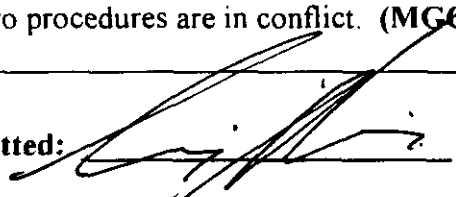
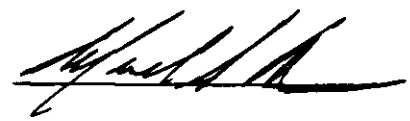
- No procedure was identified for assuring that newly identified hazards are prioritized in such a manner that they are carried forward to the feedback, management review, and work scope definition functions of the ISM process. **(MGO.3-8)**

- Numerous systems are used independently to track issues, are not associated with the CAM process and many are not institutionalized. **(MGO.3-9)**

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 4/27/00

- HNF-PRO-052 states that the ECP program is exempt from consideration except when safety concerns have been identified. The ECP, governed by HNF-PRO-410, does not provide for inclusion of identified safety concerns into the CAM process described by HNF-PRO-052. The two procedures are in conflict. **(MGO.3-10)**

Submitted: 	**Approved:** 
Craig R. Richins	**Michael A. Mikolanis**
Team Member	***Team Leader***

FH ISMSV-I ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 4/27/00

OBJECTIVE

MGO.4 - Contractor ISMS procedures provide a method to ensure that those 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 ISMS procedures provide assurance that controls will remain in effect as long as the hazards are present. (CE I-5, CE I-7, CE I-8)

The following criteria are intended to serve as general guidelines. More specific criteria may be developed at the discretion of the Team Leader and the individual SME.

Criteria

1. FH procedures ensure that controls are adequate to mitigate all identified hazards associated with the individual work.

2. FH procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in effect as long as the hazard is present.

3. FH 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 effect as long as the hazard is present.

4. FH procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.

5. FH mechanisms for the control of work specifies that line management are responsible for ES&H.

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

7. FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.

Approach

Record Review

- Review contractor manuals of practice that 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 line 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-RL-2000-30, *Project Hanford Management Contract ISMS Phase I Verification Review Plan*, April 2000
- FSP-WESF-001, *WESF Project Administration*, Section TN-01, "WESF Training Program," Rev. 5, March 21, 2000
- HNF-MP-001, *Fluor Hanford Management Plan*, Rev. 2, March 10, 2000
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*, Rev. 3, April 12, 2000
- HNF-MP-011, *Site Wide Qualification and Training*, Rev. 1, April 6, 1999
- HNF-MP-599, *Project Hanford Quality Assurance Program Description*, Rev. 4, January 14, 2000
- HNF-PRO-055, *Facilities Startup Readiness*, Rev. 2, December 16, 1999
- HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Question*, Rev. 1, May 1, 2000
- HNF-PRO-068, *Site Maintenance Training*, Rev. 0, September 29, 1997
- HNF-PRO-069, *Maintenance Management*, Rev. 3, January 14, 2000
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-079, *Job Hazards Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-265, *Standards/Requirements Identification Document Process*, Rev. 4, January 19, 2000
- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 29, 1999
- HNF-PRO-430, *Safety Analysis Program*, Rev. 3, December 7, 1999
- HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, Rev. 1, February 2, 2000
- HNF-PRO-696, *Conduct of Operations Policy*, Rev. 1, January 17, 2000
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 2, December 2, 1999
- HNF-PRO-705, *Safety Basis Planning, Documentation and Review and Approval*, Rev. 2, November 9, 1999

- WMH-200, *Waste Management Hanford Procedures*
  - Section 3.1, "Maintenance Work Management," Rev. 3, February 22, 2000
  - Section 3.8, "Enhanced Radiological Work Planning," Rev. 3, January 31, 2000.

Interviews Conducted

Analytical Services Provider (ASP)

- Manager, Analytical
- Manager, Maintenance (2)
- Manager, Operations
- Supervisor, Analytical Building Operations.

Fast Flux Test Facility (FFTF)

- ISMS Coordinator
- Manager
- Project Manager, Maintenance
- Project Office Manager
- Quality Assurance Manager
- Training Manager.

Fluor Hanford (FH)

- Manager, ES&H
- Project Manager, Operations and Maintenance (2).

River Corridor Project (RCP)

- ISMS Coordinator
- Manager
- Operations Specialist
- Project Manager.

Waste Management Project (WMP)

- Manager, Maintenance and Operations Waste Encapsulation and Storage Facility (WESF)
- Manager, Project Maintenance Support
- Safety Manager
- Shift Operations Manager/200 Liquid Waste Processing Facility (LWPF).

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 4/27/00

Discussion of Results

Criterion 1: *FH procedures ensure that controls are adequate to mitigate all identified hazards associated with the individual work.*

Facility hazard analysis, environmental impact analysis, and Job Hazard Analysis (JHA) results are used to develop, implement, and maintain controls through the use of procedures, worker training, and emergency response planning. Facility hazard and environmental impact analysis and JHA are completed to ensure that facility and project operations are conducted in a safe and environmentally sound manner. The facility hazard analysis is designed to evaluate hazards and environmental impacts associated with the operation of a facility. The depth and rigor of the facility hazard analysis is based on the facility's hazard classification and categorization, life–cycle stage, potential environmental impact, and the complexity of facility operations. The results of the facility hazard analysis are documented in a safety analysis report for nuclear facilities, as required by HNF-PRO-704, *Hazard and Accident Analysis Process*.
The analysis for radiological and non-nuclear facilities is documented in auditable safety analysis reports (or comparable analysis) in accordance HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*. Environmental impacts also are analyzed in documentation prepared with regard to the National Environmental Policy Act (NEPA), permit applications, and to demonstrate compliance. These various hazard and environmental impact analysis processes result in identifying and specifying the facility operational controls necessary to ensure adequate protection of human health and the environment. Refer to **SME-M&WC** Criterion 1 and **SME-EP** Criterion 2 for additional discussion regarding hazard identification and control.

Criterion 2: *FH procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these remain in effect as long as the hazard is present.*

FH institutional–level procedures (i.e., HNF-PRO-069, *Maintenance Management and* HNF-PRO-079, *Job Hazard Analysis*) for ES&H analysis for work are in place. These mechanisms ensure that controls are implemented prior to commencing work and that these controls remain in effect as long as the hazard is present. At the project and/or facility–level, procedures (i.e., WMH-200, *Waste Management Hanford Procedures*, Section 3.1, "Work Management") provide work authorization levels and process steps prior to commencing work. The work control process allows for worker input and the worker has Stop Work authority. FH management interviewed demonstrated an awareness of the process that ensures that controls are implemented and remain in effect as long as the hazard is present. Refer to **SME-M&WC** Criteria 3 and 6 for additional discussion regarding hazard identification and control.

Criterion 3: *FH 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 effect as long as the hazard is present.*

A variety of FH procedures are utilized for individual processes/disciplines and maintenance actions to ensure that controls are implemented prior to commencing work and that these

controls remain in effect as long as the hazard is present. For example, HNF-PRO-055, *Facilities Startup Readiness* requires that appropriate procedures, controls, operational requirements, or other positive actions be present before beginning or resuming operations for new or changed activities. FH uses the Automated Job Hazard Analysis (AJHA) in the work planning process to identify hazards associated with scopes of work. The interviews with the FH Project Manager indicated the use of the AJHA tool ensures that controls remain in effect unless hazards change or are mitigated. The JHA process was found to apply in a cross–disciplinary fashion to the performance or work activities involving general plant maintenance, operations, construction, and environmental remediation activities.

Criterion 4: *FH procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.*

The FH institutional–level procedures (i.e., HNF-PRO-055, HNF-PRO-2701, *Authorization Agreement and Authorization Envelope*, HNF-PRO-079, and the HNF-PRO-700 series – Safety Analysis) provide mechanisms or processes for gaining authorization to conduct operations or perform work. Refer to **HAZ.1** Criterion 1 and **SME-M&WC** Criteria 3 and 6 for additional discussion regarding work and work authorization.

Criterion 5: *FH mechanisms for the control of work specifies that line management are responsible for ES&H.*

FH has institutional–level mechanisms such as the Management Plan (HNF-MP-001), ISM System Description (HNF-MP-003), and administrative procedures (HNF-PRO-074, *Safety Responsibilities*) that define the management roles and responsibilities for ES&H.

Refer to **MGO.1** Criterion 2, **MGO.2** Criterion 1, and **SME-M&WC** Criterion 2 for further discussion concerning line management ES&H responsibilities.

Criterion 6: *FH personnel who plan, control, and conduct work are required to have competence commensurate with the assigned responsibilities.*

The FH institutional–level procedures and project and/or facility–level procedures establish the process to ensure that worker competence is commensurate with responsibilities. For example, HNF-MP-011, *Site Wide Qualification and Training Plan*, HNF-MP-599, *Project Hanford Quality Assurance Program Description*, HNF-PRO-068, *Site Maintenance Training*, and FSP-WESF-001, *WESF Project Administration/Training Program*, Section TN-01, "WESF Training Program" provide FH personnel who plan, control, and conduct work are required to have competence commensurate with their assigned responsibilities. Refer to **SME-M&WC** Criterion 4 for additional discussion regarding competence.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 4/27/00

Criterion 7: *FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.*

FH work–planning procedures at the institutional–level as well at project and/or facility–level ensure appropriate involvement workers and ES&H professionals in hazard analysis and selection of controls. FH projects and/or facilities staff member interviewed confirmed that a mechanism for worker and ES&H input are used during the JHA prior to initiation of work (HNF-PRO-079). WMP-200, Section 3.1 requires input into the work package during the planning process from appropriate ES&H staff and workers. It also requires a pre–job briefing using a graded approach prior to initiation of work. Refer to **SME-M&WC** Criterion 7 for additional discussion regarding worker and ES&H involvement in the planning process.

Conclusion

Contractor ISMS procedures provide a method to ensure that controls are implemented during preparation for the initiation of work. FH and Project procedures ensure that adequate controls are identified to mitigate identified hazards and that controls are effectively implemented.

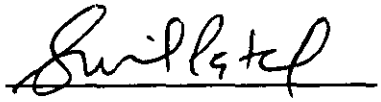
This objective has been met.

Strengths:

None.

Concerns:

None.

Submitted: 	**Approved:** 
Sunil Patel	**Michael A. Mikolanis**
Team Member	***Team Leader***

DOE/RL-2000-30, Rev. 0
U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

Fluor Hanford

Integrated Safety Management System Phase I Verification

Review Plan

Volume II
Richland, Washington
April 12-28, 2000

Michael A. Mikolanis
Integrated Safety Management System
Verification Team Leader

TABLE OF CONTENTS

APPENDICES

ACRONYMS

BBC	Business, Budgets, and Contracts (subteam)
CAP	Corrective Action Plan
CRAD	Criteria and Review Approach Document
DEAR	Department of Energy Acquisition Regulations
DOE	U. S. Department of Energy
ES&H	Environmental Safety and Health
FFTF	Fast Flux Test Facility
FH	Fluor Hanford
FEB	Facility Evaluation Board
HAZ	Hazard Identification and Standard Selection (subteam)
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
MGO	Management Oversight (subteam)
NMS	Nuclear Material Stabilization
PFP	Plutonium Finishing Plant
PHMC	Project Hanford Management Contract
RC	River Corridor
RL	DOE, Richland Operations Office
RPP	River Protection Project
SNF	Spent Nuclear Fuels
SME	Subject Matter Expert
WM	Waste Management

1.0 INTRODUCTION/BACKGROUND

The U.S. Department of Energy (DOE) policy (DOE P 450.4) requires that safety be integrated into all aspects of the management and operations of its facilities. In simple terms, DOE and its contractors will "Do work safely." The purpose of this Fluor Hanford (FH) Integrated Environment, Safety, and Health (ES&H) Management System Phase I Verification is to determine whether Integrated Safety Management System (ISMS) processes are in place within the FH revised system to accomplish the objective of "Do work safely."

The ISMS is comprised of 1) described functions, components, processes, and interfaces (system map or blueprint); and 2) personnel who perform assigned roles and responsibilities to manage and control the ISMS. Therefore, this Phase I Verification will evaluate the "paper" aspects of the ISMS to ensure that the system is developed and will be effective within FH.

HNF-MP-003, Rev. 3, *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan* (FH 2000c) represents the safety management system documentation required by Department of Energy Acquisition Regulations (DEAR) clause 970.5204-2 and the Project Hanford Management Contract (PHMC) clause C.2.D for FH. HNF-MP-003, Rev. 0 was originally approved by the DOE, Richland Operations Office (RL) based on a review against the existing contractual requirements (derived from an earlier draft of the 970.5204-2 DEAR clause) for that document. The PHMC was recently modified to reflect FH's new organizational focus on project management, and HNF-MP-003 (FH 2000c) has been revised accordingly.

In response to the need to streamline site activities and to better focus the PHMC on the site mission, FH has instituted a major re-structuring of the fundamental approach to their conduct of business. In October 1999, FH shifted from an integrator role to a role that emphasizes project management. The project organizations are as follows:

- Spent Nuclear Fuels (SNF) - The mission of the SNF project is to support Hanford Site clean up by providing safe, economic, and environmentally sound management of spent nuclear fuel in a manner that stages it to final disposition as well as deactivation of the associated facilities.

- Nuclear Material Stabilization (NMS) - The mission of the NMS project is to provide for the safe stabilization, storage, repackaging, and shipment of the Plutonium Finishing Plant (PFP) inventory of plutonium-bearing materials and other nuclear materials to other locations for reuse, long-term storage, and/or final disposition.

- Waste Management (WM) - The mission of the WM project is to provide safe, compliant, and cost-effective waste management services for the Hanford Site and the DOE complex. These services include solid waste storage, treatment, disposal, and management of liquid effluents.

- River Corridor (RC) - The mission of the RC project is to deactivate contaminated facilities in preparation for decontamination and decommissioning.

- Fast Flux Test Facility (FFTF) - The FFTF and affiliated 400 Area buildings are to be maintained in a safe and compliant standby condition.

In support of the project management organizations, FH has established a series of functional area support organizations, as well as service provider organizations. Each functional area organization is responsible for monitoring, interpreting, and communicating requirements and standards to the projects and other organizations. Additionally, functional area support organizations assure consistency of application of cross-cutting issues. Project service provider organizations support the project by providing site infrastructure and specialty services support.

FH has chosen to require specific descriptions of the safety management processes for three of these project service providers: Analytical Services, Site Services/Infrastructure, and Site Services/Safeguards and Security. Of the three, Analytical Services description documents will be incorporated into HNF-MP-003 (FH 2000c), while Infrastructure and Safeguards and Security are to be prepared and maintained by the functional subcontractor organization (per HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts* [FH 1999]).

The impact of the organizational restructuring on FH is profound. This environment of change and transition to a more streamlined structure offers both challenge and opportunity for performing work safely.

2.0 PURPOSE

The purpose of this Phase I Verification is to verify the adequacy of documentation as submitted to the Approval Authority by FH. This review is not only a review of the ISM System Description documentation, but is also a review of the procedures, policies, and manuals of practices used to implement safety management in an environment of organizational restructuring. The FH ISMS should support the *Hanford Strategic Plan* (DOE-RL 1996) to safely clean up and manage the Hanford Site's legacy waste while incorporating the ISMS objective of "Do work safely."

The guidance and direction provided in this review plan have been adapted from DOE P 450.4, DOE G 450.4-1A, and the *DOE Handbook Integrated Safety Management Systems (ISMS) Verification Team Leader's Handbook* (DOE 1999).

3.0 SCOPE

The scope of this Phase I Verification is associated with FH in its role as the PHMC management and integration contractor. A review of the RL Integrated Management System is not within the scope of this verification as it will be assessed in the May/June 2000 timeframe. To date, the following ISMS verifications have been performed for FH:

- Phase I Verification at the FH institutional level
- Phase I/II Verification at SNF (K Basins)
- Phase I Verification at NMS (PFP).

Based upon the results of these verifications, RL has concluded that the most efficient verification strategy is to perform Phase I verification of the revised FH system description. Following completion of the FH Phase I verification, it is expected that a Phase II verification will be performed for the remaining FH projects and/or service providers.

As directed in the ISMS Verification Team Leader letter of appointment (Klein 2000) provided in Appendix A, the results of previous ISMS Phase I verifications were considered in the development of this review plan so as to avoid unnecessary duplication efforts. These include the Phase I assessments of FH, SNF, and NMS.

Based on a review of previously conducted Phase I verifications for FH, it was determined that Subject Matter Experts (SME) in the areas of Environmental Protection/Chemical Management and Maintenance and Work Controls would be included in the FH Phase I ISMS Verification. Based on feedback from RL staff responsible for planning, coordinating, and conducting Hanford Site ISMS verifications, these as well as other SME areas, will also be included in the FH Phase II verification.

This Phase I Verification is intended to provide the following:

- Verify adequacy of the FH ISM System Description and associated plans, manuals of practice, and procedures used to implement safety management.

- Verify that the corrective actions derived from the previously conducted FH, SNF, and NMS Phase I Verifications have been adequately completed.

- Identify, as appropriate, any strengths in the FH ISM System Description that deserve to be highlighted so good practices are reinforced and applied at other facilities and activities.

- Develop lessons learned from this verification effort that can be used to improve the effectiveness of future verifications.

4.0 PREREQUISITES

Overall acceptance by RL to proceed with the FH Phase I Verification was based on the following:

- Corrective actions and associated activities were completed as specified in *Corrective Action Plan for Fluor Hanford, Inc. Integrated Environment, Safety and Health Management System Phase I Verification* (FH 2000a).

- Prerequisites associated with the Phase I Verification were completed as identified in the ISMS implementation project schedule, per *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan* (FH 2000b).

5.0 OVERALL APPROACH

The ISMS Verification Team will evaluate the ISM System Description, supporting procedures and processes, corrective actions previously identified from prior verifications, and implementation plans against the guiding principles and core functions defined in DOE P 450.4. Based on this assessment, the Verification Team will draw conclusions and make recommendations to the Approval Authority as to whether the ISM System Description will achieve the overall objective of ISM, which is as follows:

> DOE and contractors must systematically integrate safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment. This is to be accomplished through effective integration of safety management into all facets of work planning and execution. In other words, the overall management of safety functions and activities becomes an integral part of mission accomplishment. (DOE P 450.4)

The Verification Team will review the areas of Business, Budgets, and Contracts; Management Oversight; Hazards Identification and Standard Selection; and the subject matter areas of Environmental Protection/Chemical Management and Maintenance and Work Controls.

The major focus of this Phase I Verification will be to verify the acceptability of the FH ISM System Description. Within the subject area of Maintenance and Work Controls, the focus will be on the interface with ES&H mechanisms. Another focus of the review will be on corrective actions addressing opportunities for improvement identified during previously conducted FH Phase I Verifications.

The Phase I Verification review will be conducted using subteams as defined in Section 7.0. ISMS Verification Team membership and professional biographies are provided in Appendix B. The Verification Team will conduct the review using the Criteria and Review Approach Documents (CRAD) provided in Appendix C.

5.1 SEQUENCE OF ACTIVITIES

The first step in the ISMS Phase I verification process is to provide training and interaction among the Verification Team members to ensure an adequate understanding of the DOE ISMS Policy expectations, the ISM System Description as presented by FH, and the plan and strategy for the verification. Team members with prior ISMS training and experience will be used for this verification. The Verification Team understanding on the DEAR clauses 970.5204-2, *Integration of Environment, Safety, and Health Into Work Planning and Execution* and 970.5204-78, *Laws, Regulations, and DOE Directives* will be verified. The Verification Team will also complete preparation of the CRADs, which will guide the review. The indoctrination period of approximately 1 day, including ISMS Verification Team orientation and training, site-specific training, and CRAD finalization will be conducted at the Hanford Site prior to the start of the review.

The actual Phase I Verification review will be conducted during a 2-week period following the orientation and training. The first week of the verification will consist of ISMS briefings by FH management, interviews, and document reviews. Any additional actions that may be necessary to support review and assessment of the supporting program and process documents, gap analysis, and the ISMS implementation plans will be identified as the review progresses. During the second week of the verification, the ISMS Verification Team will complete their evaluation of the criteria in the individual CRADs that will support conclusions as to whether the individual objectives have been met. Each CRAD is intended to guide the evaluation of the adequacy of the ISM System Description and supporting documentation.

The ISMS Verification Team will evaluate the criteria in their respective CRAD based on the FH ISMS presentations coupled with the results of the verification activities conducted during the previous week. Important input to the assessment will be the presentations and persuasive discussions by the individual managers who present and defend their ISMS process at their individual levels of responsibility. The record of the evaluation will be the Assessment Form (i.e., Form 1). Detailed instructions for completing the Assessment Form will be provided to the Verification Team prior to and during the review. An Assessment Form will be prepared for each objective in the CRADs and will document the basis for the conclusions reached concerning the objective and criteria. Each Assessment Form will conclude with a set of numbered issues or observations that will be rolled up to the Opportunities for Improvement section in the Executive Summary of the final report. Issues identified during the review of the individual CRAD that warrant the attention of the RL Manager or senior FH management will be clearly identified within the Assessment Form. In addition, good work practices and strengths of the ISMS will be identified as Noteworthy Practices.

A final report to be issued at the end of the second week will describe the results of the verification review. The report will assess the adequacy of the ISM System Description and will delineate areas (if any) in which the ISMS does not conform to the previous guidance, as well as identify Noteworthy Practices that were observed. The report will also provide the conclusions reached by the Verification Team as to the objectives identified in Section 3.0 of this review plan. The format and contents of the report are described in Section 9.0.

6.0 PREPARATIONS

Preparations for the Phase I Verification will focus on two areas. The first effort is to prepare the Verification Team to conduct the review and finalize the review plan that will guide the conduct of the review. The second effort is to assist FH in gaining an understanding of the review process to most effectively present their ISM System Description to the Verification Team.

6.1 PHASE I TEAM PREPARATIONS

Efforts to prepare the ISMS Verification Team to conduct the Phase I Verification will include review of the relevant DEAR clauses (970.5204 and 970.5204-78) and ISMS guidance as deemed necessary by the Team Leader. (Due to the focused nature of this verification, it is expected that a significant majority of the Verification Team will have prior experience and knowledge in the ISMS verification process.) There will also be a discussion on the strategy and methodology for the review. This portion will include a discussion of the strategy and logic by which the initial CRADs and subject areas were developed. Verification Team members will be provided with relevant documents (e.g., ISM System Description, policies, procedures, etc.) to be read before the review is conducted. Finally, the Verification Team will receive presentations and briefings to ensure an understanding of the FH ISM System Description and the mechanisms used in the execution of that system.

6.2 FLUOR HANFORD PREPARATIONS

Briefings will consist of FH making focused presentations to the ISMS Verification Team to describe how the processes and mechanisms used to "Do work safely" fulfill the expectations of the ISMS at the institutional, project, and activity level. These presentations should also describe the integration of safety management between the contractor, subcontractors, service/support groups, and DOE. Additionally, FH may elect to present key corrective action closures as related to prior Phase I verifications. At the conclusion of the presentations, the Verification Team will provide to FH a list of documents required for review and selected personnel to be interviewed. FH should use these lists to schedule activities and interviews during the first week of the review.

7.0 PROCESS FOR INTEGRATED SAFETY MANAGEMENT SYSTEM REVIEW

As described in Section 5.0, the review will be conducted using the CRADs (provided in Appendix C). The CRADs are identified by three functional areas that correspond to the three Verification Team subteams:

- Business, Budgets, and Contracts (BBC)
- Management Oversight (MGO)
- Hazards Identification and Standard Selection (HAZ), including Environmental Protection/Chemical Management, and Maintenance and Work Controls SMEs.

The BBC functional area subteam will address the following:

- FH processes for translating mission into work in a planned and controlled manner
- Appropriate flowdown of ISMS to projects, facilities, and subcontracts, as well as support/service groups
- Corrective actions from previous Phase I Verifications.

The MGO functional area subteam will address the following:

- How work is defined and prioritized
- Flowdown of the ISM System Description to the projects, support/service groups, and facilities
- Ensure contractor roles and responsibilities (i.e., line management responsibilities) are documented and included within the core functions
- Review the feedback and improvement functions, including the contractor's Quality Assurance Program
- Corrective actions from previous Phase I Verifications.

The HAZ functional area subteam will address the following:

- FH processes for ISMS relating to hazard analysis
- Processes related to the identification of safety standards and requirements
- How controls are tailored to the work being performed
- Evaluation of the specialized SME functional areas.

- Corrective actions from previous Phase I Verifications.

8.0 ADMINISTRATION

8.1 MEETINGS AND PRESENTATIONS

The first phase of the verification will include presentations by FH to the ISMS Verification Team. The purpose of the presentations will be to provide an opportunity for the Verification Team to become familiar with the FH ISM System Description, including the supporting policies, procedures, work practices, etc. The presentations will provide an opportunity for FH to describe the mechanisms and procedures in which the ISM elements described in the various programs are integrated vertically and horizontally. These presentations should demonstrate an ISMS that fulfills the expectations of DOE P 450.4, 450.5, and 450.6 contract requirements and the DEAR clause requirements. The ISMS Verification Team will use the information provided during the presentations as part of the verification that the criteria and the objectives in the individual CRADs are met. Additional interviews, record reviews, and other activities will clarify and validate the information in the briefings.

The FH Phase I Verification will be an open process with the goal of maximizing the opportunity to achieve a full understanding of the ISM System Description. To achieve the level of openness and coordination that is desired, the Verification Team will meet daily to discuss observations and issues. The Team Leader will meet with senior FH and RL management as necessary to ensure they are fully informed of the progress and issues during the verification review.

Following the Phase I Verification, the Team Leader will conduct a briefing with senior FH and RL Managers. The briefing will include the results of the review, the basis for the improvement recommendations that will be made to the Approval Authority, and Noteworthy Practices observed during the review.

8.2 DOCUMENTATION OF THE INTEGRATED SAFETY MANAGEMENT SYSTEM PHASE I VERIFICATION

The ISMS Phase I Verification will be guided by the criteria in the CRADs. The documentation will be structured to show that the elements of the CRADs were evaluated and that the objectives were met, or what aspects of the objectives were found to be in need of improvement. The purpose of the documentation is to provide information concerning details of the review to individuals who did not witness the review.

To maintain the verification schedule and ensure that the final report is complete prior to dissolution of the team, each ISMS Verification Team member must document his/her work as it is conducted. This means that daily inputs to the Assessment Forms (Form 1's) will be required. Each subteam leader will be provided with a preliminary Assessment Form containing the objective and criteria for each CRAD. If issues of noteworthy or questionable work practices are

identified, they will be documented within the Assessment Form. If the final report to the Approval Authority recommends corrective actions for FH, those actions should be supported by detailed information in the Assessment Forms.

The lessons learned from this ISMS Verification are particularly important for future reviews at the Hanford Site and across the DOE complex. The Verification Team will prepare a lessons learned section that will be included in the final report.

8.3 TEAM COMPOSITION AND ORGANIZATION

The ISMS Phase I Verification Team will be organized into three subteams using an integrated set of CRADs. Subteam leaders are responsible for ensuring that all CRADs assigned to them are fully evaluated and that the appropriate documentation is prepared. A list of Verification Team members and professional biographies are provided in Appendix B.

The ISMS Verification Team use FH Facility Evaluation Board (FEB) personnel to support the FH Phase I Verification. The FEB has previously participated in other ISMS verifications as both observers and participants to gain ISMS verification experience such that they could support future Hanford Site verifications. The FEB will participate in the FH Phase I Verification as Verification Team members in a capacity that does not conflict with their normal functions under FH.

Additionally, independent observation of the verification process is encouraged. Observers from the Confederated Tribes of the Umatilla Indian Reservation /Hanford Advisory Board ISMS Issues Manager, Defense Nuclear Facilities Safety Board, and a Worker Representative will observe the Phase I Verification as part of the open process.

9.0 FINAL REPORT FORMAT

At the end of the Phase I Verification, the ISMS Verification Team will prepare a final report (provided as Volume I of this report). The report will discuss the adequacy of the ISM System Description and any areas where it does not conform to DOE P 450.4, 450.5, and/or 450.6, the ISMS DEAR clauses, and the requirements of the Approval Authority as specified in the guidance to the contractor. The report will also address all of the objectives identified in Section 3.0 and include any recommended actions that the Verification Team considers necessary or desirable to ensure work is performed safely.

The final report will consist of the following sections that fully describe the review, provide the necessary Opportunities for Improvement, and any information necessary to support the recommendations. The Team Leader will ensure that the final report is appropriately controlled and reviewed for classified information or Unclassified Controlled Nuclear Information prior to issuance.

a. VOLUME I

1. **Title Page** - States the site location and dates of the verification review.

2. **Signature Page** - Contains signatures designated by the Team Leader to promulgate the final version of the report.

3. **Table of Contents** - Identifies all sections of the report, tables, figures, and appendices.

4. **Executive Summary** - Provides an overview of the results of the verification review, including a summary of the recommendations that result from the review. The Executive Summary will identify Opportunities for Improvement (issues) as well as Noteworthy Practices (strengths) identified during the review.

5. **Introduction-** Provides the overall objectives of the evaluation, and the review process and methodologies used in the review.

6. **Purpose** - Provides the purpose of the verification review.

7. **Background** – Provides a general discussion of the facility and the state of maturity of the safety management programs.

8. **Scope** - Provides the scope of the verification review.

9. **Overall Approach** - Restates (with any necessary modifications) the approach followed during the verification review and delineated in the Review Plan.

10. **Assessment of Documentation of the FH ISMS** - Provides a summary discussion of the overall results of the evaluation. This section will include a summary for each functional area and issues prepared by the functional area subteam. This section will also provide details of the review, which are necessary to support the report on the adequacy of the ISM System Description. The report will also discuss the observations and conclusions of the team regarding the strengths and weaknesses of the ISM System Description. Finally, any deviations from this review plan will be discussed in the report.

11. **Conclusions and Recommendation** – Addresses the status of implementation of FH ISMS at the Hanford Site. It will also provide information about the adequacy of supporting program and process documents and the planned ISMS improvement plans.

12. **Lessons Learned** - Discusses lessons learned associated with the ISMS Phase I Verification process as well as with the development and implementation of an ISMS.

b. VOLUME II – Contains the Assessment Forms (Form 1's), Review Plan, and CRADs.

10.0 SCHEDULE

For planning purposes, the projected schedule for the FH ISMS Phase I Verification is as follows:

Orientation

Date	Topic
April 12, 2000	• Introduction/team logistics • Team orientation • Facility orientation • Discuss CRAD approaches • Plan logistics • Develop list of documents/records to be reviewed • Develop lines of inquiry • CAP review
April 13, 2000	• Finalize logistics • Prospective interview list • Finalize lines of inquiry • Complete and sign qualification forms • Provide FH final list of documents/records to be reviewed • Required reading/document review • CAP incorporation into field activities

CAP = Corrective Action Plans

Verification

Date	Topic
April 17, 2000	• Finalize interview list • FH presentations • Team members meet counterparts • Verification team meeting • Finalize CRADS • Finalize Review Plan • Documentation review
April 18, 2000	• Documentation review • Conduct interviews • Individual team member work as required
April 19, 2000	• Documentation review • Conduct interviews

Verification

Date	Topic
	• Individual team member work as required
April 20, 2000	• Complete documentation review • Finalize interviews • Individual team member work as required
April 21, 2000	• Submit draft Form 1's by 12:00 p.m. • Accuracy review with Team Lead
April 24, 2000	• Accuracy review with FH • Finalize Form 1's
April 24 -28, 2000	• Prepare final report
May 1, 2000	• Presentation to RL/FH management

11.0 REFERENCES

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.

48 CFR 970.5204-78, "Laws, Regulations, and DOE Directives," Title 48, *Code of Federal Regulations*, (DEAR) Section 970.5204-78, as amended, U.S. Department of Energy, Washington, D.C.

48 CFR 970.5204-2, "Integration of Environment, Safety, and Health Into Work Planning and Execution," Title 48, *Code of Federal Regulations*, (DEAR) Section 970.5204-2, as amended, U.S. Department of Energy, Washington, D.C.

DOE, 1999, *DOE Handbook Integrated Safety Management Systems Verification Team Leader's Handbook,* DOE-HDBK-3027-99, U.S. Department of Energy, Washington, D.C.

DOE P 450.4, *Safety Management System Policy*, U.S. Department of Energy, Washington, D.C., as amended.

DOE G 450.4-1A, *Integrated Safety Management System Guide,* Volume 1, "Guidance," and Volume 2, "Appendixes," U.S. Department of Energy, Washington, D.C., as amended.

DOE P 450.5, *Line Environment, Safety, and Health Oversight,* U.S. Department of Energy, Washington, D.C., as amended.

DOE P 450.6, *Secretarial Policy Statement Environment, Safety and Health Purpose and Scope,* U.S. Department of Energy, Washington, D.C., as amended.

DOE-RL, 1996, *Hanford Strategic Plan*, DOE/RL-96-92, Rev. 2, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

FH, 1999, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts*, HNF-MD-4821, Rev. 0, Fluor Hanford, Richland, Washington.

FH, 2000a, *Corrective Action Plan for Fluor Hanford, Inc. Integrated Environment, Safety and Health Management System Phase I Verification*, FH 9958945A R1, Rev. 1, Fluor Hanford, Richland, Washington.

FH, 2000b, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, HNF-4554, Rev. 4, Fluor Hanford, Richland, Washington.

FH, 2000c, *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan*, HNF-MP-003, Rev. 3, Fluor Hanford, Richland, Washington.

Klein, K. A., 2000, *Memorandum of Appointment as Integrated Environment, Safety and Health Management (ISM) System Team Leader for Verification of the Fluor Hanford, Inc. (FHI) System Description*, Memorandum AMS: DSS/00-AMS-032, Keith A. Klein, Manager, DOE, Richland Operations Office to Michael A. Mikolanis, Office of the Departmental Representative, Headquarters, dated March 13.

APPENDIX A

TEAM LEADER LETTER OF APPOINTMENT

RL-F-1325.8 (02/98)

United States Government **Department of Energy**

memorandum

Richland Operations Office

DATE: MAR 13 2000

REPLY TO ATTN OF: AMS:DSS/00-AMS-032

SUBJECT: MEMORANDUM OF APPOINTMENT AS INTEGRATED ENVIRONMENT, SAFETY AND HEALTH MANAGEMENT (ISM) SYSTEM TEAM LEADER FOR VERIFICATION OF THE FLUOR HANFORD, INC. (FHI) SYSTEM DESCRIPTION

TO: Michael A. Mikolanis
Office of the Departmental Representative
EH-9, HQ

As a result of recent restructuring of the Project Hanford Management Contract, reorganization by FHI, and major revisions to the FHI ISM System Description, it is necessary to conduct a follow-up assessment of the FHI ISM System Description. In accordance with the U.S. Department of Energy (DOE) Functions, Responsibilities, and Authorities Manual, DOE M 411.1-1A, Section 9.2.2.6, Approval of Safety Management System Documentation, you are requested to be the Team Leader for a verification of the FHI ISM System Description as discussed in the attachment.

Thank you for your willingness to assist in the conduct of this verification. If you have any questions regarding this matter, please contact me, or you may contact Sandra Johnson, Assistant Manager for Engineering and Standards, on (509) 376-7387, or Doug Shoop, Senior Technical Advisor for the Office of the Assistant Manager for Engineering and Standards, on (509) 376-0108.

Keith A. Klein
Manager

Attachment

cc w/attach:
C. L. Huntoon, EM-1
D. M. Michaels, EH-1
J. M. Owendoff, EM-2
T. A. Wyka, EH-9
B. A. Austin, FHI
R. D. Hanson, FHI
L. J. Olguin, FHI

Fluor Hanford Inc. (FHI) Integrated Environment, Safety, and Health Management (ISM) System Phase I Verification (ISMSV-I)

1.0 Description of Activity

This review will verify the acceptability of the FHI ISM System Description.

2.0 Background and History

In response to the need to streamline site activities and to better focus the Project Hanford Management Contract (PHMC) on the site mission, FHI (previously Fluor Daniel Hanford Inc. [FDH]) has instituted a major re-structuring of the fundamental approach to their conduct of business. In October 1999, FHI shifted from an integrator role to a role that emphasizes project management. As an outcome of this fundamental shift in management approach, FHI has de-scoped the PHMC major subcontractors and subsequently removed the need for independent integrated safety management systems as originally described.

Concurrent with the October 1999 re-structuring by FHI, an initial verification of the FDH ISM System Description was conducted. The *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan*, HNF-MP-003, Rev. 2 (FDH ISMS Plan), was reviewed relative to the safety management system documentation required by DOE Acquisition Regulation (DEAR) Clause 970.5204-2. The result of this initial verification validated that the FHI shift in management approach will better focus safety management within the PHMC structure.

FHI plans, manuals of practice, and procedures at the "institutional" level have been verified through the initial FDH ISM Phase I verification, however, the mechanisms to do work safely at the project and activity level could not be confirmed. FHI had previously required each project to develop an ISM System Description which would augment the institutional level ISM System Description and which would describe how work is done safely at the project and activity level. ISM System Descriptions were subsequently developed for the Spent Nuclear Fuel (SNF) and Nuclear Material Stabilization (NMS) Projects and ISM Phase I verifications were performed. Recently, FHI modified the aforementioned multiple ISM System Description strategy in favor of a single FHI ISM System Description which would described the mechanisms used to do work safely at the institutional, project and activity level. Accordingly, the revised FHI ISM System Description (HNF-MP-003, Rev. 3) requires verification.

3.0 ISM Phase I Verification

Mr. Mike Mikolanis is appointed as the Team Leader for the Phase I verification of the revised FHI ISM System Description. The verification should be scheduled to commence no later than April 17, 2000 with a final report delivered on or about May 1, 2000.

4.0 Scope and Special Considerations for the ISMSV-I

4.1 Scope

4.2.1 Verify that the FHI ISM System Description and associated plans, manuals of practice, and procedures used to implement safety management are adequate.

4.2.2 Verify that the corrective actions derived from the previously conducted FDH, SNF, and NMS Phase I verifications have been adequately completed.

4.2.3 Identify, as appropriate, any strengths in the FHI ISM System Description which deserve to be highlighted so good practices are reinforced and applied at other facilities and activities.

4.2.4 Develop lessons learned from this verification effort which can be used to improve the effectiveness of future verifications.

4.2 Special Considerations

4.2.1 Verification of the FHI ISM System Description should focus on the plans, manuals of practice, and procedures used at the project and activity level to do work safely, and need not focus on those mechanisms previously reviewed and deemed adequate during the FDH, SNF, and NMS Phase I verifications unless deemed necessary by yourself.

4.2.2 The Richland Operations Office (RL) has recently undergone a major realignment and reorganization. Consequently, the functions, responsibilities and authorities of most RL organizations, managers, and staff have changed significantly, and will not be fully formalized by the time of this verification. Accordingly, the scope of the ISMSV-I should be limited to the contractor and subcontractors. RL implementation of ISM will be evaluated in the late May/early June 2000 timeframe.

5.0 Stakeholder Observation of ISMSV-I

The RL has invited the Hanford Advisory Board (HAB) to observe ISMSV-I. Mr. Joseph Richards of the Confederated Tribes of the Umatilla Indian Reservation will be representing the HAB. Mr. Richards is the ISMS Issues Manager for the Health, Safety, and Waste Management Committee of the HAB.

Additionally, RL would like to invite a worker representative to participate as an observer on the ISMSV-I. The specific worker representative to participate in the ISMSV-I should be coordinated with Mr. Doug Shoop.

6.0 Phase I ISMS Verification Letter of Appointment

You should prepare an ISMSV-I review plan, select and train the team, and confirm the team's readiness to conduct the verification. RL has a good cadre of staff experienced in ISMS, and will be available to provide onsite support in this effort.

7.0 Desired Deliverables from the Review

The ISMSV-I Team should document the review with a report written in accordance with the guidance given Appendix 7 to the "Integrated Safety Management System Verification Team Leader's Handbook," DOE-HDBK-3027-99, dated June 1999. The report should address all of the objectives identified above, and include any recommended actions, which the ISMSV-I Team considers necessary or desirable to ensure work is done safely.

8.0 Information for the Cognizant Secretarial Officer (CSO)

A copy of this Memorandum of Appointment is forwarded to the responsible CSO, C. L. Huntoon, EM-1, DOE Headquarters for information. Please provide her copies of both the Review Plan and the final report of the FHI ISMSV-I.

9.0 ISMSV-I Point-of-Contact (POC)

The POC for the FHI ISMSV-I is Doug Shoop. Mr. Shoop can be reached at (509) 376-0108, or by electronic mail, doug_s_shoop@rl.gov.

APPENDIX B

TEAM MEMBERS AND BIOGRAPHIES

TEAM ASSIGNMENTS

ISMS Verification Team Leader: Michael A. Mikolanis

Team Lead Advisor: Ed Parsons

Technical Editor/Writer: Hope E. Matthews

Report Coordinator: Margaret M. Droddy

Integrated Reviewer: Doug S. Shoop

Business, Budgets, and Contracts

- Subteam Lead: Bart Schmidt
- Patty G. Ensign
- Dave E. Stromberg
- Gerald M. Bell

Hazards Identification and Standards Selection

- Subteam Lead: Steven L. Bertness
- Shiv Seth
- Scott Ludwig
- August Maniez
- SME Environmental Protection: Mike Silvia
- SME Maintenance and Work Controls: Dennis Humphreys

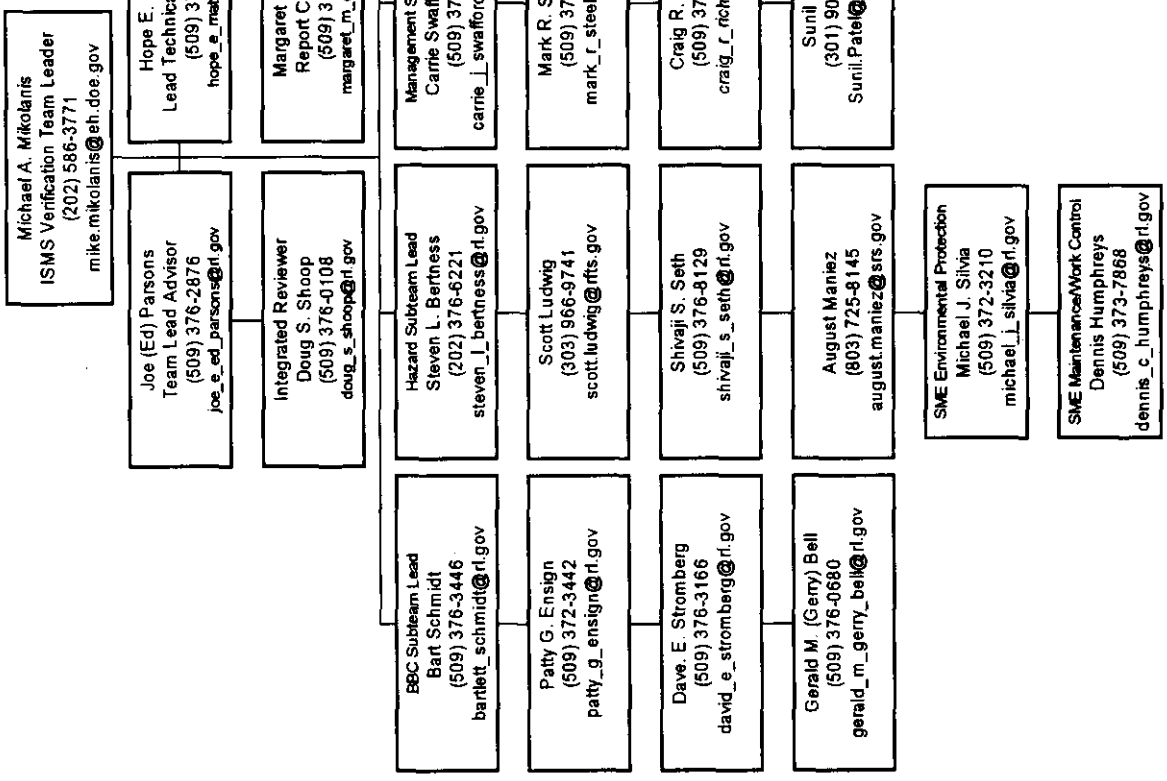
Management Oversight

- Subteam Lead: Carrie Swafford-Chube
- Mark R. Steelman
- Craig R. Richins
- Sunil Patel

Observers

- Worker Representative: Jill M. Molnaa
- Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Environmental Representative and Hanford Advisory Board ISMS Issues Manager: Joseph Henry Richards
- Defense Nuclear Facilities Safety Board Observer: Tim Hunt

ISMS Phase I Verification Team for the Project Hanford Management Contract



Michael A. Mikolanis, ISMS Verification Team Leader

Mr. Mikolanis is a Headquarters Issue Lead in the Office of the Departmental Representative to the Defense Nuclear Facilities Safety Board (S-3.1). Mr. Mikolanis holds a B.S. degree in nuclear engineering from Purdue University and has completed the coursework necessary for an M.S. in Environmental Engineering at Georgia Tech. Mr. Mikolanis has worked in the nuclear industry for 15 years and is a registered professional engineer in the state of Maryland. He spent his first 7 years as a nuclear trained naval officer. In that capacity, he qualified as the senior supervisory watchstander at reactor plants. As a naval department head, he supervised the safe operation and maintenance of a prototype reactor and managed all aspects of a 3-year overhaul of the facility. He spent the next 3 years as a senior licensing engineer at Bechtel Power Corporation. In that capacity, Mr. Mikolanis performed safety evaluations of modifications made to commercial nuclear reactor facilities and prepared the safety analysis reports required to license the emergency power distributions system at the Calvert Cliffs Nuclear Power Plant. Mr. Mikolanis spent the last 5 years working in the DOE managing safety issues of interest to the Defense Nuclear Facilities Safety Board. Hanford's safety issues include RPP characterization, systems engineering, technical competence, and implementation of integrated safety management. Mr. Mikolanis is certified as an ISM Verification Team Leader and has participated in six ISMS verifications at the Hanford Site.

Gerald M. Bell

Mr. Bell has worked for the DOE, Richland Operations Office since 1986. He received a Bachelor of Science degree in Wildlife and Fisheries Sciences from Oregon State University in 1973. He subsequently received a Masters of Science degree in Aquatic Sciences from Murray State University in Kentucky in 1975. He was employed with the State of Oregon's Department of Environmental Quality from 1976 until he transferred to DOE in October 1986. While employed with the State of Oregon, he was involved in the oversight of industrial compliance with the Environmental Protection Agency's Clean Air Act and the Clean Water Act regulations. He spent the majority of his time with the agency as the lead Environmental Toxicologist measuring ecological damage resulting from industrial waste discharges. Mr. Bell was hired by the DOE, Richland Operations Office late in 1986 as an Environmental Biologist, where he helped set up the current Environmental Compliance program. He was promoted to Branch Chief in 1991, and led a team of Environmental Safety and Health (ES&H) Subject Matter Experts who conducted oversight of contractor compliance activities in these areas. In 1995 Mr. Bell was promoted to Director of the Performance Assessment Division, where he continued supervising teams of ESH&Q experts who conducted contractor and RL regulatory compliance oversight activities. He is currently the Director of the Analysis and Evaluation Division, a multi-discipline oversight and coordination organization. Mr. Bell has led or has been a team member on numerous oversight reviews. He was the team lead on a number of multiple discipline reviews, including being the Readiness Assessment Team Lead for the start up of the Pacific Northwest National Laboratory Environmental Molecular Science Laboratory.

Steven L. Bertness

Mr. Bertness is an occupational safety and health specialist for the Assistant Manager of Engineering and Standards at the Hanford Site with special emphasis on nuclear safety for environmental restoration projects. He participated as a team member in the Fluor Daniel Hanford ISMS Phase I Verification, as a subteam lead for the Spent Nuclear Fuels Project Phase I/II Verification, and as a subteam lead for the Plutonium Finishing Plant Phase I Verification. Mr. Bertness also served as the Assistant Team Lead for the Environmental Restoration Contractor Phase I/II Verification. He also served as Fed oversight for the Facility Evaluation Board, Phase I/II validation of DynCorp.

Mr. Bertness earned a Bachelor of Science degree in Safety Engineering from Indiana University of Pennsylvania, whose Safety Science Department holds an accreditation from the American Society of Safety Engineers, in 1989. Mr. Bertness has served in his current position for the past 3 years. Previously, he was a safety and health manager at DOE Headquarters for the Deputy Assistant Secretary for Environmental Restoration, with primary areas of involvement being nuclear safety, Integrated Safety Management, HAZWOPER, Occupational Safety and Health Administration (OSHA) compliance, the OSHA Voluntary Protection Program, safety and health training and safety and health program development. Before accepting a position with DOE, Mr. Bertness was an Industrial Hygiene compliance office for the Virginia Department of Labor, Occupational Safety and Health Administration, with inspection responsibilities in the Northern Virginia District. Previously, Mr. Bertness served as an industrial hygiene consultant for APEX Environmental in Rockville, Maryland.

Margaret M. Droddy

Mrs. Droddy is an Associate with EnergX and is currently on contract as a Technical Editor and Specialist for the Facility Evaluation Board, Fluor Hanford. Mrs. Droddy has 18 years administrative and executive expertise. Her experience includes technical editing, preparation and coordination of multi-million dollar grants, and providing technical assistance with facility-specific performance reports. Mrs. Droddy supported the Fluor Hanford Critical Self-Assessment Team providing technical editing, report preparation, and graphics support. She provided technical support and report preparation and coordination of the EA-1999-04 Effectiveness Review ordered by the DOE Office of Enforcement and Investigation (EH-10) conducted by the Facility Evaluation Board. Most recently, Mrs. Droddy has provided technical support and report preparation and coordination in multiple DOE Integrated Safety Management System reviews (the River Protection Program, the Fluor Daniel Hanford, Inc. Phase I, the Spent Nuclear Fuel Project Phase I/II, the Plutonium Finishing Plant Phase I) and an FEB Integrated Safety Management System validation (DynCorp Tri-Cities Services, Inc.) at the Hanford Site.

Patty G. Ensign

Ms. Ensign earned her Bachelor of Science degree in Business, majoring in Accounting. She has 10 years experience in the professional and technical fields of accounting, budget formulation, planning and execution, and project controls working for the DOE. This experience includes the following:

- Four years of accounting experience supporting the monthly and annual submittals of the financial statements to DOE Headquarters.

- Two years of budgeting experience supporting the annual budget submittals. This includes evaluating the effectiveness of planning and budgeting processes and assisting in the overall formulation, justification, defense, and execution of various budget activities.

- Four years as a program analyst on both the Spent Nuclear Fuel Project and the Waste Management Program.

- Coordinated and supported budget and planning activities among divisions, and validated cost estimates and budget requirements.

- Provided direct support in the analysis of Fluor Hanford budgeting and planning efforts through the reviews of their Annual Work Plans and Multi-Year Work Plans.

- Performed baseline management to ensure project controls are in place, and reviewed Baseline Change Requests involving life cycle work scopes to ensure changes were justified and adequate.

- Worked with technical staff in the development, execution and the validation of completion phases of the Performance Incentives and fee structure. She has routinely interpreted RL guidance and policies to ensure compliance.

- Participated as a Business, Budgets and Contracts team member in the Fluor Hanford ISMS Phase I Verification; the Spent Nuclear Fuels Project Phase I/II Verification; the Plutonium Finishing Plant Phase I Verification; and the Environmental Restoration Contractor Phase I/II Verification.

Ms. Ensign is currently assigned to the Analysis and Evaluation Division.

Dennis Humphreys

Mr. Humphreys is a graduate of the Navy's Nuclear Power Training Program. In 1995, he successfully passed the Washington State Engineer in Training examination. Mr. Humphreys, through New York Regents College, received credit for his Navy technical and engineering education towards a Bachelor of Science degree in Engineering. He has successfully passed several college-level courses in Hazardous Waste/Material Management, Nuclear Chemistry (masters level), and Engineering Technology Management (masters level). At both the Navy and the Navy Yard level, ISMS principles had been practiced for some time.

Mr. Humphreys has over 29 years (8 years with the Nuclear Navy, 17 years with the Nuclear Shipyard, and 4+ years at the Hanford Site) experience in the repair, maintenance, operation, testing, startup, restart, and decommissioning of navy nuclear power plants and related nuclear facilities. Mr. Humphreys was a certified Nuclear Shift Test Engineer at a Nuclear Navy Yard. He also spent 4 years as a Nuclear Chief Test Engineer. Mr. Humphreys has been with the DOE for approximately 4.5 years. He has been a member of several full and partial Conduct of Ops and Maintenance Assessments at the Hanford Site, including the team leader for the Maintenance Team for the Characterization Project Assessment. Mr. Humphreys has completed EM-25 Operations Assessment Training. He has participated as a team member on several Operational Readiness Reviews (ORR) and Readiness Assessment (RA). Mr. Humphreys also participated as a team member in a current contractor/DOE Automated Job Hazard Analysis (AJHA) implementation assessment.

Mr. Humphreys was a Maintenance and Work Control Subject Matter Expert for the Spent Nuclear Fuel ISMS Phase I/II Verification. He also participated as an Operations Planning/Work Planning assessor in the Plutonium Finishing Plant ISMS Phase I Verification and the Environmental Restoration Contractor ISMS Phase I/II Verification.

Mr. Humphreys is also a qualified Facility Maintenance Manager and as such, has participated in assessments of various contractors Maintenance Programs. This includes being the lead auditor for the maintenance portion of a CPO Conduct of Operations assessment. He is also a member of the Enhanced Work Planning Site Core Team. Mr. Humphreys reviews both the Maintenance Implementation Plans and Conduct of Operations Matrices. He is a Subject Matter Expert on Hoisting and Rigging, Maintenance, and Conduct of Operations. Earlier at the Hanford Site, Mr. Humphreys was also responsible for the Configuration Management Program. Mr. Humphreys has also completed the DOE Accident Investigator Training Program.

Mr. Humphreys is also a qualified Facility Maintenance Manager and in that function, is involved in all aspects of maintenance management, including MIP reviews, Enhanced Work Planning Site Wide Core Team, Automated Job Hazard Analysis implementation assessment, ISMS implementation, etc. Mr. Humphreys participated in two ISMS workshops at the Hanford Site from planning through execution.

In the area of ORRs and RAs, Mr. Humphreys has taken the lead and revised the existing ORR/RA RLID to improve the process, incorporate the new DOE Order 425.1A, incorporate past lessons learned, and input from a Quality Improvement Plan ORR/RA Team. The draft revision is pending the recent reorganization.

Scott Ludwig

Mr. Ludwig is a Physical Scientist in the Field Assessment Division at the Rocky Flats Field Office in Golden, Colorado and conducts daily oversight of deactivation and decommissioning activities in Category II nuclear facilities. He participated as a team member during the 1998 Phase I/II ISMS Verification in the Operations and Implementation area at the Rocky Flats Environmental Technology Site. Mr. Ludwig holds a Bachelor of Science degree in Natural Resources Management from Ball State University and a Masters of Science degree in Environmental Safety and Health Management from Denver University. He has successfully completed the Defense Nuclear Facility Safety Board 93-3 qualification program in Emergency Management and serves as a Local Response Coordinator on the DOE Region 6 RAP Team.

Mr. Ludwig served as a team member on Operational Readiness Reviews for the Building 371 Caustic Waste Treatment System, Building 440 Radioactive Waste Handling Operations, Building 771 Plutonium Solutions, and Building 707 Low Americium Thermal Salt Stabilization Process. Mr. Ludwig is a qualified Lead Assessor and served as Lead Evaluator during the READY '96 annual emergency preparedness exercise. Mr. Ludwig oversaw deactivation and demolition activities throughout the decommissioning of Building 779. He reviewed work packages to ensure compliance with ISMS policies and reviewed final status surveys to ensure compliance with Rocky Flats Cleanup Agreement standards.

August Maniez

Mr. Maniez is a safety engineer for the Assistant Manager of Health, Safety, and Technical Standards at the Savannah River Site providing an occupational safety and health oversight function. These duties involve safety assessments, safety consultations, and contractor coordination. Mr. Maniez has participated in various design and operational project verification reviews. Mr. Maniez also coordinates the technical qualification training of eight (8) DOE personnel within his division who are qualified in occupational safety, industrial hygiene, fire protection, chemical management, and emergency management preparedness. Mr. Maniez has served at this position for 8 years.

Mr. Maniez has earned a Bachelor of Science degree in Mechanical Engineering from Michigan State University in 1971. Also, Mr. Maniez has attended some graduate classes in reactor engineering at the University of Michigan in 1974. Other educational background includes various Occupational Safety and Health Administration (OSHA) subjects, such as, basic OS&H, industrial hygiene, construction safety, full protection, electrical safety, and crane safety. Mr. Maniez serves as a member of the DOE Hoisting and Rigging Committee and the DOE Construction Safety Advisory Committee representing the Savannah River Site. Past work experience includes nineteen (19) years in the commercial nuclear industry; thirteen (13) years devoted to power plant design engineering, and six (6) years to project engineering at Sequoyah Nuclear Plant for the Tennessee Valley Authority. During the 6 years at Sequoyah, Mr. Maniez was a qualified system engineer and also qualified as a 10 CFR 50.59 evaluator.

Hope E. Matthews

Ms. Matthews is currently employed with Critique, Inc. as a Senior Technical Writer/Editor with the Office of Intergovernmental, Public & Institutional Affairs at the DOE, Richland Operations Office. Ms. Matthews has nearly 10 years of experience as a Technical Writer/Editor at the Hanford Site.

Her current responsibilities include providing technical writing/editing support and coordinating all aspects of document preparation (editing, word processing, clearance, printing, and distribution) for the RL ISMS Project Team. In 1999 and 2000, Ms. Matthews served as the Senior Technical Editor/Writer for the following ISMS Verifications:

- Fluor Daniel Hanford, Inc. Phase I Verification
- Spent Nuclear Fuels Project Phase I/II Verification
- Plutonium Finishing Plant Phase I Verification
- Bechtel Hanford, Inc. Phase I/II Verification.

Ms. Matthews earned her Bachelor of Arts degree in English in 1991 from Seattle University in Washington State. Her technical expertise includes SGML and HTML programming languages and numerous software applications.

From 1994-1999, she worked at Bechtel Hanford, Inc. as a Senior Technical Writer/Editor. She served on the Hanford Technical Council as Bechtel's site representative and participated in monthly meetings/technical discussions with other Hanford Site contractors. She was the Project Lead for preparing and transmitting SGML-encoded metadata records to the Office of Scientific and Technical Information in Oakridge, Tennessee. Ms. Matthews also served on the Bechtel Internet Task Team and helped establish guidelines/policies for company web sites. She also helped design/write/and maintain company web sites.

From 1991 to 1994, Ms. Matthews worked at Westinghouse Hanford Company as an Engineering Writer. In that assignment, she was responsible for providing editorial support to the Safety and Analysis Division. She was also involved in beta testing of software for the environmental division. Ms. Matthews also prepared a summary of publication standards for use by authors and subcontractors. She trained the H&R Technical Associates publication group in Hanford Site-specific publication standards. She worked as a summer intern in 1990 for Westinghouse Hanford Company.

Jill M. Molnaa

Ms. Molnaa has worked at the Hanford Site for 17 years as a truck driver and as a Hanford Atomic Metal Trades (HAMTC) Council member. Ms. Molnaa is currently the HAMTC ISMS Representative for Fluor Hanford. She has been involved in the planning and participation of the ISMS workshops that have been held for Hanford Site employees. Ms. Molnaa is also actively involved in fieldwork for the implementation of ISMS.

Ms. Molnaa participated as an observer for the Environmental Restoration Contractor ISMS Phase I/II Verification.

Joe (Ed) Parsons

Mr. Parsons is currently serving as the Senior Technical Advisor for Radiological Controls, Office of Engineering and Safety at the DOE, Richland Operations Office. He has 25 years of diversified experience in the nuclear industry including commercial nuclear power operations, industrial and commercial power decommissioning, the national weapons program, project and departmental management, medical health physics, and technical consultation. Mr. Parsons has been involved in a variety of activities in the nuclear industry such as the accelerated high-yield nuclear weapon test program, various nuclear power operational radiation protection and waste management programs, medical health physics consulting and data management system development for both radiation protection and security information management.

In addition, Mr. Parsons' experience includes numerous decommissioning activities, including several industrial sites, a thorium storage facility, a uranium mill site, nuclear aircraft propulsion systems dismantlement, a plutonium facility, and a commercial nuclear power plant decommissioning. Mr. Parsons also served as the technical expert for the International Labor Organization during the ratification of the International Atomic Energy Agency's (IAEA) International Basic Radiation Safety Standards. He is also a member of the technical council for the development of IAEA's safety guide Occupational Radiation Protection in the Decommissioning of Nuclear Facilities.

Mr. Parsons is certified by the American Board of Health Physics in comprehensive health physics and holds a bachelor's degree in Health Physics from Oklahoma State University.

Mr. Parsons serves as a member of the DOE, Richland Operations Office ISMS Development Team and is qualified as an ISMS Verification Team Leader. Mr. Parsons also served as Team Advisor for the Fluor Daniel Hanford ISMS Phase I Verification conducted in October 1999.

Sunil Patel

Mr. Patel is the Program Manager at the DOE-Headquarters for the Environmental Management Program associated with the nuclear cleanup activities. He is currently reporting to the Office Director for the Headquarters Richland Operations Office Program. Mr. Patel provides assessment/advisement in the technical, environmental, and management areas to the DOE Headquarters senior management including the Secretarial Offices, Office of Management and Budget, Congressional, and other agencies. He oversees the DOE, Richland Operations Office's Environmental Management Projects. Mr. Patel holds a Masters of Science degree in civil/structure engineering. He has over 20 years of experience in nuclear and non-nuclear facilities with the DOE, the Department of Defense, and the private sector. He has experience in the engineering and construction management, design, construction, maintenance, facility start up and operations, supervision, inspections, technical validation reviews, oversight, and contract management areas. Mr. Patel also participated in numerous assessment/validation reviews.

Joseph Henry Richards

Mr. Richards is in his twelfth year with the Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Department of Natural Resources. Mr. Richards' responsibilities are to assist the CTUIR in the protection of natural resources impacted by Federal Facilities located within the tribe's ceded area (Hanford Nuclear Site, Umatilla Army Chemical Weapons Depot, and Boardman Bombing Range). Currently, his primary activities are performed at the Hanford Site. Mr. Richards focuses on environmental compliance activities and the ISMS.

Mr. Richards' academic preparation includes a M.S. in Business Information Systems from Utah State University. He specialized in auditing, auditing research, and accounting information systems courses via the Master of Accountancy Program at Washington State University. Mr. Richards also received a Distinguished Associate Diploma in Environment, Safety & Health from the Government Institutes. Mr. Richards' prior professional experience includes senior level accounting positions in private industry and the instruction of accounting (cost accounting, accounting information systems, fund accounting), auditing, and economic courses at the 4-year collegiate level.

Mr. Richards is a Certified Professional Environmental Auditor, a Certified Environmental Inspector, and a Certified Environmental Specialist. Mr. Richards has also completed training as a Lead Auditor for ISO 14001.

Mr. Richards participates as a member of DOE-Headquarter's Environmental Management System (EMS) Topical Committee (Technical Standards Program). As the ISMS Issues Manager for the Health, Safety & Waste Management Committee, Hanford Advisory Board, Mr. Richards participates in a variety of RL and contractor ISMS activities, including participation as a member of RL's ISMS Development Team. Mr. Richards also participates, by invitation of the National Co-Chair, in the National Steering Committee of the Enhanced Work Planning organization, and is an active participant in DOE's ISM Lessons Learned Workshops.

Mr. Richards has participated in several ISMS verifications at the Hanford Site (Office of River Protection/River Protection Project, Fluor Daniel Hanford, Spent Nuclear Fuels Project, Dyncorp, and the Plutonium Finishing Plant).

Mr. Richards is currently active in several professional organizations, including the Environmental Auditing Roundtable, the Institute of Internal Auditors, the Environmental Assessment Association, the Air & Waste Management Association, Sigma Xi (Scientific Research Society), and the Board of Environmental Auditor Certifications.

Mr. Richards is also the owner/operator of "Mother Earth Consulting."

Craig R. Richins

Mr. Richins is a qualified ISMS Verification Team Leader and as such managed the reviews of the National Renewable Energy Laboratory and the Plutonium Finishing Plant Project. Mr. Richins also participated in the Fluor Daniel Hanford ISMS Phase I Verification and the Environmental Restoration Contractor ISMS Phase I/II Verification. Mr. Richins is also a standing member of the ISM Core Team at the Hanford Site charged with overall implementation of ISMS at the Hanford Site.

Mr. Richins has over 12 years experience in the field of nuclear safety, operations and programs within the DOE. His experience includes strategic planning, formulation and implementation of ISM at the Pacific National Laboratory. Mr. Richins led the National Renewable Energy Laboratory ISM Verification and has participated in six other efforts nationally. Mr. Richins holds a B.S. in Chemical Engineering from Brigham Young University. Mr. Richins has over 8 years experience as a Facility Representative at both Richland and Savannah River and as such, has had extensive training and experience in all aspects of safety and operations within the DOE nuclear complex. His assignments have included a wide variety of nuclear chemical processing, fuel fabrication, isotopic production and nuclear laboratory facilities as well as the Fast Flux Test Facility. Mr. Richins has also functioned as the program manager for a variety of DOE projects and programs for over 12 years. He has led various Operational Readiness Reviews, as well as numerous audits and assessments. Mr. Richins currently functions as a team lead within the Office of Science and Technology at RL. His assignments with that office have included both oversight of the ES&H and facility operations of the Pacific Northwest National Laboratory and management of Site Technology services. Mr. Richins also led development of the national laboratory's ES&H and Operational Performance Measures and Indicators process.

Mr. Richins functioned as the Authorization Basis manager overseeing the normal laboratory program and the H-Area programs at Savannah River.

Bart Schmidt

Mr. Schmidt earned his Bachelor of Science degree in Engineering and majored in Industrial Engineering. He has 30 years experience in the professional and technical fields of Industrial Engineering, quality assurance, and government contract management, which includes the following:

- Eleven years of technical support to the Defense Contract Administration Service Contracting Officer in administration of a wide range of government contracts, including Global Positioning System satellites, Defense Advanced Research Projects Agency projects, and conventional bombs

- Two years validating management information systems (Rockwell International, Morton Thiokol, Honeywell, Texas Instrument, Aerojet Propulsion, Boeing, and TRW) and training users for the Air Force Space and Missile Systems Organization

- Seven years as a manufacturing and quality assurance manager in Air Force System Program Offices (Space Defense and MILSTAR)

- Four years as a DOE Project Control Officer on a fuel processing plant project

- Four years as DOE Project Control Officer for Superconducting Super Collider Project.

Mr. Schmidt is presently in the Management Systems Division at DOE, Richland Operations Office with responsibility for requirements management. He has performed design reviews, functional and physical configuration audits, cost reviews, and lead production readiness reviews. He has hands-on experience in specifying and implementing manufacturing and management information systems. He has developed requirements, implemented quality assurance programs, and conducted audits to MIL-Q-9858A, DOE Order 5700.6C, and NQA-1.

He participated as a team member in the ISMS Business, Budgets and Contracts (BBC) area for the ISMS Phase I verification of the Tank Waste Remediation Project at the Hanford Site. He was a BBC subteam leader for the Fluor Daniel Hanford Phase I, Spent Nuclear Fuel Project Phase I/II, and Environmental Restoration Contractor Phase I/II Verifications. He also helped develop the ISM System Description for RL. Mr. Schmidt is the point of contact for the RL ISMS verification. He worked as an independent consultant in management information systems implementation. He is certified as an auditor for Nuclear Quality Assurance Programs and in Government Contract Management.

Shivaji S. Seth

Dr. Seth is a Senior Technical Advisor for Nuclear Safety at the DOE, Richland Operations Office. His primary responsibility is safety review and oversight of operations at several nuclear facilities under deactivation and decommissioning at the Hanford Site. Additionally, he has sitewide responsibilities in specific areas related to nuclear criticality safety, chemical safety, and the implementation of the ISMS. During the past 2 years, he also served as RL's Senior Liaison to the Defense Nuclear Facilities Safety Board (DNFSB). Dr. Seth has led the RL guidance and coordination effort to implement ISMS at the nuclear facilities in transition. Dr. Seth served as the Team Advisor for the Plutonium Finishing Plant ISMS Phase I Verification in January 2000. He was also a subteam leader for DOE's ISMS verification at the radioactive waste storage tank (Tank Farms) nuclear facilities in 1998. Dr. Seth is an active member of RL's ISMS core team for implementing ISMS throughout the Hanford Site.

From 1985 to 1996, Dr. Seth was at the MITRE Corporation, where he was responsible for guiding and managing numerous projects in support of the DNFSB, the U.S. Nuclear Regulatory Commission (USNRC), and the U.S. Army's program for demilitarization of chemical weapons. For the DNFSB, Dr. Seth conducted assessments of DOE requirements and implementation of safety standards at various defense nuclear facilities, and contributed to the development of an integrated safety management systems approach and standards review guides in various safety functional areas. For the USNRC, he analyzed safety issues and assisted development of regulatory requirements and guidance, such as for renewal of nuclear power plant operating licenses and use of safety-critical software in nuclear power plants. For the Army, he contributed to several safety and risk assessments of chemical weapon disposal facilities and operations. Currently, he is a member of a national expert panel to review probabilistic safety (risk) assessments for two chemical demilitarization facilities, which are mandated by the National Research Council.

From 1983 to 1985, Dr. Seth served as Senior Fellow to the USNRC's Advisory Committee on Reactor Safeguards (ACRS). He provided consultations and recommendations to the ACRS on a wide range of safety and regulatory issues associated with the design and operation of nuclear power plants. At the General Atomic Company as staff engineer from 1978 to 1983, Dr. Seth's work included nuclear design, fuel cycle optimization, and safety and risk analyses. Prior to that, from 1970 to 1978, Dr. Seth was responsible for the planning and analysis of critical experiments in support of physics and safety investigations of fast and thermal reactor cores at the Swiss Federal Institute for Reactor Research. There he was also licensed to supervise operations at the reactor and associated nuclear fuel handling facility. As a graduate research assistant at the MIT Reactor, from 1965 to 1970, Dr. Seth performed experimental and theoretical studies of nuclear reactor cores.

Dr. Seth holds a Masters and Doctors degrees in Nuclear Engineering from the Massachusetts Institute of Technology, and has authored over 75 technical publications.

Doug S. Shoop

Mr. Shoop is employed by RL as a Senior Technical Advisor for Integrated Safety Management (ISM) and Occupational Safety and Health. Mr. Shoop holds a Bachelors of Science degree in Medical Microbiology and a Masters of Science degree in Environmental Health/Industrial Hygiene. He is a Certified Industrial Hygienist and has worked in the nuclear industry for over 11 years. Mr. Shoop has primary responsibility for the planning, coordination, and conduct of ISMS verifications for RL and is the primary interface with RL senior management and staff, DOE-Headquarters, Defense Nuclear Facilities Safety Board, and Hanford Site stakeholders on ISM matters. Mr. Shoop was the Hazard Identification and Standards Selection subteam leader for the Hanford River Protection Project Phase II ISMS Verification and has planned, coordinated, and assisted in the conduct of four additional ISMS verifications.

Prior to his employment with RL, Mr. Shoop was employed by Fluor Hanford and Westinghouse Hanford Company as an Occupational Health manager. In addition to his normal responsibilities as the Occupational Health Manager, Mr. Shoop served as a team leader for the development of the initial PHMC Integrated Environment, Safety and Health Management System; initiated and led the Hanford Enhanced Work Planning effort; managed the development of the Automated Job Hazard Analysis; and served as the Interpretative Authority for the PHMC Occupational Safety and Health Standards/Requirements Identification Documents. Mr. Shoop also led the development and implementation of the Hanford Occupational Health Process for FH and coordinated the Hanford Chemical Safety Vulnerability Study. In collaboration with personnel from RL, Mr. Shoop led the investigation of the Emergency Response to the May 14, 1997 explosion at the Plutonium Reclamation Facility (PRF) and served as the PRF Incident Response Occupational Health/Medicine Team Leader.

Prior to his employment at the Hanford Site, Mr. Shoop was employed at the Idaho National Environmental Engineering Laboratory (INEEL) where he provided technical management of the Industrial Hygiene staff and programs associated with the characterization and remediation of hazardous waste sites, facility decontamination and decommissioning, and *Resource Conservation and Recovery Act of 1976* treatment, storage, and disposal operations. Prior to his employment at INEEL, Mr. Shoop spent approximately 8 years conducting clinical research in collaboration with various universities and hospitals throughout the United States. He has authored 23 professional publications in internationally recognized scientific journals and has had numerous abstracts accepted for presentation at national scientific meetings.

Michael J. Silvia

Mr. Silvia is an Executive Consultant for EnergX and is currently on contract to Fluor Hanford as an Assessor for the Facility Evaluation Board (FEB). Mr. Silvia is qualified as a FEB Team Lead and Environmental Program Assessor. Mr. Silvia has been with the Facility Evaluation Board for the last 2 1/2 years and qualified as a Team Lead for the Waste Encapsulation and Storage Facility assessment in April 1999. Mr. Silvia served on the Office of River Protection (ORP) ISMS Phase II Verification of the River Protection Project (RPP), Spent Nuclear Fuel Project ISMS Phase I/II Verification, and DynCorp ISMS Phase I/II Validation. Mr. Silvia was a Subject Matter Expert assessor for the area of Work Planning as it related to Environmental/Chemical Management for the ORP verification, and as a Subject Matter Expert for Environmental Compliance/Chemical Management for the Spent Nuclear Fuel Project verification and DynCorp validation. Mr. Silvia holds a Masters of Management, Information Systems degree from West Coast University, California, and a B.S. in Environmental Technology of Engineering degree from Norwich University, Vermont. Mr. Silvia has over 13 years of professional experience with environmental assessments, air quality management, regulatory permitting and analysis, policy and procedure development, information systems, and data evaluation.

Mr. Silvia worked a Senior Scientist for Duke Engineering Services at the Hanford Site as an Assessor for the FEB. In 1999, Mr. Silvia was part of a team contracted to develop regulatory analysis and waste incidental to reprocessing reports to support the Idaho National Engineering and Environmental Laboratories (INEEL) Tank Farm Closure. Mr. Silvia was the Regulatory/Administrative Support Manager for International Technology (IT) Corporation's offices in Richland and Tacoma, Washington. Mr. Silvia was part of an IT team responsible for developing the Environmental Sites Database Procedures for the Hanford Environmental Restoration Contract. Mr. Silvia served as lead on the initial DOE Hanford Site Title V permitting effort and was integral in the development of the air emission inventory and database management system for the entire Hanford Site air emission program. Mr. Silvia served in the U.S. Air Force and was responsible for managing over 100 air operating permits, overseeing air quality source testing plans including field sampling and analysis, and test. Mr. Silvia supervised the staff responsible for regulatory inspections, and negotiating operating permits, source test plans, and Notice of Construction permits.

Mark R. Steelman

Mr. Steelman is presently the Senior Advisor for the Fluor Hanford Facility Evaluation Board. Mr. Steelman holds a Bachelor of Science degree in aeronautical engineering, a Bachelor of Arts degree in Economics from the University of Washington, has completed an MBA from LaSalle University.

Mr. Steelman has more than 25 years of commercial nuclear plant experience in Engineering/Configuration Management, Operations and Maintenance Advisor, Reactor Operator Training/Training Advisor, Root Cause Analysis, Licensing/Nuclear Safety, and Consultant to Nuclear Regulatory Commission. His DOE experience consists of Regulatory Integration Manager at the Rocky Flats Environmental Technology Site, and consultant in areas of Authorization Basis, Engineering, and Integrated Safety Management.

His assessment/Operational Readiness Review (ORR)/inspection qualifications include the participation in several safety system functional inspections and ORRs at commercial nuclear facilities and participation in the ISMS reviews at Rocky Flats. He has also participated in multiple DOE ISMS reviews (the River Protection Program, the Fluor Daniel Hanford, Inc. Phase I, the Spent Nuclear Fuel Project Phase I/II, the Plutonium Finishing Plant Phase I) and an FEB ISMS validation (DynCorp Tri-Cities Services, Inc.) at the Hanford Site. He was a member of the SRT for the restart and ORR of Buildings 559 and 707 at Rocky Flats and participated in the management self-assessment of Building 779 Glove Box Removal. Mr. Steelman served as a consultant and led the PNNL self-assessment of Building 325 Processing Laboratory Unreviewed Safety Question process. He participated in facility evolutions of the Plutonium Finishing Plant, Spent Nuclear Fuel Project, Fast Flux Test Facility, and single-shell tanks in the functional areas of Engineering/Nuclear Safety. He also participated in the contractor ORR for the Light Duty Utility Arm and contractor ORR for the Project W-320 Tank 241-C106 Sluicing for Fluor Hanford.

Dave E. Stromberg

Dave Stromberg holds a Bachelor's degree in Business Administration from the University of Washington. He has since completed all mandatory contracting courses for receipt of the Government's Level III certification for the contract administration career field.

Mr. Stromberg's 4 years of DOE experience has been in the Procurement Division. Specific duties performed during this period include administration of support service contracts, contract closeouts, purchasing system reviews, performance incentive reviews, and subcontract consents. General knowledge used in the performance of duties includes thoroughly understanding the terms and conditions of multiple contracts, as well as the applicability of appropriate contract clauses. Mr. Stromberg was also a member of the BBC subteam for the Plutonium Finishing Plant ISMS Phase I Verification.

Prior to his assignment to RL, Mr. Stromberg performed a wide range of duties for the Department of Defense (DOD) on major weapon systems. His 22 years of experience with the DOD included extensive involvement in the following areas: performance measurement systems surveillance and compliance reviews, at-completion cost estimates, the writing and enforcement of special contract clauses, company-wide should-cost reviews, price/cost analysis, and various accounting and financial reviews/analyses.

Carrie J. Swafford-Chube

Ms. Swafford-Chube is employed by the DOE, Richland Operations Office as an Independent Oversight Specialist for the Analysis and Evaluation Division. She oversees contractor independent and self-assessment programs. Ms. Swafford-Chube received a Bachelor of Science degree in Civil Engineering from Southern University Baton Rouge, Louisiana in 1992 and is currently taking graduate courses at Washington State University Tri-Cities. She began her career at the Hanford Site in 1994 as a Project Engineer in the Tank Waste Remediation Systems. Prior to working at the Hanford Site, Ms. Swafford-Chube was employed by the Illinois Department of Transportation as a Civil Engineer where she worked in both design and construction.

Ms. Swafford-Chube is a member of the RL ISM Development Team. She has participated in one offsite review at the DOE Princeton Plasma Physics Laboratory in Princeton, New Jersey. She also participated in five RL Phase I/II ISMS Verifications: Office of River Protection, Phase II ISMV; Fluor Daniel Hanford Phase I ISMV; Plutonium Finishing Plant Phase I/II ISMV (as the MGO subteam lead); and the Environmental Restoration Contractor Phase I/II ISMSV. She also was the DOE oversight for the DynCorp ISM Verification performed by the Facility Evaluation Board.

She has conducted assessments looking at the management assessment programs of the prime and subcontractors. She has also participated in three audits and numerous assessments. Ms. Swafford-Chube completed the Office of Civilian Radioactive Waste Management Quality Assurance Requirements and Description Lead Auditor Training (DOE/RW-0333P, Revision 7) and the Carlsbad Area Office Auditor and Lead Auditor Training.

APPENDIX C

INTEGRATED SAFETY MANAGEMENT SYSTEM PHASE I CRITERIA AND REVIEW APPROACH DOCUMENTS

TABLE OF CONTENTS

BUSINESS, BUDGETS, AND CONTRACTS (BBC)

OBJECTIVE

BBC.1 - FH 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-7, CE I-9).

Criteria

1. FH procedures translate mission expectations from DOE into tasks that permit identification of resource requirements, relative prioritization, and performance measures.

2. FH procedures provide for DOE approval of proposed tasks and prioritization. Work planning procedures provide for feedback and continuous improvement.

3. FH procedures provide for change control of approved tasks, prioritization, and identification of resources.

4. FH procedures provide for flow-down of DEAR 970.5204-2, *Integration of Environment, Safety and Health into Work Planning and Execution* requirements into subcontracts involving complex or hazardous work.

5. FH has established a process that establishes documents, and implements ES&H performance objectives, performance measures, and commitments in response to DOE program and budget execution guidance. The ISMS describes how system effectiveness will be measured.

6. Ensure completion of corrective actions from previous Phase I verifications.

Approach

Record Review

- 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.

- 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 the budget process allows adequate resources for standards selection, hazard controls, and work authorization processes to support work planning and scope definition.

- Review corporate/site manuals of practice that describe the budget and planning process and those documents that identify mission requirements, the approval of contractor plans, and those that address the assignment of budget priorities.

- Review corporate/site procedures for formally documenting change control procedures.

- Review how safety requirements are included in subcontracts as well as the flow-down of the DEAR clause into subcontracts for hazardous work.

- Select several mission tasks from the DOE programs and planning documents and track the tasks through the process to evaluate how the above criteria are met.

- Review future year planning and current year authorized work.

- Select several current-year authorizations and track change control.

- Select several project-specific subcontracts and review for incorporation of the ISM DEAR clauses.

Interviews

- Interview project contractor personnel responsible for management of the budget process.

- Interview line managers responsible for Headquarters-directed mission accomplishment.

- Interview the ES&H manager to determine how the process for integration of safety into mission tasks is accomplished.

- Interview managers at selected project levels to determine their understanding and implementation of the defined process for translation of mission into work authorization.

- Interview selected ES&H professionals and line managers to determine how safety is incorporated into the budget plans and authorization.

- Interview project contractor procurement personnel regarding subcontract flow-down requirements.

Corrective Action Plan Closures

See Attachment BBC-1a, PHMC Corrective Action Plan (CAP), BBC 1.5, BBC 1.7, BBC 1.9 and SNF CAP (DOE/RL-99-73), Opportunity 2.

CORRECTIVE ACTION CLOSURE PACKAGES
BBC – 1a

CLOSURE PACKAGE COVER SHEET

Responsible Organization: Business Budget and Contracts (BBC)	*Opportunities for Improvement:* BBC.1.5	*SUBMITTED BY/DATE:* G. MCCLEARY NAME/SIGNATURE
Due Date: 12/17/99	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

OPPORTUNITIES FOR IMPROVEMENT:

HNF-PRO-533, *Change Control* and HNF-MD-029, *Hanford Site Technical Baseline Change Control,* are not linked.

Commitment: FDH will modify the procedure and Management Directive to reference each other.

Subtask 01: *Modify HNF-PRO-533,* Change Control, *to reference HNF-MF-029,* Hanford Site Technical Baseline Change Control *by December 17, 1999.*

Subtask 02: Modify HNF-MD-029, *Hanford Site Technical Baseline Change Control,* to reference HNF-PRO-533, *Change Control* by December 17, 1999.

Acceptance Criteria:

Revisions to HNF-PRO-533 and HNF-MD-029 approved.

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:

To be completed.

Closure Actions

Submitted by:		*Date:*	
Concurrence By: ISMS Implementation Project		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Business Budget and Contracts (BBC)**	*Opportunities for Improvement:* **BBC.1.7**	*SUBMITTED BY ACTIONEE:* **G. MCCLEARY** **NAME/SIGNATURE**
Due Date: **12/17/99**	*Completion Date:*	*Approved for Implementation:* **ISMS Implementation Project Manager**

OPPORTUNITIES FOR IMPROVEMENT:

ES&H considerations are not formalized and are not an integral element of the change control process. Specifically, the change control process does not explicitly address how ES&H implications of proposed changes are evaluated and addressed.

Commitment: FDH will modify HNF-PRO-533, *Change Control* procedure to include ES&H representation on the Change Control Board.

Subtask 01 : Modify HNF-PRO-533 by December 17, 1999.

Acceptance Criteria:

Revision to HNF-PRO-533 approved.

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:

To be completed.

Closure Actions

Submitted by:		*Date:*	
Concurrence By: **ISMS Implementation Project**		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
Issue Statement Title: Business, Budget and Contracts (BBC)	*Opportunities for Improvement:* BBC.1.9 (Revision 1 – DRAFT)	*SUBMITTED BY ACTIONEE:* R. KALDOR NAME/SIGNATURE
Due Date: April 7, 2000	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

OPPORTUNITIES FOR IMPROVEMENT:

The integration and linkages among FDH procedures needs to be more fully developed.

Commitment:

This opportunity for improvement was tied to Criteria 1, 3, 4, and 5 of the Objective BBC.1. Specific procedure deficiencies noted are being addressed in Opportunities for Improvement BBC.1.5, 1.8, and 1.7. (See attached spreadsheet). In addition, FH will revise the Management Plan, (HNF-MP-001) to establish the process of requirements flow down to the project and ensure the implementing documentation is integrated and applicable to the work. Revisions to the FH ISM System Description (HNF-MP-003) will include this information.

Subtask 01

Revise HNF-MP-001, *FH Management Plan* to establish the process of requirements flow down to the project and ensure the implementing documentation is integrated and applicable to the work.

Due Date: Complete

Subtask 02

Revise HNF-MP-003, *FH ISM System Description* to reflect the changes to HNF-MP-001 in subtask 01.

Due Date: April 7, 2000

Actionee: R. Kaldor

Acceptance Criteria:

Approval and issuance of HNF-MP-001, HNF-MP-003, and HNF-MP-589.

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:
To be completed.

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Business Budget and Contracts (BBC)**	*Opportunities for Improvement:* **BBC.1.9 (Revision 1 – DRAFT)**	*SUBMITTED BY ACTIONEE:* **R. KALDOR** ***NAME/SIGNATURE***

Closure Actions

Submitted by:	***Date:***
Concurrence By: **ISMS Implementation Project**	***Date:***

Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: Business, Budgets and Contracts (BBC)	Opportunities for Improvement: DOE/RL-99-73 *Opportunity 2*	SUBMITTED BY ACTIONEE: R. WILLARD NAME/SIGNATURE
Due Date: March 15, 2000	Completion Date:	Approved for Implementation: ISMS Implementation Project Manager

OPPORTUNITIES FOR IMPROVEMENT:

Implementation of ISMS flow down to construction subcontracts on the SNF Project is not adequate. Procedural guidance is preliminary and needs to be more fully developed to assure that flow down of requirements are clearly understood and met. **(BBC.1-5, MG.1a-1, MG.1a-2, SME.4-3)**

Commitment:

SNF will clarify the ISMS flow down requirements to construction subcontracts and update the ISM System Description to reflect current organizational structures and processes.

Subtask 01
SNF Contracts & Construction organizations will establish the mutually agreed upon contractual flow down of the ISMS requirements with the construction contractor (Fluor Federal Services, Inc) that defines, documents and assures the flow down of ISMS requirements to construction subcontractors.
Actionee: R. Willard
Due Date: March 15, 2000

Subtask 02

Incorporate recent lessons learned regarding procedural compliance in the procurement procedures to ensure that ISMS requirement flow down is properly documented.
Actionee: R. Willard
Due Date: February 29, 2000

Subtask 03

Revise the SNF ISM System Description to incorporate the SNF Project construction projects.
Actionee: J. Klos
Due Date: February 29, 2000

Subtask 04
Fluor Federal Services, Inc. conduct a review of the CESH Manual to determine compliance with the ISMS DEAR Clause requirements.
Actionee: D. Siddoway
Due Date: March 01, 2000

Acceptance Criteria:
Objective evidence of the required ISMS DEAR clauses flow down to the construction contractor. Approved revision to the SNF ISM System Description with specific inclusion of the construction projects.

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Business, Budgets and Contracts (BBC)**	*Opportunities for Improvement:* **DOE\RL-99-73** **Opportunity 2***	*SUBMITTED BY ACTIONEE:* **R. WILLARD** **NAME/SIGNATURE**

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:

* This is a Corrective Action and requires RL Validation prior to closure. To be completed.

Closure Actions

Submitted by:		***Date:***	
Concurrence By: **ISMS Implementation Project**		***Date:***	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

OBJECTIVE

BBC.2 - FH budgeting and resource assignment procedures include a process to ensure the application of balanced priorities. Resources are allocated to address ES&H, 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 FH's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results, including commitments and agreements to DOE.

2. FH procedures allow for adequate analysis of hazards associated with the work being planned.

3. FH procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.

4. Resource allocations reflect the tailored hazard controls.

5. The incentive and performance fee structure promotes balanced priorities.

Approach

Record Review

- Review corporate/site manuals of practice that describe the budget and planning process and those documents that address the assignment of budget priority as well as the procedures for their development.

- Select several mission tasks from the DOE requirements and outyear planning documents to determine if they adequately address the assignment of resources with balanced priorities.

- Select several current year authorizations and review selected funded tasks at the individual task level to verify balanced priorities.

Interviews

- Interview responsible DOE and contractor personnel who manage the budget process to determine their understanding of the priority for assigning resources.

- Interview line managers responsible for DOE mission accomplishment.

- Interview the ES&H manager to determine the process used for integration of safety into mission tasks. Interview selected managers at each level of corporate/site organizations to determine their understanding of the allocation of resources with appropriate priority.

OBJECTIVE

BBC.3 - The contractor procedures and practices ensure that personnel who define the scope of work and allocate resources have and maintain competence that is commensurate with the assigned responsibilities. (CE I-8)

Criteria

1. FH procedures ensure that the personnel, including line management who define, prioritize, and approve the scope of work and allocate resources, have and maintain competence that is commensurate with the assigned responsibilities.

2. FH 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 include defining the scope of work and allocation of resources to determine competence in prioritizing and approving work with tailored hazard controls.

HAZARDS IDENTIFICATION AND STANDARD SELECTION

OBJECTIVE

HAZ.1 - Hazards associated with the work are identified, analyzed, and categorized. Policies and procedures shall assure that hazards for the work to be authorized have been analyzed. (CE I-3, CE I-9)

Criteria

1. The FH ISM System Description and supporting documents assure that project/facility hazards have been identified and appropriately analyzed. FH procedures for analysis of project/facility hazards reflect accepted rigor and methodology. The resulting analyses are utilized in the selection of controls and the development of appropriate Authorization Agreements/Authorization Envelopes.

2. FH procedures require identification, analysis, and categorization of all hazards associated with planned work. Hazards that are considered are nuclear, chemical, industrial or others applicable to the work being considered.

3. The FH ISM System Description and supporting documents ensure controls are tailored to the hazards associated with the work or operations to be authorized.

4. The FH ISM System Description and supporting documents ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.

Approach

Record Review

- Review FH policies and procedures associated with identification and evaluation of potential hazards (e.g., nuclear, chemical, radiological, industrial, and other ES&H) to ensure that there is a proper flow-down of requirements.

- Review the policies and procedures to assure that they include requirements for comprehensive identification, appropriate analysis, review, and approval of hazards.

- Review the procedures on safety authorization basis documentation to verify consistency with DOE requirements.

- Review procedures to ensure accurate and effective development of Authorization Basis documentation.

- Review procedures for Automated Job Hazard Analysis (AJHA) for identification and analysis of hazards.

- Coordinate the review with the Subject Matter Expert (SME) functional area reviewers.

Interviews

Interview corporate/site personnel responsible for identification, analysis, and categorization of hazards to assess their understanding of the procedures, tools, the underlying principles and requirements.

OBJECTIVE

HAZ.2 - Applicable standards and requirements are identified and agreed upon (CE I-4, CE I-9).

Criteria

1. The FH ISM System Description and supporting documents utilize acceptable methodologies to identify adequate hazard control standards at both the site and corporate level and at the facility level to protect the public, worker, and environment. Controls at the corporate level appear in the contract while those at the facility level are reflected in the authorization basis documentation.

2. The FH ISM System Description and supporting documents utilize accepted and structured methods and processes to identify, select, and gain approval for ES&H standards and requirements commensurate with the workscope and its associated hazards.

3. FH procedures define the processes for the development, approval, and maintenance of documentation addressing the establishment of authorization protocols and authorization agreements.

4. Approved requirements are based on site-specific hazards, vulnerabilities, and risks and are sufficient to ensure protection of the public, workers, and the environment.

Approach

Record Review

- Review policies and procedures to verify methodologies and instructions provided for hazard control are acceptable and robust, and that the policies and procedures encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment.

- Review requirements and procedures at the institutional, project/facility and activity levels to ensure that the requirements flow down properly.

- Review hazard control requirements and procedures to ensure that they are appropriately tailored and graded for the diverse types of nuclear, non-nuclear, and industrial facilities and operations.

- Review requirements for developing and monitoring the applicable set of ES&H requirements, including the Standards/Requirements Identification Documents (S/RID).

- Review requirements and procedures for developing and maintaining authorization agreements/envelopes.
- Review the procedures for Unreviewed Safety Question (USQ) screening and evaluation.
- Review procedures for coordinating work-related documents with the SME functional area reviewers.
- Review requirements and procedures to ensure that hazard controls are in place prior to work authorization and remain effective until the activity is complete.

Interviews

Interview personnel responsible for developing and implementing hazard control policies and procedures. This should include personnel such as those responsible for Safety Analysis Review/Technical Safety Requirements policies and procedures, S/RID procedures and policies, Health and Safety Plan development procedures, Authorization Basis and Agreements, etc.

OBJECTIVE

HAZ.3 - Contractor procedures and policies ensure that contractor personnel responsible for analyzing the hazards and developing, reviewing, or implementing the controls have competence that is commensurate with their responsibilities. Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities (CE I-7, CE I-8).

Criteria

1. The FH ISM System Description and supporting documents have clearly defined roles and responsibilities to oversee, review, approve the analysis of hazards, and establish controls associated with facility activities.

2. The FH ISM System Description and supporting documents require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.

3. FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.

Approach

Record Review

- Review FH organization documentation 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 cooperate/site training manuals and qualification and competency procedures.

- Review selected training and qualification records for those personnel identified above to determine how the required competency has been gained, retained, and validated.

Interviews

Interview managers responsible for analyzing hazards and developing and implementing controls and/or Authorization Basis Documentation at the site and project levels. This should include personnel such as those responsible for Safety Analysis Review/Technical Safety Requirements preparations and implementation, As Low as Reasonably Achievable (ALARA) review requirements, Process Hazard Analysis activities, etc.

MANAGEMENT OVERSIGHT (MGO)

OBJECTIVE

MGO.1 - The contractor's ISM System 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's policies and procedures ensure that the ISM System Description is maintained and implemented, and that implementation mechanisms result in integrated safety management. (CE I-1).

Criteria

1. The FH ISM System 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. FH has assigned responsibilities and established mechanisms to direct, monitor, verify, evaluate, maintain, and improve the integrated implementation of the ISMS as described in the ISM System Description. Implementation and integration expectations and mechanisms are evident throughout all corporate/site organizational functions.

3. Ensure completion of corrective actions from previous Phase I verifications

Approach

Record Review

- Review the FH ISM System Description and the direction concerning the guidance on the preparation, content, review, and approval of the ISMS.

- Review corporate/site procedures for the implementation review and maintenance of the ISM System Description and associated items, including provisions for the annual review and update to DOE. Review charters and "output documentation" from any ISMS coordinating committees.

- Review contractor assessment activities incident to determination of the adequacy of implementation of ISMS.

- Review implementation planning efforts and any corrective action plans that may have been developed.

- Review the process established 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 ISM System Description.

- Interview contractor line mangers that are or will be responsible for administering the mechanisms of the ISMS.

- Interview chairpersons and key members of any ISMS coordinating committees, if established.

Corrective Action Plan Closures

See PHMC CAP, Attachment MGO-1a, MGO 1.1, 1.2 and 1.3; and PFP CAP, PFP-1, and PFP-2.

CORRECTIVE ACTION CLOSURE PACKAGES
MGO – 1a

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: Management Oversight (MGO)	*Opportunities for Improvement:* MGO.1.1, MGO.1.2 Revision 1	*SUBMITTED BY ACTIONEE:* M. Grygiel/R. Kaldor NAME/SIGNATURE
Due Date: April 7, 2000	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

OPPORTUNITIES FOR IMPROVEMENT:

MGO.1.1: FDH System does not clearly identify FDH line management with respect to defined functions, roles, and responsibilities.

MGO.1.2: FDH Plans, procedures, and roles and responsibilities do not reflect the current FDH organization.

Commitment: Revise HNF-MP-001, *Management Plan,* and HNF-MP-003, *FH ISM System Description*, to be consistent with the new organization, to simplify the system description and to clarify flow down to the worker level.

Subtask 01

Complete and issue a revised HNF-MP-001.

Due Date: Complete.

Subtask 02

Complete and issue HNF-MP-003

Due Date: April 7, 2000

Actionee: R. Kaldor

Acceptance Criteria:

HNF-MP-001 and HNF-MP-003 approved. Documents will include clear definitions of the roles and responsibilities for the new organization, and ensure that ISMS concepts are clear and consistent.

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:
To be completed.

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Management Oversight (MGO)**	*Opportunities for Improvement:* **MGO.1.1, MGO.1.2 Revision 1**	*SUBMITTED BY ACTIONEE:* **M. Grygiel/R. Kaldor** **NAME/SIGNATURE**

Closure Actions

Submitted by:		***Date:***	
Concurrence By: **ISMS Implementation Project**		***Date:***	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Management Oversight (MGO)**	*Opportunities for Improvement:* **MGO.1.3**	*SUBMITTED BY ACTIONEE:* **Richard Mitchell** NAME/SIGNATURE
Due Date: **December 15, 1999**	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

OPPORTUNITIES FOR IMPROVEMENT:

Facility-specific procedures have not been mapped to the FDH ISMS Plan.

Commitment:

Facility Specific procedures are mapped to ISMS through project level system descriptions. This construct has been validated during the recent Project/Service verification assessments. These linkages will be more clearly defined in the revised Management Plan (HNF-MP-001) and ISM System Description (HNF-MP-003). In addition, this linkage will be tested during each Project/Service level Phase I Verification.

Subtask 01

Distribute Verification lessons Learned to the Projects and Service Providers. (Complete).

Subtask 02

Align the revised Management Plan to the new ISM System Description (HNF-MP-003).

Subtask 03

Revise the PHMC ISMS verification strategy and schedule to ensure that the criteria for Project verifications include reviews, as applicable, of project/facility process and procedure links to the FDH ISMSD and that Projects/Service providers are required to develop ISM System Descriptions that link to the FH ISM System Description.

Subtask 04

Revise PHMC verification schedule to be consistent with the new project structure.

Acceptance Criteria:

Note: Approval of this closure package and closure package MGO.1.1, MGO.1.2, meets the criteria for Performance Incentive Item 1.B.2 as documented in Contract Number DE-AC06-RL13200-M090.

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Management Oversight (MGO)**	*Opportunities for Improvement:* ***MGO.1.3***	*SUBMITTED BY ACTIONEE:* **Richard Mitchell** **NAME/SIGNATURE**

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:
To be completed.

Closure Actions

Submitted by:	***Date:***
Concurrence By: **ISMS Implementation Project**	***Date:***

Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Management Oversight (MG)**	*Area for Improvement:* **PFP-1**	*SUBMITTED BY ACTIONEE:* **R. Redekopp** NAME/SIGNATURE
Due Date: **March 31, 2000**	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

AREA FOR IMPROVEMENT:

While all of the ISMS core functions are addressed, other policy and procedure documents must be accessed to get the complete understanding of the PFP ISM System Description. Integration of the work process across all operations was not readily demonstrated. Ties to most ISM elements were observed through a review of a multitude of policies and procedures, but some outdated documentation was encountered and several expected connections to higher-order procedures were not found. When the anticipated change to the FH company-level ISM System Description occurs, reconciliation with the PFP ISM System Description will be necessary.

Commitment:

PFP will revise the ISMS System description to reflect the site standard being requested by the FH Site ISMS Project Implementation Project Manager. This standard has been shared with the DOE RL ISMS point of contact and is acceptable as a path forward. The standard requires that the facility system description meets certain criteria and be placed in HNF-MP-003, Integrated Environmental Safety and Health management System Plan, Rev. 3.

Subtask 01

PFP will review and analyze the recommended standard for Project and facility ISM System Descriptions.
Actionee: R. Redekopp
Due Date: Complete

Subtask 02

Revise the PFP System description to incorporate recommendations described in the Verification report and to be consistent with HNF-MP-003. Ensure that the revised SD:

- Corresponds to the context and content and structure of HNF-MP-003.
- Eliminates BWHC references and provides a clear description of the new management structure.
- Contains verified and current references.
- Describes training programs used to quality and certify personnel to meet ISM guiding principles.

Actionee: R. Redekopp
Due Date: Complete

Subtask 03

Obtain PFP management approval of revised PFP ISM System Description
Actionee: R. Redekopp
Due Date: Complete

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Management Oversight (MG)**	*Area for Improvement:* **PFP-1**	*SUBMITTED BY ACTIONEE:* **R. Redekopp** NAME/SIGNATURE

Subtask 04

Submit approved System Description to ES&H Vice President for incorporation into HNF-MP-003.
Actionee: R. Redekopp
Due Date: March 10, 2000

Subtask 05

Conduct team briefing to PFP Management and Team Leads on the revised PFP ISM System Description.
Actionee: R. Redekopp
Due Date: March 31, 2000

Subtask 06

Delete FSP-PFP-3.24, PFP ISM System Description
Actionee: R. Redekopp
Due Date: Complete

Acceptance Criteria:

Approved PFP System Description incorporated into HNF-MP-003.

Validation: This closure package requires RL Validation and concurrence for closure.

Closure Actions

Submitted by:		*Date:*	
Concurrence By: **ISMS Implementation Project**		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
ISMS: **Documentation of the Work Process**	*Area for Improvement:* **PFP-2**	*SUBMITTED BY ACTIONEE:* **BJ Gray** NAME/SIGNATURE
Due Date: **March 28, 2000**	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

AREA FOR IMPROVEMENT:

The PFP Project has established the necessary base procedures and mechanisms to support work planning and execution; however, not all of these documents reflect the current organization or field work team practices. Documentation has lagged implementation. Additionally, the tools available to the teams (procedures regarding Automated Job Hazard Analysis [AJHA] applicability, scheduling, release and suspension of work, feedback and improvement) are not mature or integrated within the plant ISMS.

Commitment:
PFP will review the core processes that govern work at the facility and identify necessary improvements.

Subtask 01

PFP will review existing facility procedures for conducting work.
Actionee: BJ Gray
Due Date: March 10, 2000

Subtask 02

Develop a priority listing, and schedule for implementing identified improvements. Identify those changes required for Phase II ISMS Readiness.
Actionee: BJ Gray
Due Date: March 17, 2000

Subtask 03

Revise and approve those procedures identified as "pre-phase 2 ISMS".
Actionee: BJ Gray
Due Date: March 28, 2000

Acceptance Criteria:

Procedure Revision priority listing and approved revisions to pre-phase 2 ISMS procedures.

Validation:

This Closure Package requires RL Validation and concurrence for closure.

CLOSURE PACKAGE COVER SHEET		
ISMS: **Documentation of the Work Process**	*Area for Improvement:* **PFP-2**	*SUBMITTED BY ACTIONEE:* **BJ Gray** NAME/SIGNATURE

Closure Actions

Submitted by:	*Date:*
Concurrence By: ISMS Implementation Project	*Date:*

Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

OBJECTIVE

MGO.2 - 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. The FH ISM System Description defines clear roles and responsibilities of all personnel to ensure that safety is maintained at all levels. ISMS procedures and implementing mechanisms specify that line management is responsible for ES&H.

2. The FH ISM System Description identifies supporting documents that identify line management as responsible for ensuring that the implementation of hazard controls is adequate. Line management ensures that work is planned, approved, and conducted safely. FH 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. FH procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.

4. FH projects, facilities, and subcontractors are held accountable for ES&H through appropriate appraisal/verification mechanisms.

5. Ensure completion of corrective actions from previous Phase I verifications.

Approach

Record Review

- Review facility or activity manuals of practice that define roles and responsibilities of personnel responsible for safety.

- Review position descriptions and other documentation that describe roles and responsibilities related to ensuring safety is maintained.

- The review should consider personnel in line management and staff positions and should evaluate whether line managers are responsible for safety.

- Review the procedures established to ensure that managers and the work force are competent to safely perform work. Review the records of qualification and certification as applicable.

Interviews

- Interview selected personnel at all levels of facility or activity management that are identified by the record review above.

- Verify their understanding and commitment to ensuring that safety is maintained for all work at the facility or activity.

- Interview a selected number of supervisors and workers (see definition) to determine their understanding of competency requirements and their commitment to performing work safely.

Corrective Action Plan Closures

See Attachment MGO.2a - PFP CAP, PFP-3.

CORRECTIVE ACTION CLOSURE PACKAGES
MGO – 2a

CLOSURE PACKAGE COVER SHEET		
ISMS: **Roles and Responsibilities**	*Area for Improvement:* **PFP-3**	*SUBMITTED BY ACTIONEE:* **J. Carey** NAME/SIGNATURE
Due Date: **April 10, 2000**	*Completion Date:*	*Approved for Implementation:* **ISMS Implementation Project Manager**

AREA FOR IMPROVEMENT:

Roles and responsibilities have not been clearly defined and were spread widely among various documents, some of which were obsolete. In addition, changes pending the introduction of the new management team at the PFP were shown to affect the current representation of assignments. The newly created Authorization Basis Team could not identify where their roles and responsibilities had been defined and documented. Position descriptions for several key Subject Matter Experts could not be found. Of particular concern, due to past issues, was the lack of defined qualifications for Criticality Safety Engineers.

Commitment:

Documentation of roles and responsibilities in the Nuclear Material Stabilization Project will be updated to reflect the redesigned project organization, the Westinghouse Safety Management Solutions (WSMS) restructuring, and key individual positions found lacking.

Subtask 01
Update the organization structures and roles and responsibilities section (Introduction Attachments A and B) in the FSP-PFP-5-8 manual to reflect the redesigned project organization and the WSMS restructuring.
Actionee: R. Heineman
Due Date: April 3, 2000

Subtask 02
Assure that position descriptions are in place for all Subject Matter Experts and that qualification requirements are formally documented for Criticality Safety Engineers..
Actionee: J. Carlson
Due Date: April 10, 2000

Acceptance Criteria:
Approved Roles and Responsibilities section in FSP-PFP-5-8, objective evidence of revised charters and documentation defining key personnel qualification programs.

Validation:
This Closure Package requires RL Validation and concurrence for closure.

CLOSURE PACKAGE COVER SHEET		
ISMS: **Roles and Responsibilities**	*Area for Improvement:* **PFP-3**	*SUBMITTED BY ACTIONEE:* **J. Carey** **NAME/SIGNATURE**

Closure Actions

Submitted by:	*Date:*
Concurrence By: **ISMS Implementation Project**	*Date:*

Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

OBJECTIVE

MGO.3 - Contractor 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. FH procedures describe clear roles and responsibilities to provide feedback and continuous improvement including line management responsibility for ES&H.

2. FH procedures ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.

3. FH procedures ensure that priorities are balanced to ensure feedback is provided and continuous improvement results.

4. FH 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. FH 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. FH procedures ensure that performance measures or indicators and performance objectives are developed in coordination with DOE as required. Contractor ISMS procedures require effective management and use of performance measures and objectives to ascertain the status of the ISMS.

7. FH procedures provide for regulatory compliance and enforcement as required by rules, laws, and permits such as PAAA, NEPA, RCRA, CERCLA, etc.

8. FH procedures establish an employee concerns program to provide a mechanism for employees to raise and follow up on ES&H concerns, including safety-related issues.

9. The FH ISM System Description and supporting documents adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting.

10. Ensure completion of corrective actions from previous Phase I verifications.

11. FH procedures ensure that oversight for safety systems have the appropriate review for maintenance and functionality (DNFSB 2002-observation).

Approach

Record Review

- Review corporate/site manuals of practice 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 results and schedules of self and independent assessments.

- Review procedures for scheduling and tracking routine assessments. Track issues identified during assessments to completion. Assess the effectiveness of the assessment and feedback process to achieve process improvement.

- Review the issues management program 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.

Corrective Action Plan Closures

See Attachment MGO.3a - PFP CAP, PFP-7.

CORRECTIVE ACTION CLOSURE PACKAGES
MGO – 3a

CLOSURE PACKAGE COVER SHEET		
ISMS: **Feedback and Improvement**	*Area for Improvement:* **PFP-7**	*SUBMITTED BY ACTIONEE:* **J. Carey** NAME/SIGNATURE
Due Date: **April 3, 2000**	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

AREA FOR IMPROVEMENT:

PFP has established feedback mechanisms to gather, analyze, and close out issues. While it is evident that programs are in place to provide feedback and improvement, PFP procedures do not provide sufficient requirements to ensure that such input is evaluated and applied during future work activities. Also, procedures governing the feedback process do not provide acceptable process definitions. Concerns were identified in PFP procedures governing the post-job review process, training and qualification, and generation of lessons learned. The tie between feedback processes and the business cycle was not fully developed. No documented, required procedure was identified for assuring that newly identified hazards are prioritized in such a manner that they are carried forward to the feedback, management review, and work scope definition loops of the ISM process.

Commitment:
The ISM System Description will be revised to integrate the feedback core function into work processes. PFP procedures will be revised to clearly ensure that input is evaluated and applied during future work activities.

Subtask 01
The PFP ISM System Description will be revised to clearly describe how feedback functions during work processes at PFP.
Actionee: R. Redekopp
Due Date: Complete

Subtask 02
FSP-PFP-5-8, Volume 2, Section 13.4 will be revised to include specific requirements to ensure a thorough post-job review, including reviews of the accuracy and completeness of the AJHA. The revision will also include a requirement that lessons-learned generated during a post-job review be sent to the PFP Lessons Learned Point of Contact.
Actionee: K. Keever
Due Date: March 13, 2000

Subtask 03
FSP-PFP-5-8, Volume 1, Section 1.14 will be revised to address the handling of lessons learned from good work practices, post job reviews, and mock-up training.
Actionee: W. Leonard
Due Date: April 3, 2000

Subtask 04
FSP-PFP-1121 will be revised to include current training requirements for occurrence report investigators.
Actionee: W. Leonard
Due Date: April 3, 2000

CLOSURE PACKAGE COVER SHEET		
ISMS: **Feedback and Improvement**	*Area for Improvement:* **PFP-7**	*SUBMITTED BY ACTIONEE:* **J. Carey** NAME/SIGNATURE

Subtask 05
A listing of all qualified critique leaders, as required by HNF-PRO-058, will be developed and maintained.
Actionee: R. Wade
Due Date: March 15, 2000

Subtask 06
FSP-PFP-5-8, Volume 1, Section 2.27 will be revised to indicate the qualifications and experience that would be required to serve as Senior Supervisor Watchstander (SSW). A listing of qualified SSWs will be maintained on the PFP Intranet page. The revision will also include a requirement for the SSW to discuss observations with the first line manager/team leader of the work team performing he activity observed.
Actionee: R. Redekopp
Due Date: March 15, 2000

Subtask 07
Develop and implement a plan to integrate the core functions of ISMS into the PFP Management Assessment program.
Actionee: R. Thorne
Due Date: April 3, 2000

Acceptance Criteria:
Completed management evaluation and objective evidence of implementation of the improvements identified in the evaluation report.

Validation:
This Closure Package requires RL Validation and concurrence for closure.

Closure Actions

Submitted by:		*Date:*	
Concurrence By: ISMS Implementation Project		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

OBJECTIVE

MGO.4 - Contractor ISMS procedures provide a method to ensure that those 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 ISMS procedures provide assurance that controls will remain in effect as long as the hazards are present (CE I-5, CE I-7, CE I-8).

NOTE: This objective evaluates both the line management practices and mechanisms, as well as the practices and mechanisms associated with the selected individual disciplines listed below:

- Environmental Protection
- Radiation Protection
- Training and Qualification.

The following criteria are intended to serve as general guidelines. More specific criteria may be developed at the discretion of the Team Leader and the individual SME.

Criteria

1. FH procedures ensure that controls are adequate to mitigate all identified hazards associated with the individual work.

2. FH procedures for individual processes or maintenance actions ensure that controls are implemented prior to commencing work and that these controls remain in effect as long as the hazard is present.

3. FH 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 effect as long as the hazard is present.

4. FH procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.

5. FH mechanisms for the control of work specifies that line management are responsible for ES&H.

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

7. FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.

Approach

Record Review

- Review contractor manuals of practice that 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 line 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.

SUBJECT MATTER EXPERT (SME)

OBJECTIVE

SME-EP: Environmental Protection/Chemical Management - Within the Environmental Protection/ Chemical Management area, the planning of work includes an integrated analysis of hazards and development and specification of necessary controls and opportunities for feedback and continuous improvement. Line managers are responsible for safety, that clear roles and responsibilities have been established, and there is a satisfactory level of competence.

Criteria

1. The FH ISM System Description and supporting documents are established for allocating resources for environmental regulatory and chemical management required provisions (BBC.2).

2. The FH ISM System Description and supporting documents ensure that environmental and hazardous material controls are adequate to mitigate all identified hazards associated with the planned work.

3. The FH ISM System Description and supporting documents for environmental protection and chemical management contain clear roles and responsibilities and specify that the line management is responsible for environmental protection/requirements.

4. FH mechanisms are established to communicate environmental requirements and chemical management to employees at all levels.

5. The FH ISM System Description and supporting documents are established to ensure that environmental protection and chemical management personnel are required to have competence commensurate with the assigned responsibility.

6. The FH ISM System Description and supporting documents are established to ensure that the contractor and subcontractors are held accountable for environmental regulations and chemical management requirements through appropriate contractual and appraisal mechanisms (MGO.2).

7. The FH ISM System Description and supporting documents for environmental protection and chemical management require that within the subject area, feedback and continuous improvement occurs.

8. Ensure completion of corrective actions from previous Phase I verifications.

Approach

Record Review

- Review the policies and procedures that define the procedures and interactions required for environmental protection at the site level.
- Assess the adequacy of the documents to meet the criteria above and determine that the environmental protection procedures flow down to subcontractor levels.
- Review assessment and feedback mechanisms to assess the effectiveness within the environmental protection area.
- Review training records of personnel in the Environmental Protection group to determine whether they meet competency standards.

Interviews

- Interview personnel and responsible managers assigned to Environment Protection.
- Interview line managers to assess the establishment of clear roles and responsibilities and the understanding of the support provided to line managers.
- Interview personnel assigned to Environmental Protection to assess level of competence.

Corrective Action Plan Closures

See Attachment SME-EPa - PHMC CAP, SME EP-4, SME RP.2 and PFP CAP, PFP-6.

CORRECTIVE ACTION CLOSURE PACKAGES
SME – EPa

CLOSURE PACKAGE COVER SHEET		
PHMS Functional Area: **Environmental Protection (SME-EP)**	*Opportunities for Improvement:* **SME-EP-4**	*SUBMITTED BY ACMONEE:* **R. Ni** NAME/SIGNATURE
Due Date: **December 31, 1999**	*Completion Date:*	*Approved for Implementation:* **ISMS Implementation Project Manager**

OPPORTUNITIES FOR IMPROVEMENT:

Environmental controls are not being adequately integrated within Operations and Maintenance FDH level policies and procedures.

Commitment:

Evaluate, and modify as necessary the Operations and Maintenance functional area procedures to ensure that environmental controls and concerns are adequately represented.

Subtask 01

The FDH Environmental and Regulation Senior Technical Advisor will review the procedures in the PHMS Operations and Maintenance functional areas (PHMS) and make recommendations for incorporation of Environmental considerations into these procedures.

Subtask 02

Revise the Operations and Maintenance procedure review process to ensure EP has an opportunity to review proposed revisions to Operations and Maintenance procedures.

Subtask 03

Incorporate modifications to the following HNF-PROs to ensure that Environmental considerations are adequately captures, as appropriate:

HNF-PRO-1793	HNF-PRO-696	HNF-PRO-058
HNF-PRO-1794	HNF-PRO-229	HNF-PRO-473
HNF-PRO-474	HNF-PRO-069	

Acceptance Criteria:
Procedure changes to procedures listed in Subtask 03 approved.

Validation:
The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:
To be completed.

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Environmental Protection (SME-EP)**	*Opportunities for Improvement:* **SME-EP-4**	*SUBMITTED BY ACTIONEE:* **R. Ni** NAME/SIGNATURE

Closure Actions

Submitted by:		*Date:*	
Concurrence By: **ISMS Implementation Project**		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
Radiological Controls (SME-RP)	*Opportunities for Improvement:* SME-RP.2	*SUBMITTED BY ACTIONEE:* R. Ni NAME/SIGNATURE
Due Date: December 31, 1999	*Completion Date:*	*Approved for Implementation:* ISMS Implementation Project Manager

OPPORTUNITIES FOR IMPROVEMENT:

Radiological controls and use of ALARA practices are not integrated and needs to be established in the FDH Operations and Maintenance Program procedures.

Commitment:

Evaluate, and modify as necessary, the Operations and Maintenance functional area procedures to ensure that radiological controls and ALARA practices are adequately integrated and represented.

Subtask 01

The FDH Radiation Protection group will review the procedures in the PHMS Operations and Maintenance functional areas and make recommendations for incorporation of Radiological considerations into these procedures.

Subtask 02

Revise the Operations and Maintenance procedure review process to ensure RP has an opportunity to review proposed revisions to Operations and Maintenance procedures.

Subtask 03

Incorporate modifications to the following HNF-PROs:

HNF-PRO-696	HNF-PRO-489	HNF-PRO-473
HNF-PRO-1794	HNF-PRO-490	HNF-PRO-072

Acceptance Criteria:

Procedure changes for procedures listed in Subtask 03 approved.

Validation:

The following evidence (letter number, reports, etc.) has been reviewed and are included in the closure package to validate the accuracy and completeness of the commitment:

To be completed.

CLOSURE PACKAGE COVER SHEET		
ISMS Functional Area: **Radiological Controls (SME-RP)**	*Opportunities for Improvement:* **SME-RP.2**	*SUBMITTED BY ACTIONEE:* **R. Ni** **NAME/SIGNATURE**

Closure Actions

Submitted by:		*Date:*	
Concurrence By: **ISMS Implementation Project**		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

CLOSURE PACKAGE COVER SHEET		
ISMS: **Hazards Analysis**	*Area for Improvement:* **PFP-6**	*SUBMITTED BY ACTIONEE:* **J. Carlson** NAME/SIGNATURE
Due Date: **April 10, 2000**	*Completion Date:*	*Approved for Implementation:* **ISMS Implementation Project Manager**

AREA FOR IMPROVEMENT:

PFP has integrated Environmental Compliance/Chemical Management into work planning to ensure hazard identification and controls are evaluated and in place. However, there is no documented process for a consistent, systematic approach for performing and tracking internal environmental reviews of facility procedures and documents.

Commitment:

PFP will develop a documented process for performing and tracking internal environmental reviews of facility procedures.

Subtask 01
Conduct an evaluation of the existing PFP instructions to individuals to determine the adequacy of the requirements for the conduct of the environmental reviews. Identify needed improvements.
Actionee: J. Bramson
Due Date: April 3, 2000

Subtask 02
Implement improvements.
Actionee: J. Bramson
Due Date: April 10, 2000

Subtask 03
Evaluate document review and approval process to ensure that other special process reviews and criteria are well defined for facility documentation.
Actionee: J. Bramson/W. Leonard
Due Date: April 3, 2000

Acceptance Criteria:
Completed management evaluation and objective evidence of implementation of the improvements identified in the evaluation report.

Validation:
This Closure Package requires RL Validation and concurrence for closure.

CLOSURE PACKAGE COVER SHEET		
ISMS: **Hazards Analysis**	*Area for Improvement:* **PFP-6**	*SUBMITTED BY ACTIONEE:* **J. Carlson** NAME/SIGNATURE

Closure Actions

Submitted by:		*Date:*	
Concurrence By: ISMS Implementation Project		*Date:*	
Date Received:	*Date Validated*	*Date Approved by DOE:*	*DTS Cross Reference*

OBJECTIVE

SME - Maintenance and Work Control (M&WC) - Within M&WC, the planning of work includes an integrated analysis of hazards and development and specification of necessary controls. There is an adequate process for the authorization and control of work and a process for identifying opportunities for feedback and continuous improvement. Within M&WC, line managers are responsible for safety, that clear roles and responsibilities have been established, and that there is a satisfactory level of competence (CE I/II-3, CE I/II-5, CE I/II-6, CE I/II-7, CE I/II-8).

Criteria

1. The FH ISM System Description and supporting documents for M&WC require adequate planning of individual work items to ensure that hazards are analyzed and controls are identified.

2. Procedures and/or mechanisms for M&WC contain clear roles and responsibilities. M&WC is effectively integrated with line support managers to ensure that line managers are responsible for safety.

3. Procedures and/or mechanisms for M&WC require controls to be implemented, that these controls are effectively integrated, and that readiness is confirmed prior to performing work.

4. Procedures and/or mechanisms for M&WC require that personnel who are assigned to the subject area have a satisfactory level of competence.

5. Procedures and/or mechanisms for M&WC require that within the subject area, feedback and continuous improvement occurs.

6. Contractor procedures provide a method to ensure that controls are implemented during preparation for the initiation of work and start-up activities 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.

7. FH work planning procedures ensure appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls.

   NOTE: This objective will evaluate both the line management practices and mechanisms, as well as the practices and mechanisms associated with the selected individual disciplines such as conduct of operations, maintenance, radiological controls, industrial safety, criticality safety, nuclear safety, etc., as related to the phase start-up initiatives for the SNF Project.

Approach

Record Review

- Review the manuals of practice and selected records that define the procedures and interactions required for M&WC at the facility or activity.

- Assess the adequacy of the documents to meet the criteria above and determine that M&WC is effectively integrated into the facility or activity procedures. In particular, note the methods of maintaining configuration management and the documentation during the execution of the facility work. Be alert to worker involvement in the processes reviewed.

- Review any lessons learned that provide an opportunity to assess that lessons learned have been effectively used within M&WC.

- Review training records of personnel in M&WC to determine whether they meet competency standards.

- Review performance indicators used to gauge effectiveness or the work control system; i.e., how many packages get worked to completion when they are originally scheduled, how many procedures require changes, how many changes per procedure, etc.

Interviews

- Interview personnel and responsible managers assigned to M&WC.

- Interview line managers to assess the establishment of clear roles and responsibilities and the understanding of the support provided to line managers.

- Interview personnel assigned to M&WC to assess the level of competence.