DOE/RL-99-72
U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

Fluor Daniel Hanford, Inc.

Integrated Safety Management System Phase I Verification

Final Report

Volume I

Richland, Washington
October 19 – October 29, 1999

SIGNATURE PAGE

I, by signature here, acknowledge that I concur with the Team Leader and Senior Advisor in the issues, opportunities for improvement, noteworthy practices, and recommendations of this report of the Fluor Daniel Hanford, Inc. Integrated Safety Management System Verification Phase I in my assigned functional area.

John D. Rothrock
Team Leader

Ed Parsons
Senior Advisor

Bart Schmidt
Business

Ali Tabatabai
Business

Patty Ensign
Business

Verneice Skinner
Business

Steve Veitenheimer
Management

Mark R. Steelman
Management

Carrie Swafford-Chube
Management

Craig Richins
Management

Bill Smoot
Management

Original signature on FAX

Diane Clark
Hazard and Radiation Protection

Tom Wright
Hazard

Steve Bertness
Hazard

Burt Hill
Hazard

Ellen Mattlin
Environmental Protection

Colleen A. Meyers
Training and Qualification

October 28, 1999
Date

EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) commits to accomplishing the Hanford Site mission safely. To achieve this outcome, contractors must integrate safety into management and work practices at all levels. Contractors are required to describe the integrated safety management systems used to implement this safety performance objective. This report documents the results of the DOE Phase I review of the Fluor Daniel Hanford, Inc. (FDH) Integrated Safety Management System (ISMS). This review concluded that approval of the contractor's ISMS Description should be deferred until ongoing organizational restructuring progresses.

The Approval Authority, the Manager of the DOE, Richland Operations Office (RL), provided guidance and directed that a Phase I Verification be conducted of the FDH ISMS Description and associated plans, manuals of practice, and procedures at the upper levels of management. The DOE Verification Team developed tailored Criteria and Review Approach Documents to validate the adequacy of the contractor's ISMS documentation against core expectations, the Department of Energy Acquisition Regulations clause as amplified in DOE Policies 450.4, 450.5, and 450.6, and associated guidance. The verification focused on the Project Hanford Management Contract (PHMC) scope (the institutional level) ISMS Description and deferred consideration of the facility and activity levels because of organizational restructuring. Both the RL and FDH recognize that future verification efforts will be required. Because of recent restructuring of RL, the Manager further directed that this verification be limited to the contractor's ISMS and not include review of DOE and execution of responsibilities described in the Functions, Responsibilities, and Authorities Manual.

FDH is in the initial phase of moving from a management and integration organization to a new project-focused organization. A consequence of this restructuring is the dissolution of the PHMC independent, major subcontractor structure and transition into a less complex, flatter, more efficient, project-focused organization. FDH will be assuming roles and responsibilities that, in the past, were the direct responsibility of the major subcontractors. This restructuring is to be done in a planned and controlled manner, with an emphasis on assuring continued safe

work performance. The new FDH organization is expected to become a centralized project management structure, using common project controls and management practices.

The FDH ISMS Description evolved from a 1996 PHMC Environment, Safety, and Health Management Plan, written before the ISMS clause was incorporated in the FDH contract. This 1996 plan addressed the Environment, Safety, and Health aspects of the *Hanford Strategic Plan* and principles, processes, systems, and commitments for Environment, Safety, and Health risks within the scope of the PHMC. From this original document, FDH developed the *PHMC Integrated Environment, Safety, and Health Management Plan*, HNF-MP-003, Rev. 2 (FDH 1999a), which incorporates Appendix B, the *ISMS Description*. This is the system description evaluated by the Team. This description includes ISMS principles brought forward in the Defense Nuclear Facilities Safety Board Recommendation 95-2, and elements of International Standards Organization 14001, the DOE Voluntary Protection Program, Enhanced Work Planning, and other best practices.

FDH uniquely expands upon the DOE Core Functions and Guiding Principles, resulting in 7 Core Functions and 11 Guiding Principles, and establishes discrete levels of responsibility called "expectations" at the PHMC scope level, facility level, and activity level. This unique approach is acceptable, but not optimum, and it perpetuates an overly layered, complex, and often confusing picture. A significant opportunity for improvement exists for FDH to simplify their ISMS Description as they restructure.

The Team concluded that the FDH ISMS Description lacks connection between FDH at the institutional level and the major projects at the facility and activity level. This is the principle weakness. Its resolution will require decisions about whether to keep major subcontractor ISMS Descriptions or to de-scope subcontractors and have them operate under an umbrella of FDH procedures.

ISMS mechanisms are in place and revisions to the system have been made to incorporate lessons learned from the K Basins and Tank Waste Remediation System verifications, the May 1999 Secretary of Energy Quality Assurance Rule compliance order, PHMC Gap Analysis, and

FDH internal review. Mechanisms considered to be effective include the Automated Job Hazard Analysis tool for analyzing hazards and developing controls, and the various FDH committees, councils, and groups, such as the President's Zero Action Council, which are important to feedback and improvement.

Weaknesses were found in some aspects of the early stages of the FDH restructuring. ISMS roles and responsibilities are not yet adequately defined in some restructured organizations. The Team is also concerned about weaknesses in flow down and vertical integration of ISMS, which must be resolved during the transition of major subcontractors to their new project service provider role.

Interviews indicate that FDH management is striving for operations that are well run and safe. The work force is actively involved and supports integrating safety into all work activities. Management meets regularly with bargaining unit representatives and receives strong, constructive feedback. A major challenge is not to impact safety as a result of restructuring. Transition planning is proceeding in a satisfactory manner but many unanticipated issues are expected to emerge. Senior management is substantially involved in gathering feedback to know the truth about what is really going on. They act on the information they receive to achieve continuing improvement. FDH intends to reduce the layers of management and redeploy resources to the projects. Significant attention will be required to assure that clear roles and responsibilities are maintained.

The Team offers the following specific recommendations:

- The Manager of RL defer approval of the ISMS Description until restructuring is further along and direct FDH to correct all opportunities for improvement.

- FDH should continue to progress in updating their policies, procedures, and manuals of practice.
- The ISMS Description must be consistent with FDH and DOE organizational restructuring and contract revisions.

- Simplify and streamline the ISMS Description to enhance clarity, coherency, and utility. Consider integrating Appendix B (the Description) into the base document (the Plan) and adding new appendices for major projects.

- Make the ISMS Description consistent with other FDH management system documents, especially HNF-MP-001, *Management and Integration Plan*, after it is revised.

- Continue Phase I/II verification at the project level.

The Team concluded that FDH management has made progress in achieving the DOE objective to "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." Given continued, ambitious effort, and successful resolution of the opportunities for improvement from this review, there is a high probability that a fully described ISMS Description for doing work safely can be achieved in the near future.

APPROVAL PAGE

Title: Fluor Daniel Hanford, Inc.
Integrated Safety Management System Phase I
Verification Review Plan

Concurred by: Ed Parsons **Date:** 10/20/99
Ed Parsons, Team Lead Advisor

Approved by: John D. Rothrock **Date:** 10/20/99
John D. Rothrock
Integrated Safety Management System
Verification Team Leader

TABLE OF CONTENTS

APPENDICES

ACRONYMS

BBC	Business, Budgets, and Contracts (subteam)
CRAD	Criteria and Review Approach Document
DEAR	Department of Energy Acquisition Regulations
DOE	U. S. Department of Energy
FDH	Fluor Daniel Hanford, Inc.
FEB	Facility Evaluation Board
HAZ	Hazard Identification and Standard Selection (subteam)
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
ISMSV	Integrated Safety Management Systems Verification
MGO	Management Oversight (subteam)
ORP	Office of River Protection
PHMC	Project Hanford Management Contract
RL	DOE, Richland Operations Office
RPP	River Protection Project
SME	Subject Matter Expert

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, the DOE will "Do work safely." The purpose of this Fluor Daniel Hanford, Inc. (FDH) Integrated Environment, Safety, and Health (ES&H) Management System Phase I Verification Review Plan is to determine whether Integrated Safety Management System (ISMS) programs and processes are in place within the FDH 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 those assigned roles and responsibilities to manage and control the ISMS. Therefore, this review will evaluate the "paper" aspects of the ISMS to ensure that the system is developed and will be effective within the FDH.

The *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan* (HNF-MP-003, Rev. 2 [FDH 1999]) represents the safety management system documentation required by DOE Acquisition Regulations (DEAR) clause 970.5204-2 for the FDH. HNF-MP-003 (Rev. 0) was originally approved by 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 Project Hanford Management Contract (PHMC) contract was recently modified to incorporate the 970.5204-2 DEAR clause and HNF-MP-003 (FDH 1999) was revised accordingly.

The PHMC is a performance-based management contract held by FDH. This means that all of the fee or profit that the managing contractor earns is based on its ability to deliver results through its management of the subcontractors. It also means that fee is only earned for specified results, as opposed to simply undertaking activities.

Note: A prime contract was recently established in October 1999 between the Office of River Protection (ORP) and the Lockheed Martin Hanford Company relative to the River Protection Project (RPP).

The FDH Team consists of FDH and five major subcontractors, with responsibilities defined as follows:

- FDH is the management and integration contractor that directs, controls, integrates, and supports the activities of the PHMC scope. Most of the project work is performed and accomplished by subcontractors.

- B&W Hanford Company is responsible for the Facility Stabilization Project and Fast Flux Test Facility.

- Waste Management Federal Services of Hanford, Inc. is responsible for the Waste Management Project and for environmental services.

- Numatec Hanford Corporation is responsible for engineering and technology support for all projects.

- DynCorp Tri-Cities Services, Inc. is responsible for infrastructure and cross-cutting services, including facility management, site-support services, utility services, transportation infrastructure, and emergency services.

FDH also manages the Hazardous Materials Management and Emergency Response (HAMMER) facilities where state-of the art training is developed and deployed. The Fast Flux Test Facility is not currently a part of the Facility Stabilization Project, and while its future is being deliberated, it is being managed as a separate DOE and joint FDH and Pacific Northwest National Laboratory standby project and subcontracted to B&W Hanford Company. Environmental restoration work is managed under a separate contract with Bechtel Hanford, Inc.

Major change is ongoing in both the RL and FDH organizations. Organizational realignments were announced on September 30, 1999 and communicated to employees by the RL manager and senior FDH management.

The impact of the organizational restructuring on the FDH is profound. The contractual relationship between the five major subcontractors and FDH is changing, as are the assignments of many key subcontractor managers. This environment of change and transition to a more streamlined structure offers both challenge and opportunity for doing work safely.

2.0 PURPOSE

The purpose of this review is to verify the adequacy of documentation as submitted to the Approval Authority by FDH. This review is not only a review of the ISMS System Description documentation, but is also a review of the procedures, policies, and manuals of practice used to implement safety management in an environment of organizational restructuring. The FDH ISMS should support the *Hanford Strategic Plan* (DOE-RL 1996) to safely clean up and manage the site's legacy waste; deploy science and technology while incorporating the ISMS theme to "Do work safely"; and protect human health and the environment.

The guidance and direction provided in this review plan have been adapted from DOE P 450.4, DOE G 450.4, and the *Integrated Safety Management Systems (ISMS) Verification DOE Team Leader's Handbook* (DOE 1999).

3.0 SCOPE

The scope of this review is associated with FDH in its role as the PHMC management and integration contractor. Review of RL is not within the scope of this review and will be assessed in the future. To date, FDH has undergone two Phase I ISMS verifications at K Basins and the RPP, and a Phase II at the RPP. Both the K Basins Phase I and RPP Phase I and II ISMS

verifications produced a number of lessons learned. Based upon the results of those verifications, RL and FDH concluded that the most efficient verification strategy was to perform a Phase I verification at the FDH level. Following completion of the FDH verification, Phase II verifications (including a review of Phase I elements, at the facility or subcontractor level, with the exception of the RPP) will be performed, for selected facilities and/or PHMC subcontractors.

The review is intended to provide the following:

- Assess if the ISM System Description is consistent with DEAR clauses, DOE P 450.4, 450.5, and 450.6, and if implementation will assure work can be done safely.
- Evaluate the adequacy of the ISM System Description.
- Perform a general evaluation of the training and knowledge of FDH management and staff with respect to the ISMS principles, functions, mechanisms, and responsibilities.
- Provide general feedback to the RL manager as to the probability of success in implementing the ISMS given the ongoing organizational restructuring.

4.0 PREREQUISITES

Overall acceptance by DOE to proceed with the FDH Phase I Verification was based on the following:

1. FDH declaration of readiness for a Phase I verification.
2. Compliance with the requirements of the FDH contract clause H.5.E (DEAR 970.5202-2) substantially demonstrated by a FDH internal readiness review with independent oversight by RL.
3. Performance of a gap analysis.
4. Corrective actions with known deficiencies will not require changes to the ISM System Description and related policies, plans, procedures, and products to the extent that significant re-review of the ISM System Description would be required.
5. Lessons learned from previous ISMS verifications are factored into preparation for the Phase I FDH verification.

5.0 OVERALL APPROACH

The FDH ISMS Phase I Verification Team will evaluate the ISM System Description, supporting procedures and processes, corrective actions from the gap analysis, 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:

> The Department 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.

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 Radiation Protection, Environmental Protection, and Training and Qualification.

The FDH review will be conducted using subteams as defined in Section 7.0. The Verification Team membership and team member 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 FDH, and the plan and strategy for the review. The Verification Team will be trained 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*. The Verification Team will also complete preparation of the CRADs, which will guide the review. The indoctrination period of approximately 4 days, including Verification Team orientation and training, site-specific training, and CRAD finalization will be conducted at the Hanford Site 1 week prior to the start of the Phase I review.

The actual Phase I review will be conducted during a 2-week period following the orientation and training week. The first week of the actual review will consist of ISMS briefings by FDH 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 review, the 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 evaluation of the criteria will result from the FDH presentations coupled with the results of the verification activities conducted during the previous week. An 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 FDH 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 to the RL and FDH managers 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 review will focus on two areas. The first effort will be 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 will be to assist FDH 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 Verification Team to conduct the Phase I review will include training on the relevant DEAR clauses (970.5204 and 970.5204-78) as discussed in Section 5.1. 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 FDH System Description and the mechanisms used in the execution of that system.

6.2 FLUOR DANIEL HANFORD, INC. PREPARATIONS

The responsible FDH managers will present their procedures and processes used in the execution of ISMS. Therefore, it is important that the individual managers have an understanding of the Verification Team and RL expectations for ISMS, and the commitments and processes that are provided in the contractor ISMS.

Briefings will consist of FDH making presentations to the Verification Team to describe how the processes and mechanisms used to "Do work safely" fulfill the expectations of the ISMS. The briefings should include real examples of work or operations that were or are about to be conducted so the Verification Team can fully understand the processes and mechanisms used. These presentations should also describe the integration of safety management between the contractor and DOE. At the conclusion of the presentations, the Phase I Verification Team will provide a list of documents required for review and selected personnel to be interviewed. The FDH 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:

1. Business, Budgets, and Contracts (BBC)
2. Management Oversight (MGO)
3. Hazards Identification and Standard Selection (HAZ).

Subject Matter Experts (SME) in the areas listed below are assigned to the HAZ subteam to collaterally provide specialized functional area experience as needed:

- Radiation Protection
- Environmental Protection
- Training and Qualification.

The BBC functional area subteam will address the following:

- FDH processes for translating mission into work in a planned and controlled manner.
- Appropriate flowdown of ISMS to subcontracts.

The MGO functional area subteam will address the following:

- Define and prioritize work.
- Ensure contractor roles and responsibilities (i.e., line management responsibilities) are documented and included within the five core functions.
- Review the feedback and improvement functions, including the contractor's Quality Assurance Program.

The HAZ functional area subteam will address the following:

- FDH processes for ISMS relating to hazard analysis
- Processes related to the identification of safety standards and requirements
- Tailoring of controls to the work being performed
- Evaluation of the specialized SME functional areas.

8.0 ADMINISTRATION

8.1 MEETINGS AND PRESENTATIONS

The first phase of the review will include presentations by FDH to the Verification Team. The purpose of the presentations will be to provide an opportunity for the Verification Team to become familiar with the ISMS, including the supporting policies, procedures, work practices, etc. The presentations will provide an opportunity for FDH 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 for DOE P 450.4, 450.5, 450.6, and the DEAR requirements. The 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 FDH 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 as necessary with senior FDH and DOE management to ensure that they are fully informed of the progress and issues during the verification review.

Following the ISMS Phase I Verification, the Team Leader will conduct a briefing with senior FDH and DOE 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 deficient. 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 report is complete prior to dissolution of the team, each Verification Team member must document his/her work as it is conducted. This means that daily inputs to the Assessment Forms (Form 1) 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 actions for the FDH, those actions should be supported by detailed information on the Assessment Forms.

The lessons learned from this ISMS verification are particularly important for future reviews at Hanford Site and across the complex. Verification Team members will draft lessons-learned inputs and provide those inputs to the Team Leader such that the lessons learned 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. The biographies for each Verification Team member is provided in Appendix B and will be retained with the records of the verification report.

The Verification Team will use FDH Facility Evaluation Board (FEB) personnel to support the FDH Phase I Verification. The FEB 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 FDH Phase I Verification as Verification Team members in a capacity that does not conflict with their normal functions under the FDH.

9.0 FINAL REPORT FORMAT

At the completion of the review, the Verification Team will prepare a verification 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 verification report will consist of the following sections that fully describe the review, provide the necessary recommendations, and provide information necessary to support the recommendations. Verification Team members will not include any classified or Unclassified Controlled Nuclear Information in the report. 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 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, illustrations, tables, charts, 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 work practices (strengths) identified during the review.

5. **Introduction**- Includes the overall objectives of the evaluation, review process and methodologies used in the review, and team composition.

6. **Purpose** - Includes 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** - Includes 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 FDH ISMS** - Provides a summary discussion of the overall results of the evaluation. The 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 FDH ISMS at the Hanford Site. It will further provide information about the adequacy of supporting program and process documents and the planned ISMS improvement plans.

12. **Lessons Learned** - Will discuss 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), Review Plan, and CRADs.

10.0 SCHEDULE

For planning purposes, the projected schedule for the FDH ISMS Phase I Verification is as follows:

Orientation

Date	Topic
October 12, 1999	• Introduction/team logistics • Team orientation • ISMS training/executive course • Required reading
October 13, 1999	• ISMS presentations • Required reading
October 14, 1999	• Team members meet counterparts • Discuss CRAD approaches • Plan logistics • Complete required training
October 15, 1999	• Prospective interview list • Attend meetings • Finalize verification logistics
October 18, 1999	• FDH ISMS Presentations Office setup • Make final changes to CRAD approaches • Provide FDH final list of documents/records to be reviewed • Complete and sign qualification forms • Verification Team meeting • Documentation review
October 19-21, 1999	• Finalize Review Plan • Sign Review Plan • Documentation review • Conduct interviews • Team meeting
October 22, 1999	• Complete documentation review • Conduct interviews • Team meeting

Verification

Date	Topic
October 23-24, 1999	Individual team member work as required
October 25-28, 1999	Report preparation
November 1, 1999	Managers ISMS Verification presentation

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, *Integrated Safety Management Systems (ISMS) Verification DOE Team Leader's Handbook*, DOE-HDBK-3027-99, June, 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*, DOE G 450.4-1A, 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.

FDH, 1999, *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan*, HNF-MP-003, Rev. 2, Fluor Daniel Hanford, Richland, Washington.

APPENDIX A

TEAM LEADER LETTER OF APPOINTMENT

RL-F-1326.6 (02/98)

United States Government **Department of Energy**

memorandum

Richland Operations Office

DATE: OCT 6 1999

REPLY TO ATTN OF: AMS:DSS/99-AMS-003

SUBJECT: MEMORANDUM OF APPOINTMENT AS INTEGRATED SAFETY MANAGEMENT SYSTEM PHASE I VERIFICATION (ISMSV-1) TEAM LEADER FOR THE PROJECT HANFORD MANAGEMENT CONTRACT (PHMC)

TO: G. L. Dever, Manager
Oak Ridge Operations Office

In accordance with requirement 9.2.2.6 (Approval of Safety Management System Documentation) of the U.S. Department of Energy Functions, Responsibilities, and Authorities Manual, the Richland Operations Office has selected John D. Rothrock, of your organization, to be the Team Leader for the ISMSV-1 for the PHMC, as discussed in Enclosure 1. Enclosure 2 is the official DOE letter of direction to the PHMC that defines the scope of the Phase I verification.

We wish to express our appreciation for his willingness to assist in the conduct of this ISMS verification review. If you have any questions, you may contact me, or Doug S. Shoop at (509) 376-0108 or Ed Parsons at (509) 376-2876, both from the Office of Assistant Manager for Safety, Health and Environment.

Keith A. Klein
Manager

Enclosures: 2

cc w/encls:
C. L. Huntoon, EM-1
D. M. Michaels, EH-1
J. M. Owendoff, EM-2
R. W. Poe, OR
J. D. Rothrock, OR
T. A. Wyka, EH-9

Project Hanford Management Contract (PHMC) Integrated Environment, Safety, and Health Management System Phase I Verification (ISMSV-1)

1.0 Description of Facility/Activity: This review will verify the status of the ISMS for the PHMC managed and operated by Fluor Daniel Hanford, Inc. (FDH) at the Hanford Site.

2.0 Background and History: The PHMC ISMS Plan, HNF-MP-003, Rev. 2 represents the safety management system documentation required by DOE Acquisition Regulations (DEAR) clause 970.5204-2 for the PHMC. The HNF-MP-003, Rev. 0 was originally approved on September 25, 1997, by DOE, Richland Operations Office (RL) based upon a review against the contractual requirements (derived from an earlier draft of the 970.5204-2 DEAR clause) for that document. The PHMC has since been modified to incorporate the 970.5204-2 DEAR clause. The HNF-MP-003 was revised accordingly and a PHMC Phase I verification has been planned for the October 1999, timeframe.

The main responsibility of FDH is to interface with RL so that operations of the five major subcontractor companies are coordinated to accomplish overall Hanford Site goals and missions: site cleanup, waste technology development, and regional economic diversification. In addition, FDH has subcontracted with DynCorp Tri-Cities Services, Inc. to provide infrastructure support to the Hanford Site.

FDH also manages the Hazardous Materials Management and Emergency Response (HAMMER) facilities where state-of-the-art training is developed and deployed. The Fast Flux Test Facility (FFTF) is currently not a part of the Facility Stabilization Project. While the future of FFTF is being deliberated, it is being managed as a separate DOE and joint FDH and Pacific Northwest National Laboratory standby project and subcontracted to B&W Hanford Company.

3.0 Phase I ISMS Verification: You are appointed as the Team Leader for the Phase I ISMS Verification (ISMSV-I for the PHMC). The ISMSV-I is to be scheduled for the period of October through November 1999.

4.0 Scope and Special Considerations for the ISMSV-I: The purpose of this combined review is to perform the following:

4.1 Verify that PHMC system description and associated plans, manuals of practice, and procedures are consistent with the objectives, guiding principles, and core functions of Integrated Safety Management (ISM) and HNF-MP-003.

4.2 Verify that the PHMC system description and associated plans, manuals of practice, and procedures have been developed at the upper levels of management, including detailed discussions with key management personnel who are assigned or will be assigned safety management responsibilities. Also provide an evaluation of the training, and knowledge of management and staff with respect to the guiding principles and core requirements of ISM.

4.3 Develop lessons learned from this verification effort, to improve the effectiveness of future ISMS reviews at the Hanford Site.

4.4 Special Considerations for the ISMSV-I:

4.4.1 Several aspects of the PHMC ISMS have been the subject of previous implementation reviews. These include an EH-10 Compliance Order Notification, EM-5 Baseline Program Review, Government Accounting Office Audits, Configuration Management, and Corrective Action Management Program Reviews.

4.4.2 The 1999 midyear evaluation of the ISMS-related Performance Expectation Plan indicated an uneven performance and may require additional senior management attention. The K Basins verification and the Tank Waste Remediation System Phase I/II verifications have provided valuable lessons learned, specific to the PHMC system description. Both verifications indicated the need for greater senior management attention to the implementation of ISMS. Significant senior management attention within FDH and the major subcontractors (MSC) will be needed to ensure that a verified ISMS is in place for the entire PHMC by 2000.

4.4.3 As possible, utilize members of the FDH (Facilities Evaluation Board [FEB]) to allow FDH to continue to develop ISMS assessment expertise. The FEB performs an independent assessment function for FDH and will soon begin assessing ISMS implementation to facilitate continuous process improvement. The FEB will participate on the ISMSV-I team in a capacity that will not conflict with their normal functions under the PHMC.

4.4.4 FDH is currently restructuring many of its business processes and realigning personnel.

4.4.5 RL is currently restructuring many of its business processes and aligning RL personnel within these "new" business processes. Accordingly, the scope of the review should be limited to the contractor's ISMS and should not include a review of RL. The RL's implementation of ISMS will be assessed during a future ISMS verification.

4.4.6 RL plans future combined Phase I and Phase II ISM System Verifications of the MSCs and key priority facilities prior to September 2000. Accordingly, the scope of the ISMSV-I will not include reviews of subcontractor system descriptions and associated plans, manuals of practice, and procedures below the FDH level. HAMMER, the FFTF, and enterprise companies are also outside the scope of the ISMV-I and will be assessed as appropriate by other verification activities.

5.0 Phase I ISMS Verification Letter of Appointment: You should prepare an ISMS verification review plan, select, train the team, and confirm readiness to conduct the verification.

6.0 Desired Deliverables from the Review: The ISMSV-I Team should document the review with a report written in accordance with the guidance given in 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.

7.0 Stakeholder Observation of the ISMSV-I: RL has invited the Hanford Advisory Board (HAB) to observe in the ISMSV-I as observers to the verification review. Joseph Richards of the Confederated Tribes of the Umatilla Indian Reservation recently participated on the River Protection Program ISMS Phase II verification and will be representing the HAB. Mr. Richards is the ISMS Issues Manager for the Health, Safety, and Waste Management Committee of the HAB.

8.0 ISMSV-I Point-of-Contact (POC): The RL-PHMC POC for the ISMSV-I is Ed Parsons. He can be reached at phone (509) 376-2876, fax (509) 373-6100, or e-mail at Joe_E_Ed_Parsons@rl.gov.

9.0 Information for the Cognizant Secretarial Officer (CSO): A copy of this Memorandum of Appointment is forwarded to the responsible CSO, Carolyn L. Huntoon, EM-1, DOE Headquarters for information. Please provide Ms. Huntoon copies of both the Review Plan and the final report for the ISMSV-I at the PHMC.

AMS:JEP/9/28/99

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

99-ESH-025

Mr. R. D. Hanson, President
Fluor Daniel Hanford, Inc.
Richland, Washington 99352

Dear Mr. Hanson:

CONTRACT NO. DE-AC06-96RL13200 - GUIDANCE FOR PREPARATION, CONTENT, REVIEW, AND APPROVAL OF THE INTEGRATED ENVIRONMENT, SAFETY AND HEALTH MANAGEMENT SYSTEM DESCRIPTION (ISMSD) IN ACCORDANCE WITH CLAUSE H.5.E (DEAR 970.5204-2)

References: (1) HQ memo to all Department and Contractor Employees from Secretary of Energy Bill Richardson, "Safety Accountability and Performance," dtd. March 3, 1999.

(2) RL ltr. to H. J. Hatch, FDH, from J. D. Wagoner, "Approval of Project Hanford Management Contract (PHMC) Integrated Environment, Safety and Health Management System (ISMS) Plan," (97-ESH-040), dtd. September 25, 1997.

This letter provides direction to FDH with regard to the preparation, content, review, and approval of the Project Hanford Management Contract (PHMC) ISMSD, in accordance with contract clause H.5.E (Department of Energy Acquisition Regulation [DEAR] 970.5204-2). Attachment 1 provides RL expectations for the preparation and content of the ISMSD, and Attachment 2 provides the protocol for the review and approval of the ISMSD.

The DOE points-of-contact for this guidance are Maureen Hunemuller, Deputy Assistant Manager for Tank Waste Storage and Retrieval, at (509) 376-6727 and Paul Kruger, Director, Office of Environment, Safety and Health, at (509) 376-7387.

Sincerely,

SIGNED ORIGINAL ON FILE

Sally A. Sieracki
Contracting Officer

ESH:DSS

Attachments: 2

cc w/attachs:
B. A. Austin, FDH
G. A. Harvey, FDH

99-ESH-025

Mr. R. D. Hanson, President
Fluor Daniel Hanford, Inc.
Richland, Washington 99352

Dear Mr. Hanson:

CONTRACT NO. DE-AC06-96RL13200 - GUIDANCE FOR PREPARATION, CONTENT, REVIEW, AND APPROVAL OF THE INTEGRATED ENVIRONMENT, SAFETY AND HEALTH MANAGEMENT SYSTEM DESCRIPTION (ISMSD) IN ACCORDANCE WITH CLAUSE H.5.E (DEAR 970.5204-2)

References: (1) HQ memo to all Department and Contractor Employees from Secretary of Energy Bill Richardson, "Safety Accountability and Performance," dtd. March 3, 1999.

(2) RL ltr. to H. J. Hatch, FDH, from J. D. Wagoner, "Approval of Project Hanford Management Contract (PHMC) Integrated Environment, Safety and Health Management System (ISMS) Plan," (97-ESH-040), dtd. September 25, 1997.

This letter provides direction to FDH with regard to the preparation, content, review, and approval of the Project Hanford Management Contract (PHMC) ISMSD, in accordance with contract clause H.5.E (Department of Energy Acquisition Regulation [DEAR] 970.5204-2). Attachment 1 provides RL expectations for the preparation and content of the ISMSD, and Attachment 2 provides the protocol for the review and approval of the ISMSD.

The DOE points-of-contact for this guidance are Maureen Hunemuller, Deputy Assistant Manager for Tank Waste Storage and Retrieval, at (509) 376-6727 and Paul Kruger, Director, Office of Environment, Safety and Health, at (509) 376-7387.

Sincerely,

SIGNED ORIGINAL ON FILE

Sally A. Sieracki
Contracting Officer

ESH:DSS
Attachments: 2
cc w/attachs:
B. A. Austin, FDH
G. A. Harvey, FDH
bcc: ESH Rec Cpy w/attachs
ESH Rdg File
QSH Rdg file
J. M. Augustenborg, AMW
M. C. Humphreys, AMW
M. A. Hunemuller, AMSR
P. M. Knollmeyer, AMF
P. W. Kruger, ESH
D. S. Shoop, ESH
PRO Rdg File
ISMSDPHMC/DSS/MAC/11711

RECORD NOTE: This letter provides guidance to FDH relative to the preparation, content, review and approval of the Integrated Environment, Safety and Health Management System Description as required by DEAR Clause 970.5204-2 (Integration of environment safety and health into work planning and execution). The contents of this letter have been reviewed in detail with FDH ESH&Q and Project Integration. Minor changes made per Maureen Hunemuller, AMSR on 5/25/99.

Office >	ESH	AMW	AMF	AMSR	ESH	PRO
Surname >	SHOOP	AUGUSTENBORG	KNOLLMEYER	KINZER/HUNEMULLER	KRUGER	SIERACKI
Date >						

(Please return to Peggy Corbin 6-7461 A5-55/FED FAX 3-6100) Document No. 11711

RL EXPECTATIONS FOR PREPARATION AND CONTENT

Integration

The Project Hanford Management Contract (PHMC) Integrated Environment, Safety, and Health Management System (ISMS) must successfully integrate the elements of DOE Policies P450.4 (Safety Management System Policy), P450.5 (Line Environment, Safety and Health Oversight), and P450.6 (Secretarial Policy Statement - Environment, Safety, & Health). These policies collectively define DOE's expectations for environment, safety and health (ES&H) performance.

- P450.4 establishes the framework for the ISMS (implemented via Department of Energy Acquisition Regulations 970.5204-2 and 970.5204-78).

- P450.5 establishes DOE's expectations for DOE line management ES&H oversight and for the use of contractor self-assessment programs as the cornerstone for this oversight.

- P450.6 emphasizes the DOE's expectation for outstanding ES&H performance, and focuses on ISMS as the vehicle by which this is to be accomplished. This policy also communicates a "zero tolerance" for serious accidents, and emphasizes the need for worker involvement and a safety conscious work environment (e.g., a work environment that allows free and open expression of safety concerns, and where workers fear no reprisals or retaliation).

The PHMC ISMS Plan (HNF-MP-003, Rev. 0) was developed in response to requirements placed in the original PHMC, including Fiscal Year 1997 Performance Agreement SM5.1.1. These contractual requirements were based upon an early version of what ultimately became DEAR clause 970.5204-2, and were intended to assure development of a single, integrated ES&H management system which integrated existing ES&H initiatives such as Environmental Management System (EMS), Voluntary Protection Program (VPP), and Enhanced Work Planning (EWP).

RL approved the PHMC ISMS Plan, based upon review against the aforementioned contractual requirements, concluding that, " . . . the ISMS Plan ... provides the basic requirements for an effective ISMS which, when implemented, will result in substantive improvements in the safe conduct of work," and indicated that implementation of the plan should proceed immediately (Reference 2). The PHMC ISMS Plan and subsequent FDH efforts to integrate EMS, EWP, VPP, and other initiatives have been responsive to the objective of fully integrating ISM with existing ES&H initiatives, and represent a positive example to the rest of the complex. This integration is also consistent with the expectation of the Secretary as described in his March 3, 1999, memorandum listed as Reference 1 in the transmittal letter.

Establish PHMC ISMS by Fiscal Year 2000

The Secretary's memorandum (Reference 1) also established the expectation that Hanford and all other DOE sites will verify that ISMS is completely in place by September 2000. Completion of Fiscal Year 1999 Performance Expectation Plan (PEP) expectation B8.1.9 is essential for FDH to successfully demonstrate the ability to meet the Secretary's expectation. The FDH strategy to ensure that ISMS is completely in place by September 2000 should identify the facility or

company level verifications required in order to achieve full implementation of ISMS, and the schedule for each. This strategy should anticipate a ramp down of DOE resources, and a ramp up of PHMC resources (e.g., Facility Evaluation Board, etc.) as these verifications progress. In keeping with P450.5, it is important to recognize that the success of this strategy will depend upon the PHMC demonstrating its ISMS verification or assessment process is effective. This strategy should also include schedules for preparation of an Authorization Agreement (AA) for all PHMC Category 2 Nuclear Facilities for which an AA has not yet been developed and approved. To date, AAs have been approved for the Tank Waste Remediation System (TWRS), K Basins, and the Waste Encapsulation and Storage Facility (WESF).

Incorporate Lessons Learned

The K Basins and TWRS Phase I ISMS verifications have provided valuable lessons learned, specific to the PHMC System Description. The Pacific Northwest National Laboratory (PNNL) review, as well as reviews conducted at Savannah River and other sites, have also produced valuable lessons learned. FDH needs to ensure that the recommendations and lessons learned, particularly from the K Basins and TWRS verifications, are factored into preparations for the PHMC Phase I ISMS Verification. Particularly important are the following:

- Adequate System Development. In the joint DOE/contractor retreat held in July 1998 following the PNNL Phase I and II ISMS Verification, the most critical need identified by the attendees was further development of ISMS. RL remains concerned that development and implementation of the PHMC ISMS has not been given adequate focus and resources.

- Improved System Definition. The K Basins verification indicated the need for more detailed definition/documentation of the Safety Management System for both FDH and the Major Subcontractors (MSC)/Facilities. Therefore, RL expects an adequately robust system description to be developed at the FDH level, and also supporting descriptions of the Safety Management System at the MSC/Facility level. This will require appropriate revisions to the FDH ISMS Plan (HNF-MP-003) such that the PHMC MSC are explicitly required to develop documents that describe the implementation of the Safety Management System, in addition to the already required gap analyses and implementation plans.

- Senior Management Commitment. Both the K Basins and TWRS verifications indicated the need for greater senior management attention to implementation of Integrated Safety Management. The relatively recent FDH clarification of roles and responsibility relative to ISMS should provide greater senior management attention to the development and implementation of ISMS within the PHMC. Significant senior management attention within FDH and the MSCs will be needed to ensure that a verified ISMS is in place for the entire PHMC by September 2000.

Performance on ISMS Related Fiscal Year 1999 PEPs

Performance on the following PEPs will significantly influence FDH's ability to develop and implement a comprehensive ISMS, and may affect FDH's ability to declare readiness and successfully complete the PHMC Phase I ISMS verification. The recent midyear evaluation of the ISMS-related PEPs indicated an uneven performance and may require additional senior management attention.

B8.1.1 Promote and advocate an environment that encourages the raising and constructive resolution of safety and health issues and is supportive of safety and health being an integral component of work products.

B8.1.2 Ensure that the elements of the PHMC protect worker rights, enhance consideration of employee concerns, encourage open communications, and support the establishment of a safety conscious work environment.

B8.1.3 Complete training and implementation of the Automated Job Hazards Analysis tool.

B8.1.4 Ensure Declare readiness for ISMS Phase II implementation for Spent Nuclear Fuels (SNF), Tank Waste Remediation System (ORP), Plutonium Finishing Plant (PFP) / Waste Encapsulation and Storage Facility (WESF).

B8.1.5 Declare readiness for ISMS Phase I on four PHMC facilities.

B8.1.6 Develop and implement an appropriate process for flowing ISMS and Department of Energy Acquisition Regulation (DEAR) clause requirements to lower-tier subcontractors.

B8.1.7 Support and assist RL in resolution of the site roster issue relative to the Hanford Occupational Health Process.

B8.1.9 Complete a project management plan and schedule for PHMC ISMS effort to ensure a systematic and methodical implementation of ISMS within the PHMC. Coordinate this activity with FDH Project Direction and RL.

B8.1.10 The established Lessons Learned Program will be updated and utilized as the information feedback function of the ISMS.

B8.1.11 Hazard communication in a facility or project is adequate to prevent serious or life threatening injuries or illnesses that require emergency medical response.

B8.1.14 Improve integration of the Justification for Continued Operation (JCO) and related Authorization Basis (AB) approval processes, especially in regard to configuration control and integration of AB boundaries between facilities and contractors.

B8.2.1 Complete the FY 1999 commitments in the Radiological Controls Improvement Plan.

B8.3.1 Provide effective management, integration, sitewide coordination, and/or implementation of the Hanford Federal Facility Agreement and Consent Order, environmental reviews (National Environmental Policy Act and State Environmental Policy Act), environmental permits, documentation, reporting requirements, regulatory inspections, and environmental issues.

B8.3.5 In the areas of effluent and environmental monitoring, data management, and reporting, use the ISMS core functions of analysis and feedback to maintain compliance and improve monitoring for the protection of workers, public, and the environment.

B8.3.6 Ensure environmental protection/compliance values are integrated into the PHMC ISMS effort.

B8.5.1 Ensure that the PHMC Quality Assurance (QA) Program is effectively implemented.

B8.5.3 Ensure that the PHMC deficiencies are tracked and trended in a single PHMC system. Ensure that issues are corrected/resolved in a timely manner. Implement an effective corrective action management system for the PHMC. If an MSC is not tracking or trending deficiencies in the PHMC system, QA will assure that the appropriate FDH organization implements corrective actions.

B8.5.4 Maintain an effective internal management-assessment program.

B8.5.5 Provide FDH PHMC management and leadership for the implementation and maintenance of the PHMC QA Program; including Standards/Requirements Identification Documents and procurement QA.

B8.6.1 Perform oversight activities on facilities/operations. Areas of improvement identified during these reviews will be addressed through a corrective action management plan. Corrective actions will be tracked to closure through the Deficiency Tracking System.

B8.6.2 Oversight activities will be conducted through established Independent Oversight and Management.

B8.6.3 Self-Assessment processes. Results will be trended, and portrayed in a performance indicator program.

B8.6.4 Oversight activities will be conducted within the tenets of ISMS.

B8.6.5 External review results (i.e., EH-22, Defense Nuclear Facilities Safety Board, etc.) that have identified weaknesses and deficiencies will have corrective action plans written to address these concerns. The Independent Oversight/Self Assessment Programs will include monitoring these corrective actions to closure.

B8.7 Establish a process for development, production, distribution, and analysis of performance indicators that measure the implementation and effectiveness of the ESH priority goals.

B8.8 An effective corrective action management program will be implemented and maintained. Procedures guiding this program will be updated, or produced, as necessary.

B0.0 Complete the corrective actions and specific improvements identified by DOE/EH (May 1998) and FDH (July 1998) reviews of the nuclear criticality safety program, and demonstrate leadership in managing an effective and efficient safety program.

ESH:DSS/5-12-99

Protocol for Review and Approval

Background

The DOE protocol for preparation and approval of an Integrated Environment, Safety and Health Management System Description (ISMSD) is summarized in the following paragraph, excerpted from the most recent version (January 1999) of the "ISMS Verification Team Leader's Handbook."

> According to the DEAR Clause, "Guidance on the preparation, content, review, and approval of the system will be provided by the contracting officer." The system being described is the Integrated Safety Management System (ISMS) and the means by which the ISMS is normally presented to DOE for review and approval is for the contractor to prepare an ISMSD. Experience has shown that the Contracting Officer's Guidance is best developed through a process that includes consultation with the contractor. So, it may evolve somewhat as the actual ISMS is being developed. It is, therefore, important that the ISMS description be maintained under a configuration and change control process. The Contracting Officer's guidance to the contractor will be used by the ISMS verification team as one of the elements against which the ISMS is reviewed.

As suggested, the process of developing the ISMS requires some evolution (feedback and improvement). To date, the Project Hanford Management Contract (PHMC) ISMS Plan has undergone two Phase I ISMS verifications at K Basins and Tank Waste Remediation System (TWRS). The K Basins Phase I ISMS verification had mixed results, in that a follow-up verification was judged to be necessary. Both the K Basins and TWRS Phase I ISMS verifications produced a number of lessons learned. Based upon the results of those verifications, RL and FDH concluded that the most efficient verification strategy was to perform a PHMC Phase I ISMS verification. Following completion of that verification, Phase II verifications (including a review of Phase I elements, at the facility or Major Subcontractor (MSC) level, with the exception of TWRS) will be performed, for selected facilities and/or PHMC MSCs.

PHMC Phase I ISMS Verification

RL's review and approval of the PHMC ISMSD will be completed in accordance with the protocol established in the DOE ISMS Verification Team Leader's Handbook (January 1999) and DOE G 450.4, Integrated Safety Management System Guide, 11/26/97. Appendix 1 formally transmits the Criteria Review and Approach Documents (CRADs) that will be used for the PHMC Phase I ISMS Verification. These CRADs have been adopted from the DOE ISMS Verification Team Leader's Handbook, and tailored to fully address all critical aspects of various ES&H initiatives underneath the ISMS umbrella and to ensure some level of consistency with the Safety Management Evaluation criteria adopted by the Department's Office of Independent Oversight (EH-2). In accordance with the "Team Leader's Handbook" this set of CRADs may be further tailored by the Verification Team Leader based on the scope of the review, etc.

The following describes the sequence of events that should occur in preparation for, and conduct of, the PHMC Phase I ISMS verification:

1. FDH completes revision to the PHMC ISMS Plan (HNF-MP-003; hereby referred to as Rev. 1), including incorporation of lessons learned from the K Basins and TWRS Phase I verifications, and other guidance provided herein.

2. FDH completes a readiness review/self-assessment, using the previously provided CRADs (Appendix I provides an analogous set of CRADs) and "RL Acceptance Criteria" listed below. The FDH readiness review should also take into consideration those items described under "Scope of RL Acceptance Review" listed below.

3. FDH declares readiness for the PHMC Phase I ISMS Verification and submits HNF-MP-003 Rev. 1 to RL for review and approval.

4. RL performs an assessment of readiness/acceptance review, which will include an evaluation of the FDH readiness review. If RL determines that FDH is not ready for PHMC Phase I ISMS verification, based upon the RL Acceptance Criteria below, these concerns will be discussed with FDH.

5. If RL concurs with the declaration of readiness, the RL Manager, the Approval Authority (AA) will notify the selected Team Leader of readiness to proceed with the PHMC Phase I ISMS verification.

6. The Team Leader, appointed by the AA, will lead the PHMC Phase I ISMS verification and the preparation of a Verification Review Report, which will include recommendations to the AA regarding acceptability of the PHMC ISMSD (e.g., HNF-MP-003, Rev. 1 and related products and procedures) for approval, and any deficiencies requiring correction prior to approval.

7. The AA will provide direction to the contractor regarding any further revision to HNF-MP-003, Rev. 1 required prior to approval.

8. FDH prepares and submits a revised version of HNF-MP-003 (e.g., Rev. 2) to the AA for approval (if required).

9. The AA approves the PHMC ISMSD (e.g., HNF-MP-003) as the DEAR clause required System Description, indicating the DEAR clause requirements have been satisfactorily met.

Scope of RL Acceptance Review

RL will perform an acceptance review of the contractor's preparations for readiness, as discussed above. This review will include the following:

1. An evaluation of the contractor's readiness review/self-assessment, in accordance with DOE P 450.5.

2. The contractor's submitted ISMSD (e.g., HNF-MP-003, Rev. 1) including all identified policies, plans, procedures, and products.

3. A thorough evaluation of this ISMSD against each requirement of H.5.E of the PHMC (DEAR 970.5205-2).

4. The status of deficiencies and response to recommendations identified in the K Basins and TWRS reviews, previous site EH-2 reviews, Facility Evaluation Board reviews, and other recently completed assessments, relating to processes and procedures.

5. FDH performance on the Fiscal Year 1999 Performance Expectation Plans identified above, as it relates to processes and procedures.

6. An evaluation of the impact of the Quality Improvement Plan and Chemical Management System implementation actions not yet completed, relative to the RL Acceptance Criteria identified below.

7. A review of PHMC-related deficiencies identified during ongoing facility Phase I/II preparations, readiness reviews and/or verifications.

RL Acceptance Criteria

While, the ISMS verification process will undoubtedly identify some deficiencies or "opportunities for improvement," as well as some noteworthy practices, RL's overall judgement of acceptability to proceed with the PHMC Phase I Verification will be based on the following:

- Dear Clause Compliance

  Compliance with the requirements of the PHMC DEAR clause H.5.E (DEAR 970.5205-2) has been substantially demonstrated.

- Impact of Deficiencies/Corrective Actions on the ISMSD

  Corrective actions associated with deficiencies identified during the readiness review, or corrective actions already underway, will not require or result in changes to the System Description and related policies, plans, procedures, and products to the extent that significant rereview of a sizeable portion of the System Description would be required.

ESH:DSS/4-12-99

Appendix

The focus of the Project Hanford Management Contract (PHMC) Phase I Integrated Environment, Safety and Health Management System (ISMS) verification will be at the site/PHMC level and the integration of the site with the facility level. Subject Matter Expert Criteria Review and Approach Documents are designed based on the specific workscope called out in Sections C.2 and C.4 of the PHMC.

BUSINESS, BUDGET, AND CONTRACTS (BBC)

OBJECTIVE

BBC.1 - Contractor procedures ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated. (CE I-2, CE I-7, CE I-9)

Criteria

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

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

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

4. Contractor procedures provide for flowdown of DEAR 970.5204-2, "Integration of Environment, Safety and Health into Work Planning and Execution," requirements into subcontracts involving complex or hazardous work.

5. Contractor policies adequately reflect the requirements and expectations of DOE.

Approach

Record Review:

Interviews:

Observations:

OBJECTIVE

BBC.2 - Contractor budgeting and resource assignment procedures include a process to ensure the application of balanced priorities. Resources are allocated to address environment, safety

and health (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 contractor's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Priorities include commitments and agreements to DOE, as well as stakeholders.

3. Contractor ISMS procedures provide resources to adequately analyze hazards associated with the work being planned.

4. Contractor ISMS procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.

5. Resource allocations reflect the tailored hazard controls.

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

7. Contractor incentive programs are in place to promote a safety-conscious culture and worker participation and involvement in ES&H management.

Approach

Record Review:

Interviews:

Observations:

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. Contractor ISMS 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. 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.

Approach

Record Review:

Interviews:

Observations:

HAZARDS IDENTIFICATION AND STANDARD SELECTION (HAZ)

OBJECTIVE

HAZ.1 - Hazards associated with the work are identified, analyzed, and categorized. (CE I-3, CE I-9)

Criteria

1. Contractor ISMS procedures require identification, analysis, and categorization of all hazards associated with the site. Contractor ISMS procedures for analysis of hazards reflect accepted rigor and methodology. The resulting hazards are utilized in selection of controls included in the contract such as List A/List B, site Standards/Requirements Identification Document or Work Smart Standards.

2. Contractor ISMS procedures require identification, analysis, and categorization of all hazards associated with facilities or activities. Hazards that are considered include nuclear, chemical, industrial or others applicable to the work being considered. Contractor ISMS procedures for analysis of hazards reflect accepted rigor and methodology.

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

Approach

Record Review:

Interviews:

Observations:

OBJECTIVE

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

Criteria

1. Contractor ISMS procedures 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. Contractor ISMS procedures ensure controls are tailored to the hazards associated with the work or operations to be authorized.

3. Contractor ISMS procedures ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.

4. Contractor ISMS procedures 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.

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

6. Contractor procedures have clearly defined roles and responsibilities for personnel assigned to ensure that applicable directives, standards and other requirements in the contract are complete and current.

7. 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:

Interviews:

Observations:

OBJECTIVE

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

Criteria

1. Contractor ISMS procedures have clearly defined roles and responsibilities for personnel assigned to oversee, review, approve the analysis of hazards, and establish controls associated with facilities and activities.

2. Contractor ISMS procedures require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.

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

Approach

Record Review:

Interviews:

Observations:

MANAGEMENT OVERSIGHT (MGO)

OBJECTIVE

MGO.1 - The contractor's ISMS description is consistent and responsive to DOE Policies 450.4-5-6; the DEAR; and the direction to the contractor from the Approval Authority. The contractor's policies and procedures ensure that the ISMS description is maintained and implemented, and that implementation mechanisms result in integrated safety management. (CE I-1)

Criteria

1. The ISMS description is consistent and responsive to DOE Policies 450.4-5-6; the DEAR; and the direction to the contractor from the Approval Authority.

2. The contractor has mechanisms in place to direct, monitor, verify, evaluate, maintain, and improve the integrated implementation of the ISMS as described in the ISMS description.

3. Implementation and integration expectations and mechanisms are evident throughout all corporate/site organizational functions.

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

5. The contractor 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. The contractor ISMS adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting.

Approach

Record Review:

Interviews:

Observations:

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. Contractor ISMS 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. Contractor ISMS procedures identify line management as responsible for ensuring that the implementation of hazard controls is adequate to ensure that work is planned and approved and conducted safely. ISMS procedures require that line managers are responsible for the verification of adequate implementation of controls to mitigate hazards prior to authorizing work to commence.

3. Contractor ISMS procedures identify line management as responsible for ensuring that hazard controls remain in effect so long as hazards are present.

4. Contractor ISMS procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.

5. Contractor ISMS procedures define a process to ensure that ES&H responsibilities flow down to each person (employees, subcontractors, temporary employees, visiting researchers, vendor representatives, lessees, etc.) performing work.

6. Contractors and subcontractors are held accountable for ES&H through appropriate contractual and appraisal mechanisms.

Approach

Record Review:

Interviews:

Observations:

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

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

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

4. Contractor ISMS procedures require line and independent oversight or assessment activities at all levels. Oversight and assessment activities verify that work is performed within agreed upon controls.

5. Contractor ISMS procedures ensure oversight or assessment results are managed to ensure lessons are learned and applied, that issues are identified and managed to resolution, that fundamental causes are determined, and effective corrective action plans are developed and implemented.

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

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

Approach

Record Review:

Interviews:

Observations:

OBJECTIVE

MGO.4 - Contractor ISMS procedures provide a method to ensure 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:

- Nuclear/Criticality Safety
- Radiation Protection
- Training and Qualification
- Maintenance and Work Control
- Quality Assurance
- Configuration Management
- Environmental Compliance/Protection (including pollution prevention/waste minimization)
- Infrastructure Operations & Maintenance

Criteria

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

2 Contractor ISMS 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 Contractor ISMS 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. *Contractor ISMS procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.*

5. Contractor ISMS mechanisms for the control of work specify that line management is responsible for ES&H.

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

Approach

Record Review:

Interviews:

Observations:

ESH:DSS/4-12-99

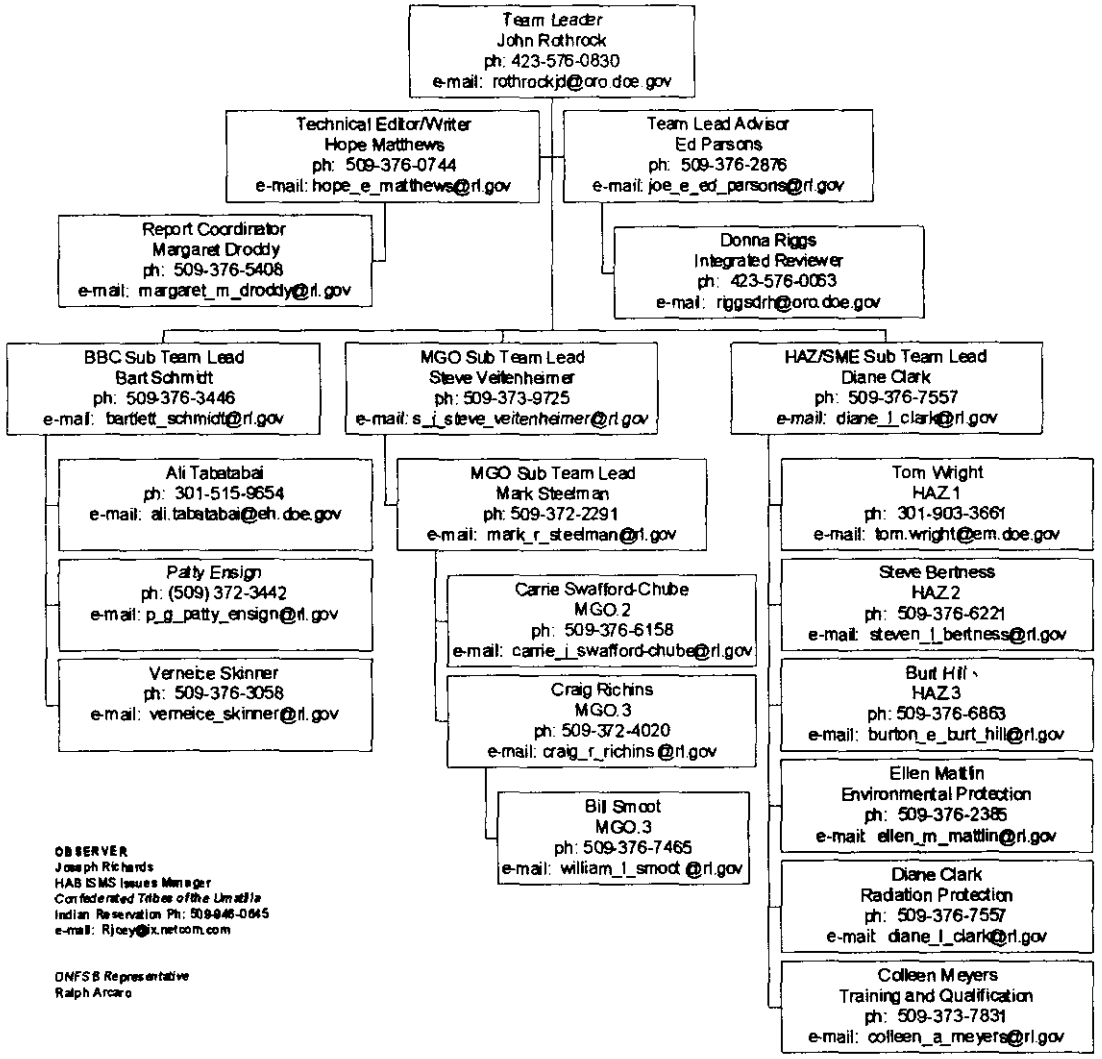
APPENDIX B

TEAM MEMBERS AND BIOGRAPHIES

TEAM ASSIGNMENTS

Team Leader	John D. Rothrock
Team Lead Advisor	Joe (Ed) Parsons
Technical Editor/Writer	Hope E. Matthews
Report Coordinator	Margaret M. Droddy
Integrated Reviewer	Donna R. H. Riggs
Hazards Identification and Standards Selection Subteam SME Radiation Protection SME Environmental Protection SME Training and Qualifications	Diane L. Clark Steve L. Bertness Burton E. (Burt) Hill Tom Wright Ellen M. Mattlin Colleen A. Meyers
Management Oversight Subteam	Steve J. Veitenheimer Mark R. Steelman (FEB) Carrie J. Swafford-Chube Craig R. Richins William L. Smoot
Business, Budgets, and Contracts Subteam	Bartlett (Bart) Schmidt Ali Tabatabai Verneice Skinner Patty G. Ensign
Hanford Advisory Board Observer	Joseph Henry Richards
Defense Nuclear Facilities Safety Board Observer	Ralph Arcaro

DOE ISMS PHASE I VERIFICATION TEAM FOR PHMC



John D. Rothrock, Team Leader

Mr. Rothrock is currently the Director of the Operations Division in the Office of the Assistant Manager for Environment, Safety, and Quality, DOE Oak Ridge Operations Office (ORO). Mr. Rothrock holds a B.S.E.E. from Washington State University and a Master of Engineering Degree in Industrial Engineering from Texas A&M University.

Mr. Rothrock has over 25 years of federal experience including 19 years working for the DOE. His previous assignments include work on the Army's Patriot Missile System, DOE Plant Representative and Contracting Officer Representative at Goodyear Aerospace Corporation for the Gas Centrifuge Enrichment Program; Director of the DOE ORO Quality and Reliability Division; and Director of the DOE ORO Safety and Health Division.

His previous experience also includes team leadership of DOE functional and management appraisals for ORO; team member on a Headquarter's Technical Safety Appraisal at the RL Plutonium Finishing Plant; team member on a Headquarter's Quality Verification Review of reactors at DOE-ID and the FFTF at DOE-RL; team leader and deputy team leader for operational readiness reviews at the Y-12 Weapons Plant; and subteam leader for Integrated Safety Management System Verification (Phase I) at the Oak Ridge National Laboratory. Mr. Rothrock has also chaired two DOE Type B Accident Investigations and is qualified as a DOE Senior Technical Safety Manager and ISMS Verification team leader.

Ed Parsons, Team Lead Advisor

Mr. Parsons is currently serving as the Senior Technical Advisor for Radiological Controls, Office of Engineering and Standards, RL. He has 24 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 decommissioning experience includes numerous industrial sites, a thorium storage facility, a uranium mill site, nuclear aircraft propulsion systems dismantlement, plutonium facility, and a full scale, commercial nuclear power plant decommissioning. Mr. Parsons has also served as technical expert to the International Labor Organization during the ratification of the International Atomic Energy Agency's (IAEA) *International Basic Radiation Safety Standards* and member of the technical council for the development of IAEA's safety guide *Occupational Radiation Protection in the Decommissioning of Nuclear Facilities.*

Steve Bertness

Mr. Bertness is an occupational safety and health specialist for the Assistant Manager of Environmental Restoration at the Hanford Site with special emphasis on nuclear safety for environmental restoration projects. Mr. Bertness earned a B.S. in Safety Engineering from Indiana University of Pennsylvania, whose Safety Science Department holds an accreditation from the American Society of Safety Engineers, in 1989. He has served in his current position for the past 3 years. Prior to that, 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.

Diane L. Clark

Ms. Clark has been with the DOE for 13 years, at RL and the Idaho Operations Office. Ms. Clark is currently the Safety Management Team Lead for the DOE ORP at the Hanford Site. She is responsible for overseeing the occupational health and safety, radiological control, quality assurance, emergency management, requirements management, and integrated safety management programs for ORP. She currently represents ORP in the DOE Safety Management Integration Team. Ms. Clark has coordinated the ISMS Phase I and II verifications for the Hanford High Level Waste Tank Farms and has participated in the Pacific Northwest National Laboratory (PNNL) ISMS Phase I/II Verification. Additionally, she developed the ORP ISMS System Description and continues to manage ORP ISMS implementation.

Ms. Clark holds a B.S. in Environmental Health and a M.S. in Radiology and Radiation Biology, both from Colorado State University.

Margaret Droddy

Ms. Droddy is an Associate with EnergX contracted as a Technical Editor and Specialist for the Fluor Daniel Hanford, Inc., Facility Evaluation Board. Ms. 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. Ms. Droddy supported the FDH Critical Self-Assessment Team providing technical editing, report preparation, and graphics support. Most recently, she provided technical support and report preparation and coordination of the Extent of Condition Review conducted by the Facility Evaluation Board, and the DOE ORP Integrated Safety Management System Phase II Verification.

Patty Ensign

Patty Ensign earned her Bachelor of Science 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 HQ.

- 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.

  - She has coordinated and supported budget and planning activities among divisions. She also validated cost estimates and budget requirements.

  - Provided direct support in the analysis of FDH budgeting and planning efforts through the reviews of their Annual Work Plans and Multi-Year Work Plans.

  - She has performed baseline management to ensure that the project controls are in place and reviewed the Baseline Change Requests involving life cycle workscope to ensure that the change is justified and adequate.

  - She has 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.

Mrs. Ensign has been recently reassigned to the Analysis and Evaluation Division.

Burt Hill

Mr. Hill attended the University of Idaho for 2 years working towards a B.S. in Civil Engineering. He then worked for 24 years in the Naval Nuclear Propulsion Program. He completed the Navy's year-long Nuclear Training Program in the upper half. Mr. Hill served aboard three submarines as a Nuclear Mechanical Operator and Engineering Duty Petty Officer. He was aboard the USS Bremerton for 4 years as the Engineering Department's leading Petty Officer in charge of 60 people who operated and maintained a S6G Nuclear Power Plant. He developed the requirements for refit coordinator used in both Sub Pac and Sub Lant. He spent 7 years at two different Navy Nuclear Training Prototypes teaching engineering and science. At both prototypes, he qualified and performed as Engineering Officer of the Watch. Mr. Hill spent 3 years at S8G, the Trident Submarine reactor prototype in upstate New York where 2 years were spent as the Mechanical Materials Engineer during testing and start up.

Mr. Hill spent 2 years as the assistant Materials Officer and the Command Senior Chief for Sub Group Seven Representative Guam. He reviewed and approved all nuclear repair work on ships West of the International Date Line. He planned nuclear ship arrivals and miscellaneous repairs in many foreign ports of the Western Pacific. He performed Sub Pac's weekly requirement for a nuclear surveillance on each Nuclear ship in port. This was independent duty.

For 3 years he was the Assistant Team Leader of the Trident Squadron 17 Performance Monitoring Team. The Team acted as Field Engineers for NAVSEA Code 390 with the goal of increasing reliability and reducing costs of our Submarine Fleet. Additionally, he stood watch as the Squadron Duty Officer and served as part of Squadron's monitor and drill Team during the annual preparation of eight Trident Submarines for the Tactical Readiness and the Operational Reactor Safeguards Examinations. This was also independent duty.

He has been with the DOE for the past 7 years as the Hanford Maintenance Manager. His responsibilities include leading and performing Conduct of Operations and Maintenance inspections on all of the Hanford Site contractors. He has the responsibility for the Lock and Tag, and Hoisting and Rigging programs. He successfully put together the Hanford Facility Representative program. He oversaw the implementation of the Occurrence Report Processing System by all of the Hanford Site contractors. Most recently, he has been gathering information and developing a new process and procedure by which Operational Readiness Reviews will be conducted by DOE at the Hanford Site.

Hope E. Matthews

Ms. Matthews is currently employed with Critique, Inc. as a Technical Writer/Editor with the DOE Office of External Affairs. Her current responsibilities include providing technical writing/editing support and coordinating all aspects of document preparation for the DOE ISMS Project Team. Ms. Matthews has nearly 10 years (1990 to 1999) of experience as a Technical Writer/Editor at the Hanford Site.

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-specific publication standards.

Ms. Matthews earned her B.A. in English in 1991 from Seattle University in Washington State. Her technical expertise includes SGML and HTML programming languages and numerous software applications.

Ellen Mattlin

Ms. Mattlin has worked for the government in different capacities for 16 years. Ms. Mattlin holds a B.S. Degree in Mechanical Engineering from Oregon State University and has completed some course work for a M.S. degree in Environmental Engineering at Washington State University. Ms. Mattlin has worked at the Hanford Site for RL since 1991. The first 3 years were at Tank Farms in the Characterization Division working with the contractor design team for the development of the Rotary Mode Core Sampling Truck. She has participated in two Operational Readiness Reviews, one for core sampling in the tanks with the Rotary Mode Core Sampling Truck and the other for placing a pump in the SY101 Tank to relieve the hydrogen gas. The remaining years (1994-present) have been with the Environmental Assurance, Permits and Policy Division where she has been the site point of contact for portions of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, RCRA Closures, and the Toxic Substance Control Act, Polychlorinated Biphenyls. She is also the point of contact for the site on rule making for these regulations. She participated as the environmental SME for the Readiness Assessment for the Environmental and Molecular Sciences Laboratory.

Colleen Meyers

Ms. Meyers has 17 years of experience in naval nuclear, commercial, and government activities which include the following: health physics/radiological control, nuclear reactor plant startup, and training. She holds a B.A. in communications from the University of Washington and has been at the Hanford Site since August 1994. Prior to joining the RL Office of Training in June 1996, she was the Radiological Control Program Engineer for Tank Waste Remediation Systems (currently ORP), which included oversight of the Radiological Control Programs for East and West Tank Farms, as well as the Characterization Project. Currently, she works with AED performing Technical Training oversight of all ES&H training on the Hanford Site.

Ms. Meyers has met the requirements of the RL Office of Training (OTR) *Qualification Standard for Personnel Evaluating Technical Training and Qualification Programs* (December 1995). She has studied and applied the Systematic Approach to Training (SAT). She has conducted assessments of Nuclear Facility training and Qualification Programs (TQPs) using DOE Order 5480.20A and DOE-STD-1070-94 criteria. These assessments have included Facility On-Shift Training as part of Conduct of Operations (DOE Order 5480.19). She has participated in numerous Operational Readiness Reviews (ORRs) and Readiness Assessments (RA) as well as the Line Management Readiness Review of the River Protection Project Integrated Safety Management Implementation in May/June 1999. Ms. Meyers is qualified as a Lead Auditor.

Joseph Henry Richards

Mr. Richards is in his eleventh 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 Reservation, Umatilla Army Chemical Weapons Depot, 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 and specialized 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 HQ's Environmental Management System 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 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 Richins

Mr. Richins is a qualified ISMSV Team Leader and 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 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. He has also functioned as the program manager for a variety of DOE projects and programs for over 12 years. 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 has also led development of the national laboratory's ES&H and Operational Performance Measures and Indicators process.

Donna Riggs

Ms. Riggs is employed by Oak Ridge Operations Office (ORO) on the Quality Management Systems Team in the Technical Support Division for the Assistant Manager for Environment, Safety and Quality (AMESQ). She supports strategic planning, organizational self-assessments (Baldrige-based), organizational development and process improvement activities, and verification of twelve ORO contractors' Integrated Safety Management Systems. Ms. Riggs received a B.S. in Industrial Engineering in 1983 and a M.S. in Manufacturing Engineering in 1990 from the University of Tennessee, Knoxville. She began her career at ORO in 1983 as a weapons engineer at the Y-12 Plant Site moving to the quality management organization as a general engineer in 1991. Ms. Riggs is a registered engineer in the state of Tennessee.

Ms. Riggs was a team member on the Oak Ridge National Laboratory (ORNL) ISMS Phase I Verification Review; the Y-12 Site Office Readiness Assessment; Readiness Assessment for Receipt, Storage, and Shipment at the Y-12 Plant; the Operational Readiness Review for the Bethel Valley Liquid Low-level Waste Collection and Transfer System Upgrades to buildings 2026 and 2099 at ORNL; the Facility Appraisal for the Fusion Energy Division at ORNL; the Facility Appraisal for the Plant and Equipment Division at ORNL; the Quality Assurance Inspection at Brookhaven National Laboratory; and the Conduct of Operations inspection of the TSCA Incinerator. She has been certified by AMESQ as a lead auditor and by headquarters to teach the quality assurance order requirements.

Bartlett Schmidt

Mr. Schmidt earned his Bachelor of Science in Engineering, majoring in Industrial Engineering. He has 31 years experience in the professional and technical fields of Industrial Engineering, quality assurance, and government contract management. This experience includes the following:

- Eleven years of technical support to the Defense Contract Administration Service Contracting Officer in administration of government contracts ranging from Global Positioning System satellites, Defense Advanced Research Projects Agency projects, conventional bombs, and tents

- 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 planning and integration at DOE, Richland Operations Office where his primary focus has been management systems. 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 developed requirements, implemented quality assurance programs, and conducted audits to MIL-Q-9858A, DOE Order 5700.6C and NQA-1. He was a team member in the ISMS Baseline, Budget and Contracts area for the Phase I verification of the Tank Waste Remediation Project at the Hanford Site. He was a team member to develop the ISMS System Description for RL. He was an independent consultant in management information systems implementation. He is a Certified Auditor for Nuclear Quality Assurance Programs and in Government Contract Management.

Verneice Skinner

Ms. Skinner is a Program Analyst in the Office of Performance Assessment. Ms. Skinner has over 18 years contracting experience relating to large, complex architect-engineer, construction, management and operating, management and integration, and research and development contracts. This experience included solicitation, evaluation, selection, negotiation, award, and administration of long-term, cost and fixed-price type contracts. Ms. Skinner has over 2 years experience as a contracting officer. Contracts have been valued in the billions and millions of dollars, including Hanford's EM Management and Integration (FDH) contract (voting member of the Source Selection Board), the Environmental Molecular Sciences Laboratory (Secretariat on the Source Selection Board and follow-on administration of the contract), and Westinghouse Hanford Company (administration). Ms. Skinner has served as Source Selection Board Chairman for architect-engineering contracts, and served as Secretariat for other major source selections. Ms. Skinner has performed reviews of contractors' procurement systems, including serving as the review team Chairman. During the last 3 years, Ms. Skinner has been responsible for Hanford Site reporting relating to achievement of Hanford's Integrated Site Baseline and the strategic goals of the Hanford Strategic Plan.

William Smoot

Mr. Smoot is the Senior Technical Advisor for Operations Startup reporting to the Director for Office of Spent Fuel, RL. He has over 30 years experience in the maintenance, operation, supervision, and oversight of nuclear power plants and nuclear support facilities. He was a member of the DOE-NR field office, PHNS, for 10 years providing oversight of the radiological controls program, defueling program, repair and inactivation programs, and hazardous material shipping program. Mr. Smoot was the manager of the Westinghouse Hanford Company (WHC) Safety Compliance Assurance program for 3 years, providing oversight of the radiological control and occupational safety programs, providing oversight of both facilities and construction activities. He instituted the contractor unannounced Occupational Safety and Health Administration compliance program at the Hanford Site. Mr. Smoot was also the manager of WHC's Radiological Safety Standards and Requirements Organizations for 2 years. During this period, he issued and implemented an inhouse radiological controls manual for all WHC activities.

Mr. Smoot has participated on two DOE-Headquarters site radiological control evaluations, one of which included decommissioning and decontamination activities, three ISMS implementation evaluations, and two facility operational readiness reviews. He is a qualified Lead Auditor for both 10 CFR 820 and OCRWM programs, and is a certified DOE Accident Investigator.

Mark Steelman

Mr. Steelman is presently the Acting Director for the Fluor Daniel Hanford, Inc., Facility Evaluation Board. Mr. Steelman holds a. B.S. degree in aeronautical engineering, a B.A. degree in economics from the University of Washington, and has completed an MBA from LaSalle University.

Mr. Steelman has 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/inspection qualifications include the participation in several safety system functional inspections (SSFIs) and Operational Readiness Reviews (ORR) at commercial nuclear facilities and participation in the Integrated Safety Management System reviews at Rocky Flats and the River Protection Program 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 the Plutonium Finishing Plant, Spent Nuclear Fuel Project, Fast Flux Test Facility, and single-shell tanks in the functional areas of Engineering/Nuclear Safety. Mr. Steelman participated in the contractor ORR for the Light Duty Utility Arm and contractor ORR for the Project W-320 Tank 241-C106 Sluicing for FDH.

Carrie Swafford-Chube

Ms. Swafford-Chube is employed by RL as an Independent Oversight Specialist for the Performance Assessment Division. She oversees Contractor Independent and Self-Assessment Programs. Ms. Swafford-Chube received a B.S. 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 Hanford, 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 DOE's Richland Operations Office ISM Development Team. She participated in the ISMSV at the Princeton Plasma Physics Lab as the Team Lead's Assistant and in the Office of River Protection ISMSV Phase II as a team member of the Management and Oversight Sub Team. Ms. Swafford-Chube also participated in three audits and numerous assessments. She completed the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements and Description Lead Auditor Training, DOE/RW-0333P, Revision 7, and the Carlsbad Area Office Auditor and Lead Auditor Training.

Ali Tabatabai

Mr. Tabatabai has 15 years of management and engineering consulting experience interacting with various Federal and private sector organizations. Mr. Tabatabai's technical expertise relates to business management systems, ES&H program planning and development, nuclear safety analysis, deactivation and decommissioning, and probabilistic risk assessments. Mr. Tabatabai has worked with senior executives in the development and formulation of strategic plans, benchmarking of best management practices, and development of business processes to improve the efficiency of organization's work planning and project execution.

Mr. Tabatabai holds a M.S. in Nuclear Engineering and a B.S. in Applied Mathematics. He currently serves as the Principal of Link Technologies, Inc. Prior to this position, Mr. Tabatabai worked as a Senior Program Manager at Battelle-Pacific Northwest National Laboratory and as a Fellow with the Advisory Committee on Reactor Safeguards. Mr. Tabatabai holds a current DOE "Q" clearance.

Steven J. Veitenheimer

Mr. Veitenheimer has over 20 years of nuclear experience. As the Director of Quality, Safety, and Health Programs Division for RL, he has been responsible for the daily supervision and direction of 20 professional staff members performing technical, program direction, and budget activities for the Hanford Site in the functional areas of quality assurance, offsite regional radiological assistance, performance monitoring, emergency planning/preparedness/ response, Hanford Site directives and requirements, deficiency tracking, fire protection, Hanford Fire Department, emergency medical response, occupational safety and industrial hygiene, occupational health, nuclear and criticality safety, transportation emergency response, and radiological controls.

Mr. Veitenheimer, as Principal Health Physicist, was responsible for the preparation and subsequent verification of radioactive waste shipping manifests and supporting documentation for the purpose of low-level waste off-site transportation and burial. He was responsible for the position of WNP-2 Radiological Emergency Manager as part of the plant Emergency Response Organization. Mr. Veitenheimer was also responsible for directing off-site mobile monitoring teams, evaluating and trending accident radiological conditions, and performing computerized off-site dose projections.

Mr. Veitenheimer holds a B.S. degree in Chemistry from Gonzaga University and served as an officer in the United States Navy.

Thomas Wright

Mr. Wright has over 28 years of government experience. He joined DOE in 1991 with the Office of Defense Programs where he dealt with authorization basis issues for the Pantex Program Office. Duties included serving as a technical reviewer for Pantex Facility Safety Analysis Reports (FSAR) serving as the Occurrence Reporting Program Manager, and reviewing new DOE Directives. In 1993, he joined the EM Office of Safety and Health where he worked with FSAR issues and chaired the Secretarial Officer Working Group for FSARs. Upon dissolution of that office, he joined the Hanford Program Office where he currently works safety and health issues, Occurrence Reporting and DNFSB concerns.

Mr. Wright holds a B.S. in Nuclear Engineering from the University of Virginia, a M.S. in Computer Engineering from the University of Michigan, and has held a USNRC Senior Reactor Operator license for the Defense Nuclear Agency AFRRI Reactor.

APPENDIX C

ISMS PHASE I CRITERIA AND REVIEW APPROACH DOCUMENTS

TABLE OF CONTENTS

BUSINESS, BUDGETS, AND CONTRACTS (BBC)

OBJECTIVE

BBC.1 - Contractor procedures ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated. (CE I-2, CE I-7, CE I-9)

Criteria

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

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

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

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

5. Contractor policies adequately reflect the requirements and expectations of DOE.

Approach

Record Review

- Review a sample of hazard control documents to verify safety controls are provided for the hazards identified and that the control strategy encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment. Typical documents include Authorization Agreements (AA), Safety Analysis Reports (SAR), Technical Safety Requirements (TSR), Health and Safety Plans (HASP), Radiological Work Permits (RWP), operating procedures, etc.

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

- Sample actual implementing documentation.

- Coordinate the review of work-related documents (such as RWPs and operating procedures) with the OP and SME functional area reviewers.

Interviews

Interview personnel responsible for developing and implementing hazard controls and/or Authorization Basis Documentation at the facility level. This should include personnel such as those responsible for SAR/TSR preparations and implementation, as low as reasonably achievable (ALARA) review requirements, Process Hazard Analysis activities, etc.

OBJECTIVE

BBC.2 - Contractor 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 contractor's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Priorities include commitments and agreements to DOE, as well as stakeholders.

3. Contractor ISMS procedures provide resources to adequately analyze hazards associated with the work being planned.

4. Contractor ISMS procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.

5. Resource allocations reflect the tailored hazard controls.

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

7. Contractor incentive programs are in place to promote a safety-conscious culture and worker participation and involvement in ES&H management.

Approach

Record Review

- Review a sample of hazard control documents to verify safety controls are provided for the hazards identified and that the control strategy encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment. Typical documents include Authorization Agreements (AA), Safety Analysis Reports (SAR), Technical Safety Requirements (TSR), Health and Safety Plans (HASP), Radiological Work Permits (RWP), operating procedures, etc.

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

- Sample actual implementing documentation.

- Coordinate the review of work-related documents (such as RWPs and operating procedures) with the OP and SME functional area reviewers.

Interviews

Interview personnel responsible for developing and implementing hazard controls and/or Authorization Basis Documentation at the facility level. This should include personnel such as those responsible for SAR/TSR preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

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. Contractor ISMS 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. 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.

Approach

Record Review

- Review a sample of hazard control documents to verify safety controls are provided for the hazards identified and that the control strategy encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment. Typical documents include Authorization Agreements (AA), Safety Analysis Reports (SAR), Technical Safety Requirements (TSR), Health and Safety Plans (HASP), Radiological Work Permits (RWP), operating procedures, etc.

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

- Sample actual implementing documentation.

- Coordinate the review of work-related documents (such as RWPs and operating procedures) with the OP and SME functional area reviewers.

Interviews

Interview personnel responsible for developing and implementing hazard controls and/or Authorization Basis Documentation at the facility level. This should include personnel such as those responsible for SAR/TSR preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

HAZARDS IDENTIFICATION AND STANDARD SELECTION (HAZ)

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 FDH policies and procedures include requirements to assure that hazards for work to be conducted have been identified and appropriately analyzed. Contractor ISMS procedures for analysis of hazards reflect accepted rigor and methodology. The resulting hazards are utilized in the selection of controls included in the contract such as List A/List B and the SRIDs.

2. FDH ISMS 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. ISMS procedures for analysis of hazards reflect accepted rigor and methodology.

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

Approach

Record Review

- Review FDH 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 flowdown 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 for AJHA for identification and analysis of hazards.

- Coordinate the review with the SME functional area reviewers.

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

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. Contractor ISMS policies and or procedures 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. Contractor ISMS policies and or procedures ensure controls are tailored to the hazards associated with the work or operations to be authorized.

3. Contractor ISMS policies and or procedures ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.

4. Contractor ISMS policies and or procedures utilize accepted and structured methods and processes to identify, select, and gain approval for ES&H standards and requirements commensurate with the work scope and its associated hazards.

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

6. Contractor procedures have clearly defined roles and responsibilities for personnel assigned to ensure that applicable directives, standards and other requirements in the contract are complete and current.

7. 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 a sample of hazard control policies and or procedures to verify methodologies and instructions provided 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 procedures to ensure accurate and effective development of Authorization Basis documentation.

- Coordinate the review of 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 SAR/TSR policies and procedures, ALARA 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. Contractor ISMS procedures and policies have clearly defined roles and responsibilities for personnel assigned to oversee, review, approve the analysis of hazards, and establish controls associated with Site-wide activities.

2. Contractor ISMS procedures and policies require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.

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

Approach

Record Review

- Review FDH 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 personnel 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 SAR/TSR preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

MANAGEMENT OVERSIGHT (MGO)

OBJECTIVE

MGO.1 - The contractor's ISMS Description is consistent and responsive to DOE Policies 450.4-5-6; the DEAR; and the direction to the contractor from the Approval Authority. The contractor's policies and procedures ensure that the ISMS Description is maintained and implemented, and that implementation mechanisms result in integrated safety management. (CE I-1)

Criteria

1. The ISMS Description is consistent and responsive to DOE Policies 450.4-5-6; the DEAR; and the direction to the contractor from the Approval Authority.

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

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

4. The contractor has established a process that establishes documents, and implements 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.

5. The contractor ISMS adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting.

Approach

Record Review

- Review the FDH ISMS 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 ISMS 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, which 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 ISMS Description.

- Interview contractor line mangers who are or will be responsible for administering the mechanisms of the ISMS.

- Interview chairman and key members of any ISMS coordinating committees, if established.

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. Contractor ISMS 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. Contractor ISMS procedures identify line management as responsible for ensuring that the implementation of hazard controls is adequate to ensure that work is planned and approved and conducted safely. ISMS procedures require that line managers are responsible for the verification of adequate implementation of controls to mitigate hazards prior to authorizing work to commence.

3. Contractor ISMS procedures identify line management as responsible for ensuring that hazard controls remain in effect so long as hazards are present.

4. Contractor ISMS procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.

5. Contractor ISMS procedures define a process to ensure that ES&H responsibilities flow down to each person (employees, subcontractors, temporary employees, visiting researchers, vendor representatives, lessees, etc.) performing work.

6. Contractors and subcontractors are held accountable for ES&H through appropriate contractual and appraisal mechanisms.

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 those managers and the work force is 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 who 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.

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

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

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

4. Contractor ISMS procedures require line and independent oversight or assessment activities at all levels. Oversight and assessment activities verify that work is performed within agreed upon controls.

5. Contractor ISMS procedures ensure oversight or assessment results are managed to ensure lessons are learned and applied, that issues are identified and managed to resolution, that fundamental causes are determined, and effective corrective action plans are developed and implemented.

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

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

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.

OBJECTIVE

MGO.4 - Contractor ISMS procedures provide a method to ensure 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:

- Nuclear Safety/Criticality Protection
- Radiation Protection
- Training and Qualification
- Maintenance and Work Control
- Environmental Compliance/Protection (including pollution prevention/waste minimization).

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

2. Contractor ISMS 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. Contractor ISMS 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. Contractor ISMS procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.

5. Contractor ISMS mechanisms for the control of work specify that line management is responsible for ES&H.

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

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, asses their understanding, support, and implementation of the control of work within the approved controls.

SUBJECT MATTER EXPERT (SME)

OBJECTIVE

SME-EP: Environmental Protection - Within the Environmental Protection 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. FDH policies and procedures are established for allocating resources for environmental regulatory required provisions. (BBC.2)

2. FDH policies and procedures ensure that environmental controls are adequate to mitigate all identified hazards associated with the planned work.

3. FDH policies and procedures for Environmental Protection contain clear roles and responsibilities and specify that the line management is responsible for environmental protection/requirements.

4. FDH mechanisms are established to communicate environmental requirements to employees at all levels.

5. FDH procedures are established to ensure that Environmental Protection personnel are required to have competence commensurate with the assigned responsibility.

6. FDH policies and procedures are established to ensure that the Contractor and subcontractors are held accountable for environmental regulations through appropriate contractual and appraisal mechanisms. (MGO.2)

7. FDH procedures and/or mechanisms for Environmental Protection require that within the subject area, feedback and continuous improvement occurs.

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 Environmental Protection to determine if 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.

OBJECTIVE

SME-RP - Radiation Protection policies and procedures are in place for the planning of radiological work, including adequate resource allocation and 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 the Radiation Protection area, line managers are responsible for safety, clear roles and responsibilities have been established, and there is a satisfactory level of competence. (CE I-2, CE I-3, CE I-4, CE I-5, CE I-6).

Criteria

1. The contractor's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Policies and procedures for Radiation Protection require adequate planning of individual work items to ensure that hazards are analyzed and controls are identified.

3. Policies and procedures for Radiation Protection contain clear roles and responsibilities. Radiation Protection is effectively integrated with line support managers to ensure that line managers are responsible for safety.

4. Policies and procedures for Radiation Protection require controls to be implemented prior to work commencing, these controls are effectively integrated, and readiness is confirmed prior to performing work.

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

6. FDH policies and procedures are established to ensure that the Contractor and subcontractors are held accountable for radiation protection regulations through appropriate contractual and appraisal mechanisms. (MGO.2)

7. Policies and procedures for Radiation Protection require that personnel who are assigned to the subject area have a satisfactory level of competence.

8. Policies and procedures for Radiation Protection require that within the subject area, feedback and continuous improvement occurs at all levels.

Approach

Record Review

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

Interviews

- Interview personnel and responsible managers assigned to Radiation 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 Radiation Protection to assess level of competence.

OBJECTIVE

SME-TQ - Training and qualification policies, plans, procedures, and programs for FDH and contractor personnel are in place to ensure competence commensurate with responsibilities; to ensure a practice of continuous performance improvement is implemented; and to ensure the responsibility for ownership of training and verification of qualification prior to work assignment lies with line management.

Criteria

1. Contracting mechanisms are in place to ensure the identification of training and qualifications required for all FDH personnel and subcontractors. (BBC.1)

2. Contractor training 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. (BBC.3)

3. Contractor training procedures are in place to ensure that contractor personnel responsible for analyzing the hazards and developing, reviewing, or implementing the controls, have competence that is commensurate with their responsibilities. (HAZ.3)

4. 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. (MGO.2)

5. Contractor training procedures ensure that the appropriate training requirements are identified and are adequate to mitigate all identified hazards associated with the individual work.

6. Contractor training procedures are in place to ensure that training is completed prior to commencing work.

7. Contractor personnel who conduct work are required to have competence commensurate with the assigned responsibilities.

8. Contractor plans, policies and procedures contain clear roles and responsibilities that specify line management responsibility for ensuring the training and qualification of personnel reporting to them.

9. The contractor has an established mechanism to ensure corrections to and suggestion for improvements to training programs and courses are fed back into the training system.

10. The contractor has a training program designed to ensure implementation of ISMS, including understanding of guiding principles and core functions.

Approach

Record Review

Review training, personnel, procurement, medical qualification, and other FDH level procedures containing roles and responsibilities for qualification, requirements for competence, and conduct of the process of training for Hanford site contractors for ISMS application.

Interviews

Interview training, procurement, ES&H, Industrial Relations, and Emergency Preparedness personnel to determine understanding of roles and responsibilities.

TABLE OF CONTENTS

VOLUME I

VOLUME II

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

OBJECTIVE

BBC.1 - Contractor procedures ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated. (CE I-2, CE I-7, CE I-9)

Criteria

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

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

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

4. Contractor procedures provide for flowdown of DEAR 970.5204-2, "Integration of Environment, Safety and Health into Work Planning and Execution," requirements into subcontracts involving complex or hazardous work.

5. Contractor policies adequately reflect the requirements and expectations of DOE.

Approach

Record Review

- Review a sample of hazard control documents to verify safety controls are provided for the hazards identified and that the control strategy encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment. Typical documents include Authorization Agreements (AA), Safety Analysis Reports (SAR), Technical Safety Requirements (TSR), Health and Safety Plans (HASP), Radiological Work Permits (RWP), operating procedures, etc.

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

- Sample actual implementing documentation.

- Coordinate the review of work-related documents (such as RWPs and operating procedures) with the OP and SME functional area reviewers.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

Interviews

Interview personnel responsible for developing and implementing hazard controls and/or Authorization Basis Documentation at the facility level. This should include personnel such as those responsible for SAR/TSR preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

Documents Review

- Contract No. DE-AC06-96RL13200- *Approval of Baseline Change Request (BCR) FSP-99-043, "Fiscal Year 2000 Multi-Year Work Plan Submittal and Baseline Revisions (Bridge),"* Correspondence from Sally A. Sieracki, RL Contracting Officer, to R. D. Hanson, President Fluor Daniel Hanford, Inc., September 30, 1999
- Contract No. DE-AC06-96RL13200- *Fiscal Year 2000 Startup*, Correspondence from S. A. Sieracki, RL Contracting Officer, to R. D. Hanson, President Fluor Daniel Hanford, Inc., September 30, 1999
- Contract No. DE-AC06-96RL13200- *Hanford Mission Planning Guidance (MPG) for FY 2001 – Amendment #2*, Correspondence from James C. Hall, Acting Manager RL, to R. D. Hanson, President Fluor Daniel Hanford, Inc., March 6, 1999
- Contract No. DE-AC06-96RL13200-*Fiscal Year (FY) 2000 Baseline Updating Guidance for Multi-Year Work Plans (BUG-MYWP)*, Correspondence from Keith A. Klein, Manager DOE/RL, and Richard T. French, Manager Office of River Protection, to R. D. Hanson, President Fluor Daniel Hanford, Inc., June 21, 1999
- DOE G 450.4-1A, *Integrated Safety Management System Guide*, May 27, 1999
- DOE/RL-98-84, *Hanford Site Environment, Safety and Health Fiscal Year 1998/1999 Execution Commitment Summary*, Rev. 0
- DOE/RL-99-03, *Hanford Site Performance Report*-June 1999, Rev. 8
- DOE/RL-99-28, *Hanford Site Environment, Safety and Health Fiscal Year 2001 Budget-Risk Management Summary*, Rev. 0
- Example Subcontract Clauses, 9.0, *Available Fee*; 41.0, *Performance Objectives, Measures, Expectations & Incentives*; 44.0, *Determination of Incentive Fees*; and 45.0, *Conditional Payment of Fee or Incentives*
- FDH-9955044, *Fiscal Year 2000 Multi-Year Work Plan Guidance*, July 21, 1999
- 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-029, *Hanford Site Technical Baseline Change Control*, Rev. 1, May 17, 1999
- HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts*, Rev. 0, July 30, 1999
- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

- HNF-MP-003, Appendix B, *Integrated ES&H Management System Description*, Rev. 2, August 1999
- HNF-MP-003, *Integrated ES&H Management System Plan*, Rev. 2, September 1, 1999
- HNF-MP-599, *Project Hanford Quality Assurance Program Description*, Rev. 3, March 10, 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-123, *The Material Request/Purchase Requisition/Contract Requisition Process*, Rev. 5, June 21, 1997
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 8, 1999
- HNF-PRO-192, *Buyer's Technical Representative and Duties*, Rev. 1, September 24, 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. 0, February 26, 1998
- HNF-PRO-706, *PHMC Acquisition System Requirements*, Rev 0, October 17, 1997
- *Integrated Environment Safety and Health Management System Phase I Readiness Review Report*, Volumes 1 and 2, Fluor Daniel Hanford, Inc., March 22-April 2, 1999
- Integrated Priority List
- Modification M086, DE-AC06-96RL13200, *Project Hanford Management Contract, Fluor Daniel Hanford, Inc*, Redacted, October 1, 1999
- Pen and Ink Change Notice Form
- PHMC Provisions Covering Services Performed on the Hanford Site
- PP-3012, *Instructions for Use of the Terms and Conditions*, Rev. 6, August 18, 1999
- SP-5A, *Special Provisions – On-Site Services-Full ISMS*, September 30, 1999
- SP-5B, *Special Provisions – On Site Services-Standard ES&H*, September 30, 1999
- Subcontract Clauses 7.0, *Integration of Environmental Safety and Health Into Work Planning and Execution*; 14.0, *Shut-Down Authorization*; 16.0, Laws, *Regulations and DOE Directives of Subcontract No. 80232764-9-K002*, Modification No. 017, June 30, 1999, Babcock & Wilcox Hanford Company
- View Graphs, *RL/PHMC Senior Management Monthly Project Review*, August 12, 1999.

Interviews Conducted

- Director, Contracting
- Director, Site Planning and Integration
- Director, Systems Integration

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

- Manager, Change Control
- Manager, Contracts
- Manager, Planning and Evaluation (ES&H Organization)
- Manager, Risk Management
- Manager, Site Planning and Integration
- Manager, Subcontracts
- Principal Project Control Engineer
- Project Control Engineer
- Project Director, Nuclear Materials Stabilization
- Vice President, Environment, Safety and Health
- Vice President, Project Control.

Observations

None.

Discussion of Results

Criterion 1: The FDH 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 Mission Planning Guidance document and Baseline Updating Guidance document. The Mission Planning Guidance is the source for the annual budget submittal and development of the Integrated Priority List. FDH uses a risk-based approach for initial priority setting after complying with DOE direction contained in the Mission Planning Guidance. The ES&H aspects are strongly supported as the DOE guidance is based on maintaining a minimum safe condition and providing essential safety services. As part of the budget formulation and planning process, resources are identified translating Hanford's mission into work. Performance objective, measures, and expectations are set which focus on the outcomes set by DOE in their guidance.

The contractor process for monitoring the project status is via the Hanford Site Performance Reports and the Senior Management Monthly Project reviews. These were found to focus primarily on project schedule status, cost variances, and numerous ES&H performance indicators (e.g., OSHA Lost/Restricted Workday Case Rate). These monthly reviews do not status the DOE approved objectives, measures and expectations. However, there seems to be no focus on high level ES&H expectations. It seems that the current ES&H measurements are set via a historical basis. Therefore, any analysis that is performed is just to see if the trend is constant and will only warrant action if the trend is negative. Therefore, if the ES&H "goals"/expectations are not set for improvement at the higher level, then input to those measurements at the lower level is just a statusing exercise, not a tool to know whether behavior change is warranted or not. **(BBC.1.4)**

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

It is recommended that Senior Management implement the following: 1) establish a few high-level ES&H performance expectations for improvement at the site- or major project-level focusing on priorities and/or significant ES&H vulnerabilities, 2) extract specific work commitments from project directors to address these vulnerabilities (e.g., improve Radiological Control program), and 3) continue to monitor progress for improvement. **(BBC.1.1)**

During this review, the complete process for development of the Integrated Priority List was found not to have been well documented. FDH recognizes that procedure needs to be developed. Additionally, there are no procedures that describe the processes used by the Contractor to ensure a proper balance among competing priorities of the organization, reconciling internal and external conflicts. Specifically; the procedures should explicitly state how FDH ensures that safety is the top priority in the allocation of resources. **(BBC.1.6, BBC.1.9)**

Internal FDH business management systems and tools enable the contractor to readily identify ES&H components of planned work, i.e., ES&H is integral and visible in work planning. One area where this is evident is in the contractor's ability to efficiently respond to contractual requirements related to the annual update in response to DOE program and budget guidance (i.e., the UNICALL). Specifically, FDH prepares two reports: the Risk Management Summary and the ES&H Execution Commitment. These documents provide a site-level perspective on major ES&H vulnerabilities and issues, ES&H impacts and implications of funding decisions, site-wide risk management strategies deployed to address ES&H vulnerabilities in light of funding profile, and a listing/status of key ES&H and programmatic commitments. The contractor has the ability to identify the ES&H component of projects from its existing business systems by fully utilizing its current databases. **(BBC.1.2)**

This criterion has been met.

Criterion 2: The review of contractor documents (plans, manuals, procedures) and interviews with responsible personnel within FDH indicate that the existing plans, procedures, and processes provide for DOE review and approval of proposed tasks. Additionally, the contractor procedures provide for significant up-front DOE engagement, review, and eventual approval of work prioritization reflected in the Integrated Priority List and the subsequent generation of the Multi-Year Work Plans and the Annual Work Plans. The DOE formally conveys its approval of Multi-Year Work Plans and Annual Work Plans to the contractor through issuance of "PHMC Work Authorization."

The contractor work planning process and procedures also provide for feedback and continuous improvement. This is evident at two distinct levels of work planning. First, at the site level (PHMC level), the contractor procedures provide for review of proposed work plans and feedback by internal organizations (i.e., responsible Project Director and the Site Planning and Integration Group) and external groups (e.g., RL, local/state/federal stakeholders). Second, at

the Facility/Project level as well as during the project-execution cycle, contractor procedures provide for feedback and continuous improvement through extensive employee involvement and utilization of a variety of tools and processes such as the Job Hazard Analysis and the Automated Job Hazard Analysis. Additionally, the contractor change control process provides for adjustments to the work plans as new information and feedback becomes available that necessitates a change in planned work. **(BBC.1.1)**

This criterion has been met.

Criterion 3: The FDH ISMS Plan calls for change control in accordance with ISMS policies. Interviews and procedures reviewed indicate that the contractor provides a comprehensive process for controlling technical, cost, and schedule changes to the approved Hanford Integrated Site Baseline. The change control process is applicable to key documents that make up the Integrated Site Baseline (including the Multi-Year Work Plans, Annual Work Plans, and applicable Line Item Construction projects). As indicated in the procedures and confirmed through interviews, FDH Project Directors are responsible for identifying, controlling, monitoring, implementing, and ensuring completion of changes to the baselines. The procedure requires identification of impacts to the life cycle, project work scope, schedules, costs, other projects, inter-project, and enforceable agreements. There is great span of control on changes that exceed the Project Level thresholds (e.g., <$100,000). All changes above the Project Level must be reviewed and approved by the Change Control Board. The Change Control Board is chaired by the Executive Vice President and Chief Operating Officer, and includes three Vice Presidents for projects, and the Directors of Site Planning and Integration and Contracts (NOTE: ES&H is not represented). The review of the Baseline Change Control process clearly demonstrated the linkages starting from 1) the project level all the way through FDH, 2) DOE-RL review and feedback, and 3) implementation into the approved Integrated Site Baseline. **(BBC.1.3)**

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. Adding ES&H technical competence to the Change Control Board would enrich the decision process. However, interviewees stated that these functions are inherent in the tasks of the FDH Project Directors, Site Planning and Integration, and the FDH Change Control Board. The Change Control Manager provided copies of forms that were intended to verify that prioritization and allocation of resources are occurring as part of the change control process. **(BBC.1.7)**

Additionally, in reviewing the Baseline change control procedures the two-way linkage between the procedures is not fully developed. Specifically, the lack of integration was found in the HNF-PRO-533, Change Control, and HNF-MD-029 Hanford Site Technical Baseline Change Control. **(BBC.1.5, BBC.1.9)**

The criterion has not been met.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

Criterion 4: The Contractor's ISMS Plan, HNF-MD-4821, *Guidance for Flowdown of ISMS Requirements to Lower Tier Subcontracts,* and contract require that a clause (substantially the same as DEAR 970.5204-2) be flowed down to its major subcontractors and to lower-tier subcontractors on a graded approach. Review of the procedures, documents, and interviews indicate that the contractor has flowed down a clause substantially the same as DEAR 970.5204-2 to its major subcontractors, DynCorp, and other first-tier subcontractors. The contractor has developed a tailored process to assess the applicability of the flowdown requirements to lower-tiered subcontractors. There are two new preprinted special provision clause sets to ensure routine incorporation as appropriate, one for flowing down full ISMS requirements (SP-5A) and another that flows down basic ES&H safety requirements (SP-5B). It was noted that SP-5A removes the requirement "resources are effectively allocated to address ES&H programmatic and operational considerations."

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 flow-down provisions of the FDH Prime Contract. However, it does not mention flow down of ISMS requirements, nor does it reference all of the procurement procedures that effect the acquisition system. **(BBC.1.8, BBC.1.9)**

This criterion has been met.

Criterion 5: FDH policies adequately reflect the requirements and expectations of DOE for implementation of ISMS.

These policies are documented in HNF-MP-001, *Management and Integration Plan*, and HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan.* While DOE approved both of these documents initially, neither has been updated on a regular basis nor has DOE approved subsequent versions. Currently neither document reflects the new FDH organization, but are being used in accordance with HNF-MD-5260, *Use of the Project Hanford Management System in the Streamlined Project Hanford Organization.* The contractor implementing procedures (e.g., HNF-PRO-116, *Managing DOE Directives*) provide procedures for ensuring contractor policies reflect DOE requirements and expectations. **(BBC.1.9)**

This criterion has been met.

<u>Conclusion</u>

This objective has been met.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

Issues

Noteworthy Practices

- The contractor work planning decisions process (i.e., work prioritization and budget formulation and planning) is very open and clearly reflects and links RL priorities, strategic plans, and external commitments (e.g., Tri-Party Agreement, Defense Nuclear Facilities Safety Board, DOE-Headquarters reviews). **(BBC.1.1)**

- ES&H is integral and visible in work planning. The contractor has the ability to identify the ES&H component of projects from its existing business systems by fully utilizing its current databases. **(BBC.1.2)**

- Change control process is logically driven and well documented. **(BBC.1.3)**

Opportunities for Improvement

- ES&H expectations and performance goals are not established at the institutional level. This results in an ineffective measurement of ES&H performance as well as ineffective measurement of line management accountability. **(BBC.1.4)**

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

- The processes associated with prioritization are not fully documented. Specifically, there are no procedures that describe the processes used by the contractor to ensure a proper balance among competing priorities of the organization, reconciling internal and external conflicts. The procedures should explicitly state how FDH ensures that safety is the top priority in the allocation of resources. **(BBC.1.6)**

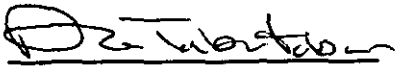
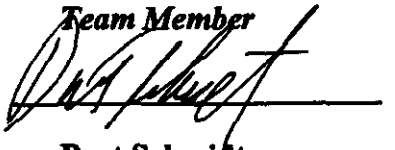
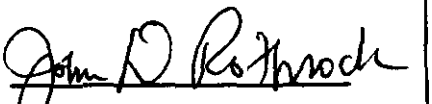
- ES&H considerations are not formalized and are not an integral element of the change control process. Specifically, the change control process does not explicitly address how ES&H implications of proposed changes are evaluated and addressed. **(BBC.1.7)**

- HNF-PRO-706, *PHMC Acquisition System Requirements*, does not mention flowdown of ISMS requirements, nor does it reference all of the procurement procedures that effect the acquisition system. **(BBC.1.8)**

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.1** DATE: 10/28/99

- The integration and linkages among FDH procedures need to be more fully developed. **(BBC.1.9)**

Submitted:  **Ali Tabatabai** ***Team Member***  **Verneice Skinner** ***Team Member***  **Patty Ensign** ***Team Member***  **Bart Schmidt** ***Team Member***	**Approved:**  **John D, Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

OBJECTIVE

BBC.2 - Contractor 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 contractor's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Priorities include commitments and agreements to DOE, as well as stakeholders.

3. Contractor ISMS procedures provide resources to adequately analyze hazards associated with the work being planned.

4. Contractor ISMS procedures for allocating resources include provisions for implementation of hazard controls for tasks being funded.

5. Resource allocations reflect the tailored hazard controls.

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

7. Contractor incentive programs are in place to promote a safety-conscious culture and worker participation and involvement in ES&H management.

Approach

Record Review

- Review a sample of hazard control documents to verify safety controls are provided for the hazards identified and that the control strategy encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment. Typical documents include Authorization Agreements (AA), Safety Analysis Reports (SAR), Technical Safety Requirements (TSR), Health and Safety Plans (HASP), Radiological Work Permits (RWP), operating procedures, etc.

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

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

- Sample actual implementing documentation.

- Coordinate the review of work-related documents (such as RWPs and operating procedures) with the OP and SME functional area reviewers.

Interviews

Interview personnel responsible for developing and implementing hazard controls and/or Authorization Basis Documentation at the facility level. This should include personnel such as those responsible for SAR/TSR preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

Documents Review

- Contract No. DE-AC06-96RL13200- *Approval of Baseline Change Request (BCR) FSP-99-043, "Fiscal Year 2000 Multi-Year Work Plan Submittal and Baseline Revisions (Bridge),"* Correspondence from Sally A. Sieracki, RL Contracting Officer, to R. D. Hanson, President Fluor Daniel Hanford, Inc., September 30, 1999
- Contract No. DE-AC06-96RL13200- *Fiscal Year 2000 Startup*, Correspondence from S. A. Sieracki, RL Contracting Officer, to R. D. Hanson, President Fluor Daniel Hanford, Inc., September 30, 1999
- Contract No. DE-AC06-96RL13200- *Hanford Mission Planning Guidance (MPG) for FY 2001 – Amendment #2*, Correspondence from James C. Hall, Acting Manager DOE/RL, to R. D. Hanson, President Fluor Daniel Hanford, Inc., March 6, 1999
- Contract No. DE-AC06-96RL13200-*Fiscal Year (FY) 2000 Baseline Updating Guidance for Multi-Year Work Plans (BUG-MYWP)*, Correspondence from Keith A. Klein, Manger DOE/RL, and Richard T. French, Manager Office of River Protection, to R. D. Hanson, President Fluor Daniel Hanford, Inc., June 21, 1999
- DOE/RL-98-84, *Hanford Site Environment, Safety and Health Fiscal Year 1998/1999 Execution Commitment Summary*, Rev. 0
- DOE/RL-99-03, *Hanford Site Performance Report*-June 1999, Rev. 8
- DOE/RL-99-28, *Hanford Site Environment, Safety and Health Fiscal Year 2001 Budget-Risk Management Summary*, Rev. 0
- Example Subcontract Clauses, 9.0, *Available Fee*, 41.0, *Performance Objectives, Measures, Expectations & Incentives*, 44.0, *Determination of Incentive Fees*, and 45.0, *Conditional Payment of Fee or Incentives*
- FDH ESH&Q Proposed Year-End PEP Expectation Ratings
- FDH FY 1999 PEP Accountability
- FDH-9955044, *Fiscal Year 2000 Multi-Year Work Plan Guidance*, July 21, 1999

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

- FY 1999 PEP Rating Analysis Form
- 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-029, *Hanford Site Technical Baseline Change Control*, Rev. 1, May 17, 1999
- HNF-MD-032, *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-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, Appendix B, *Integrated ES&H Management System Description*, Rev. 2, August 1999
- HNF-MP-003, *Integrated ES&H Management System Plan*, Rev. 2, September 1, 1999
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-054, *Sharing Fee with Employees*, Rev. 0, July 15, 1998
- 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. 0, February 26, 1998
- *Integrated Environment Safety and Health Management System Phase I Readiness Review Report*, Volumes 1 and 2, Fluor Daniel Hanford, Inc., March 22-April 2, 1999
- Integrated Priority List
- Letter to S. A. Sieracki, Contracting Officer, subject "Performance Expectation Completion Notice for TRWR5.1.1, S/RIDs," October 20, 1999
- Modification M086, DE-AC06-96RL13200, *Project Hanford Management Contract, Fluor Daniel Hanford, Inc*, Redacted, October 1, 1999
- View Graphs, *RL/PHMC Senior Management Monthly Project Review*, August 12, 1999.

Interviews Conducted

- Director, Contracting
- Director, Site Planning and Integration
- Director, Systems Integration
- Manager, Change Control
- Manager, Planning and Evaluation (ES&H Organization)

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

- Manager, Subcontracts
- Principal Engineer, Risk Management (Systems Integration)
- Principal Project Control Engineer
- Project Control Engineer
- Vice President, Environment, Safety and Health
- Vice President, Project Control.

Observations

None.

Discussion of Results

Criterion 1: FDH personnel use a process for prioritization of work and allocation of resources that addresses both ES&H and programmatic needs, however, the procedures are not fully developed. The process involves input and agreement of line management. The processes of resource allocation starts with the development of the Multi-Year Work Plan, which is a life cycle plan updated annually to reflect execution year budget allocations and out-year budget submissions. It is developed under the direction of line management at the work element level. The FDH Planning and Budget Organization provides guidance for this activity based on the DOE Mission Planning Guidance and Baseline Updating Guidance documents. The processes for developing and updating Budget and Multi-Year Work Plan submissions are documented in procedures. The process of setting work priorities is not documented. However, work processes implement a balanced priority approach at the project level consistent with DOE guidance provided in the Mission Planning Guidance. Review of the prioritization of tasks starts with the project directors and flows upward to the senior management to assure balance and "buy in."

This criterion has been met.

Criterion 2: The priority-setting process addresses both DOE and stakeholder commitments. Agreement with DOE is assured by the close relationship of the priority-setting process and the development of DOE priority guidance. The recommended priority list is reviewed with the public, regulators, and Tribal Nations starting with the earliest draft form through final submission of the integrated priority list. The input from these multiple reviews is considered in the development and final submittal of the Integrated Priority List each year.

This criterion has been met.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

Criteria 3 and 4: FDH manuals, plans, and procedures clearly provide and require that hazards associated with planned work be identified and analyzed. Additionally, the contractor ISMS procedures provide and require implementation of hazard controls for tasks being funded. The FDH documents reviewed (plans, procedures, and directives) do not specifically mention allocation of resources for the purpose of analyzing hazards or implementation of tailored hazard controls. However, discussions with FDH personnel demonstrates that resources are indeed allocated to the project managers to analyze the hazards and implement hazard controls. The contractor procedures provide for various tools to ensure identification of hazards and the required controls including Job Hazard Analysis and the Automated Job Hazard Analysis. This is also evident in documents demonstrating that hazards associated with planned work are indeed analyzed and the required controls are identified. This can be verified at both the FDH level (e.g., in the Project Baseline Summary and Units of Analysis used in the Integrated Priority List) as well as at the Project/Task level type documents (Job Hazard Analysis, Automated Job Hazard Analysis, Safety Analysis Report, Basis for Interim Operations, Authorization Basis, etc.).

During the procedure reviews and discussions with FDH personnel, it became evident that there are not any procedures that provide for secondary review at the FDH institutional level for ensuring that ES&H support needs are adequately accounted for as part of work planning. The process seems to rely upon project managers and procedures at the facility/project level to ensure hazards and associated controls are adequately identified. **(BBC.2.1)**

These criteria have been met.

Criterion 5: The contractor ISMS procedures require a tailored (graded approach) to implementation of hazard controls. However, in the context of allocation of resources, the contractor procedures do not provide a methodology to ensure allocation of resources address the tailoring of hazard controls. Further discussions with FDH personnel indicate that in light of competing demands and needs for resources, the project managers do allocate resources based on "tailored" hazard controls. However, this can not be verified. **(BBC.2.3)**

This criterion has not been met.

Criterion 6: The contractor does not have procedures that govern establishment of fees. The contractor's priorities are driven by DOE's planning and incentive fee process. However, interviews and review of documentation indicate that the contractor has established mechanisms which to reinforce DOE's balanced priorities. The contractor presented documents that indicate the contractor has incorporated ES&H considerations in establishment and payment of fees to major subcontractors.

This criterion has been met.

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

Criterion 7: Interviews and procedures indicate that the contractor's incentives program promotes a safety-conscious culture and employee involvement in ES&H management. Employee performance appraisals are to include and employees are to be evaluated against specific ESH&Q goals and objectives. Employees are allowed to participate on teams that address ESH&Q. The contractor has recognition programs which recognize employees for accomplishments (including ES&H) under which employees can be recognized by sharing in the contractor's fee. The Contractor Employee Concerns Program also encourages employees to bring forth safety issues. In addition, the contractor recognizes organization's employees for million (or over) of hours of work performed without an accident.

It is noted that HNF-PRO-054, *Sharing of Fee with Employees*, does provide criteria/requirements for employee awards (e.g., exceed normal job responsibilities and expectations). However, it is recommended that ES&H considerations be more visibly included in the procedures to highlight its priority. **(BBC.2.2)**

This criterion has been met.

Conclusion

This objective has been met.

Issues

Noteworthy Practices

None.

Opportunities for Improvement

- The FDH procedures do not provide for secondary review at the FDH level for ensuring that ES&H support needs are adequately accounted for as part of work planning. **(BBC.2.1)**

- ES&H considerations need to be more visibly included in the HNF-PRO-054, *Sharing of Fee with Employees*, to highlight its priority. **(BBC.2.2)**

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.2** DATE: 10/28/99

- The FDH procedures do not provide clear definition and/or criteria for "tailored" hazard controls. This lack of clear and consistent definition/criteria could adversely impact the cost-effectiveness of resource allocated to implementation of hazard controls. **(BBC.2.3)**

Submitted: Verneice Skinner **Verneice Skinner** ***Team Member*** Ali Tabatabai **Ali Tabatabai** ***Team Member*** Patty Ensign **Patty Ensign** ***Team Member*** Bart Schmidt **Bart Schmidt** ***Team Member***	**Approved:** John D. Rothrock **John D. Rothrock** ***Team Leader***

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.3** DATE: 10/28/99

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. Contractor ISMS 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. 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.

Approach

Record Review

- Review a sample of hazard control documents to verify safety controls are provided for the hazards identified and that the control strategy encompasses a hierarchy of 1) hazard elimination, 2) engineering controls, 3) administrative controls, and 4) personnel protective equipment. Typical documents include Authorization Agreements (AA), Safety Analysis Reports (SAR), Technical Safety Requirements (TSR), Health and Safety Plans (HASP), Radiological Work Permits (RWP), operating procedures, etc.

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

- Sample actual implementing documentation.

- Coordinate the review of work-related documents (such as RWPs and operating procedures) with the OP and SME functional area reviewers.

Interviews

Interview personnel responsible for developing and implementing hazard controls and/or Authorization Basis Documentation at the facility level. This should include personnel such as those responsible for SAR/TSR preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.3** DATE: 10/28/99

Documents Review

- Sampling of current staff resumes
- A-6002-307.1, *FDH Performance Assessment and Development,* October, 1998
- A-6002-709, *PHMC Safety/Quality Performance Review Addendum,* August, 1999
- A-6002-710, *PHMC ISMS Guiding Principles,* August, 1999
- A-6002-711, *PHMC Quality Performance Attributes,* August, 1999
- HNF-MP-011, *Sitewide Qualification and Training Plan,* Rev.1, April 6, 1999
- HNF-PRO-050, *Managing Employee Performance,* Rev. 1, August 25, 1999
- Job Descriptions for Project Controls Engineer and Engineer/Analyst (all categories).

Interviews Conducted

- Director, Planning
- Director, Site Planning and Integration
- Vice President, Project Controls.

Observations

None.

Discussion of Results

Criterion 1: FDH plans and procedures document a training management system that ensures qualifications and training activities meet the established requirements. This encompasses FDH personnel including line management who define, prioritize, and approve the scope of work and allocate resources. The documentation identifies the process for qualifying and training personnel to perform assigned work activities safely, effectively, and efficiently. In addition, procedures for determining the effectiveness of training are established.

The FDH Director, Site Planning and Integration stated that HNF-MP-011, *PHMC Sitewide Qualification and Training Plan,* ensures FDH contractor workers' competence is commensurate with their responsibility. The Director identified several examples demonstrating how this plan directly supports HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan,* and its fundamental goal to "Do work safely and protect human, health and the environment." In addition, line management demonstrates ownership of the training programs through active involvement. Post-training work performance is observed, and feedback on qualification and training effectiveness is provided.

FDH administers its own employee performance management system. This allows for a documented means for establishing job expectations/standards, and measuring performance

FUNCTIONAL AREA: **Business, Budgets, and Contracts**	OBJECTIVE: **BBC.3** DATE: 10/28/99

against those expectations and standards. The expectations/standards align with the integrated site baseline and incorporate Environmental, Safety, Health, and Quality goals and objectives.

This criterion has been met.

Criterion 2: The FDH Director, Site Planning and Integration, clarified how contractor personnel participation is conducted in defining the scope of work, allocating resources, and prioritizing the approved work with tailored hazard controls. A review of a small sample of personnel resumes provided evidence of competence for personnel's assigned responsibility was commensurate with their experience and knowledge.

This criterion has been met.

Conclusion

This objective has been met.

Issues

None.

Noteworthy Practices

None.

Opportunities for Improvement

None.

Submitted: Patty Ensign **Patty Ensign** ***Team Member*** **Bart Schmidt** ***Team Member***	**Approved:** John D Rothrock **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 10/28/99

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 FDH policies and procedures include requirements to assure that hazards for work to be conducted have been identified and appropriately analyzed. Contractor ISMS procedures for analysis of hazards reflect accepted rigor and methodology. The resulting hazards are utilized in the selection of controls included in the contract such as List A/List B and the SRIDs.

2. FDH ISMS 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. ISMS procedures for analysis of hazards reflect accepted rigor and methodology.

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

Approach

Record Review

- Review FDH 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 flowdown 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 for AJHA for identification and analysis of hazards.

- Coordinate the review with the SME functional area reviewers.

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

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 10/28/99

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.

Documents Review

- HNF-4361, *PHMC Expectations for Worker Involvement*
- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Plan*, Rev. 2, September 1, 1999
- HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Questions*, Rev. 0, July 1, 1997
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-2258, *Chemical Management*, Rev. 0, August 31, 1999
- HNF-PRO-265, *Standards/Requirements Identification Documentation Process*, Rev. 2, April 13, 1999
- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 21, 1999
- HNF-PRO-340, *Fire Protection Overview & Responsibilities*, Rev. 1, September 1, 1999
- HNF-PRO-350, *Fire Hazards Analysis Requirements*, Rev. 2, November 20, 1998
- HNF-PRO-424, *Emergency Preparedness Program*, Rev. 2, July 1, 1998
- HNF-PRO-430, *Safety Analysis Program*, Rev. 1, October 15, 1997
- HNF-PRO-440, *Engineering Document Change Control Requirements*, Rev. 3, August 23, 1999
- HNF-PRO-539,*Criticality Safety Evaluations*, Rev. 0, August 1, 1997
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 1, December 29, 1997
- HNF-PRO-701, *Safety Analysis Process - Existing Facility*, Rev. 0, October 15, 1997
- HNF-PRO-702, *Safety Analysis Process - Facility Change or Modification*, Rev. 0, October 15, 1997
- HNF-PRO-703, *Safety Analysis Process - New Project*, Rev. 0, October 15, 1997
- HNF-PRO-704, *Hazard and Accident Analysis Process*, Rev. 1, August 24, 1999
- HNF-PRO-705, *Safety Basis Planning, Documentation, Review and Approval*, Rev. 1, February 27, 1998

Interviews Conducted

- Administrator, Automated Job Hazard Analysis (AJHA)
- Chemical Management Lead
- Consultant to Chemical Management Program
- Director, Emergency Preparedness

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 10/28/99

- Manager, Analysis and Integration
- Manager, DOE Program Support
- Manager, FDH Project Support
- Manager, Standard/Requirements Identification Document (S/RID)
- Nuclear Safety Specialist
- Scientist
- Tech Director, S/RID
- Technical Safety Program Director
- Technical Support, AJHA.

Observations

None.

Discussion of Results

Criteria 1, 2, and 3: The FDH system of policies, plans and procedures was reviewed to determine if there was a comprehensive system in place for the identification and evaluation of hazards. Hazard areas evaluated were nuclear, criticality, chemical, and industrial. Interviews were conducted with personnel in these hazard disciplines to achieve an understanding for both nuclear and non-nuclear facilities.

FDH has an Internet homepage with links to management policies, plans, and procedures. These were found to be readily accessible. The policy statements defined FDH expectations for ES&H and many other areas. Some of the policy statements reflected the old organization structure with major subcontractors; not the current FDH approach with projects. This is a deficiency. However, given the newness of the FDH restructuring, it will take time to bring all of their policies and procedures up to date. This update will occur in accordance with HNF-MD-5260, Rev. 0, *Use of Project Hanford Management System in the Streamlined Project Hanford Organization*. FDH plans, procedures, and roles and responsibilities do not reflect the current FDH organization. **(MGO.1.2)**

The primary vehicle for the definition and transmission of hazard and safety requirements is through HNF-PRO-2701, *Authorization Agreement and Authorization Envelope*. The stated intent of the Authorization Envelope is to establish the scope, applicability, approval, and documentation requirements and controls that are necessary for safe, environmentally protective operation of a facility, and adequate protection of the workers, public, and environment. This procedure is deemed to be an excellent way to define authorization requirements for nuclear, non-nuclear, radiological, and industrial facilities. Existing Hazard Category 2 and some Category 3 nuclear facilities have S/RIDs that list the applicable requirements for the nuclear facilities. The nuclear safety portion of these is mandated through the FDH contract in Section J, Appendix C (also known as List A/List B). The development, maintenance, and assessment of the S/RIDs is specified in HNF-PRO-265, *Standards/Requirements Identification Document*

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 10/28/99

Process. Non-nuclear facilities and those nuclear and radiological facilities without S/RIDs are directed to establish a "safety envelope" through the use of a hazard baseline assessment (HNF-PRO-704, *Hazard and Accident Analysis Process*) and inclusion of the appropriate List A/List B requirements from the FDH contract (Section J, Appendix C).

For nuclear facilities, hazards are identified, mitigated, and controlled through a safety analysis process. The products of this process (SARs, BIOs, TSRs, USQs, and SERs) become the Authorization Basis (AB) for the facility when approved by the Approval Authority. HNF-PRO-2701, *Authorization Envelope and Authorization Agreement* directs the FDH projects to develop their Authorization Agreements and ABs. HNF-PRO-705, *Safety Basis Planning, Documentation, Review and Approval* directs the planning, documentation, review and approval of the AB. FDH procedures, HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, HNF-PRO-701, *Safety Analysis Process - Existing Facility*, and HNF-PRO-703, *Safety Analysis Process - New Project* define the specific requirements for the development, implementation, and maintenance of the AB documentation. The guidance for the actual hazard and accident analysis that form the basis for the hazard controls is provided by HNF-PRO-704, *Hazard and Accident Analysis Process*. The process for amending the facility AB is described in HNF-PRO-702, *Safety Analysis Process - Facility Change or Modification*. Nuclear facilities are directed to use the Unreviewed Safety Question process (HNF-PRO-062, *Identifying and Resolving Unreviewed Safety Questions)* to assure that changes are within the current AB or to get DOE approval for the change. Further direction is given by HNF-PRO-440, *Engineering Document Change Control Requirements,* to control the development, review, approval, release, and incorporation of changes to engineering documents.

Worker safety requirements are defined and integrated through the use of an AJHA. HNF-PRO-079, *Job Hazard Analysis*, establishes the minimum requirements for integrating ES&H and quality into the work planning process. The AJHA automatically invokes the proper Subject Matter Experts, work planners, and workers in the work planning and execution process. **(HAZ.1.1)**

Worker involvement in the identification of hazards and selection of controls is required through procedures HNF-4361, *Expectations for Worker Involvement* and HNF-PRO-079. This is captured by the AJHA tool in worker participation and post-job feedback.

These criteria have been met.

Conclusion

This objective has been met.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.1** DATE: 10/28/99

Issues

Noteworthy Practices

The AJHA is a very effective tool for capturing worker safety requirements and encouraging worker participation and feedback. **(HAZ.1.1)**

Opportunities for Improvement

None.

Submitted: _____ **Tom Wright** ***Team Member***	**Approved:** _____ **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 10/28/99

OBJECTIVE

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

Criteria

1. Contractor ISMS policies and or procedures 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. Contractor ISMS policies and or procedures ensure controls are tailored to the hazards associated with the work or operations to be authorized.

3. Contractor ISMS policies and or procedures ensure the identified controls, standards, and requirements are agreed upon and approved prior to the commencement of the operations or work being authorized.

4. Contractor ISMS policies and or procedures utilize accepted and structured methods and processes to identify, select, and gain approval for ES&H standards and requirements commensurate with the work scope and its associated hazards.

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

6. Contractor procedures have clearly defined roles and responsibilities for personnel assigned to ensure that applicable directives, standards and other requirements in the contract are complete and current.

7. 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 a sample of hazard control policies and or procedures to verify methodologies and instructions provided 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.

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 10/28/99

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

- Coordinate the review of 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 SAR/TSR policies and procedures, ALARA procedures and policies, Health and Safety Plan development procedures etc.

Documents Review

- Contract No. DE-AC06-96RL13200 – *Issuance of the Plutonium Finishing Plant (PFP) Authorization Agreement (AA)*
- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, *PHMC Integrated Environment, Safety, and Health Management Plan*, Rev. 2, September 1, 1999
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-116, *Managing DOE Directives*, Rev. 0, October 1, 1997
- HNF-PRO-265, *S/RIDs Process*, Rev. 2, April 13, 1999
- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 21, 1999
- HNF-PRO-430, *Safety Analysis Program*, Rev. 1, October 15, 1997
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 1, December 29, 1997
- HNF-PRO-701, *Safety Analysis Program, Existing Facility*, Rev. 0, October 15, 1997
- HNF-PRO-702, *Safety Analysis Program, Facility Change or Modification*, Rev. 0, October 15, 1997
- HNF-PRO-703, *Safety Analysis Program, New Project*, Rev. 0, October 15, 1997
- HNF-PRO-704, *Hazard and Accident Analysis Process*, Rev. 1, August 24, 1999
- HNF-PRO-705, *Safety Basis Planning, Documentation, Review, and Approval*, Rev. 1, February 27, 1998
- Subcontract No. 80232764-9-K006 (NUMATEC), *General Terms Modification No. 15*, March 1, 1999.

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 10/28/99

Interviews Conducted

- Consultant, ISMS
- Contracting Officer, FDH
- Director, Contracting
- Director, Occupational Safety and Health
- Director, Systems Integration
- Industrial Hygienist
- Manager, Management Systems
- Nuclear Safety Specialist
- Nuclear Safety Specialist
- Principle Engineer
- Project Support Consultant for ISMS
- Senior Operations Specialist
- Senior Technical Advisor for Analytical Services
- Systems Engineer
- Technical Authority for Operations
- Technical Director of the Standard/Requirements Identification Document (S/RID) Process.

Observations

None.

Discussion of Results

Criteria 1, 2, 3, 4, 6, and 7: FDH utilizes a three-tier approach for identifying standards and requirements that ensures responsive transition of requirements down to the activity level. At the uppermost or institutional level, standards and requirements are maintained in the contract in Lists A and B. At the site level and in nuclear facilities, FDH implements an S/RID process that contains the higher-level requirements applicable to the site and to discreet individual nuclear facilities. The AJHA process is the driving tool to establish the applicable standards, requirements, and controls at the activity level.

Applicable standards and requirements for the scope of work at the Hanford Site are contained in Section J, Appendix C of the PHMC. The procedure utilized by FDH to maintain and modify this set of standards and requirements is consistent with DOE expectations at the institutional level regarding the selection of, and concurrence on, applicable standards and requirements for the scope of work contained in the contract. The procedure HNF-PRO-116, *Managing DOE Directives* clearly specifies roles and responsibilities, concurrence requirements, and the approval process to add or delete requirements from the PHMC.

The S/RIDs process, as documented in HNF-PRO 265, *Standards/Requirements Identification Documentation Process,* Rev. 2, defines the methodology used by FDH to identify applicable

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 10/29/99

requirements for nuclear facilities under the scope of the PHMC. The S/RIDs process, by definition reflects the graded approach and by utilizing the procedure as written, FDH is tailoring the set of applicable requirements at their nuclear facilities to the hazards present at these facilities. The procedure defines the functional logistics relating to review and approval as well as maintenance of S/RID documentation and provides the integrated flexibility to ensure the document remains current and complete. The synchronized interface between organizations during the approval process ensures that the S/RID document specifies standards and requirements that provide adequate protection to the workers, environment, and the public. Facilities that do not have approved S/RIDs are required to comply with ES&H standards listed in Section J, Appendix C of the PHMC.

For all work activities, FDH direction is to implement the AJHA process as specified in HNF-PRO-079, *Job Hazard Analysis.* **(HAZ.2.1)** This procedure stipulates a process that identifies hazards based on work package development, walk-through inspections, worker involvement, and the concurrence of SMEs as dictated by the hazards of the activity. The AJHA is an integrated management tool that ensures hazards are identified, and standards and controls are tailored to provide adequate protection for the worker, the environment, and the public. This process also provides logistical flexibility in initial planning and in developing lessons learned.

These criteria have been met.

Criterion 5: FDH has developed and approved a functional management procedure to ensure that authorization agreements and authorization envelopes are consistently prepared across the Hanford Site. The systematized approach required by HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, ensures that documents that specify the standards and requirements are identified for each facility under the scope of the PHMC. The procedure outlines an integrated organizational approach that ensures the adequacy of the identified standards and requirements to provide protection to the workers, environment, and the public.

This criterion has been met.

Conclusion

This objective has been met.

Issues

Noteworthy Practices

The AJHA process provides a powerful and valuable tool to ensure integrated organizational functions are utilized to identify and control hazards, as well as providing streamlined logistical capabilities regarding work package development, worker involvement, approvals, and feedback. **(HAZ.2.1)**

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.2** DATE: 10/28/99

Opportunities for Improvement

None.

Submitted:	**Approved:**
Steve Bertness	**John D. Rothrock**
Team Member	***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 10/28/99

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. Contractor ISMS procedures and policies have clearly defined roles and responsibilities for personnel assigned to oversee, review, approve the analysis of hazards, and establish controls associated with Site-wide activities.

2. Contractor ISMS procedures and policies require that personnel responsible for analyzing hazards and identification of adequate controls have competence that is commensurate with their responsibilities.

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

Approach

Record Review

Review FDH 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 personnel 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 Requirement preparations and implementation, ALARA review requirements, Process Hazard Analysis activities, etc.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 10/28/99

Documents Review

- HNF-4361, *PHMC Expectations for Worker Involvement*
- HNF-MD-019, *Project Work Authorization*, Rev. 0, March 31, 1997
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan*, Rev. 2, September 1, 1999
- HNF-MP-011, *Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-PRO-069, *Maintenance Management*, Rev. 2, June 23, 1999
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-111, *Occupational Medical Qualification and Monitoring*, Rev. 0, July 1, 1997
- HNF-PRO-409, *Exposure Monitoring, Reporting, and Exposure Records Management*, Rev. 0, June 30, 1997
- HNF-PRO-4616, *Supervision of Field Work Activities*, Rev. 2, June 30, 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. 1, February 27, 1998.

Interviews Conducted

- Associate Scientist II (Environmental)
- Director, Conduct of Operations and Maintenance
- Director, Occupational Safety and Health
- Director, Systems Integration
- Manager, Employee Job Task Analysis Procedures
- Manager, Performance Improvement and Regulatory Services (Spent Nuclear Fuels)
- Manager, Regulatory Interface
- Manager, Training
- Principle Engineer (Environmental)
- Principle Engineer (Occupational Safety and Health)
- Project Manager
- Site Operations and Maintenance
- Individual Contributor, Technical Safety Group.

Observations

None.

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 10/28/99

Discussion of Results

Criterion 1: FDH procedures do have clearly defined roles and responsibilities for personnel assigned to oversee, review, approve the analysis of hazards, and establish controls associated with facilities and activities. Attachment C-1 of HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan* contains a very comprehensive listing of ES&H roles and responsibilities for the various technical disciplines in regard to hazards and related controls. Each technical discipline owns a set of procedural documents (the HNF-PROs) that implement the controls to address specific functional area hazards. The links with roles and responsibilities are achieved in these documents. However, these roles and responsibilities do not reflect the current FDH organization. **(MGO.1.2)**

HNF-PRO-079, *Job Hazard Analysis,* Rev. 4, Table 1, "Risk vs. Complexity Decision Matrix" offers what may be an over simplification for some jobs, presenting to the layman gray areas that imply a possible selection of an improper hazard analysis path. **(HAZ.3.1)** The reason the system presently works well is that individuals making these decisions have the knowledge and skill commensurate with this critical responsibility. This is because the HNF-PRO-079 requires those who perform hazard and environmental impact identification and analysis, and development of controls must have the skill and knowledge to perform this function safely, completely, and effectively. Two separate training courses have been developed, one for those who make these decisions and one for those who do the work. The risk matrix process should be enhanced such that the gray areas are eliminated. FDH currently has a team working to enhance the risk matrix process, thus making this recommendation totally in line with FDH's current activities.

This criterion has been met.

Criterion 2: FDH procedures and policies do require personnel responsible for analyzing hazards and identification of adequate controls to have competence that is commensurate with their responsibilities. HNF-MP-003, Rev. 2, Chapter 3 states that major subcontractors must ensure personnel performing hazard identification and analysis and development of controls are qualified and trained per HNF-MP-011, *Qualification and Training Plan* to perform work safely, completely, and effectively. A good example of this application in functional area documents is in the above discussion where training for the responsibilities has been called out.

This criterion has been met.

Criterion 3: FDH's work planning procedures have requirements that drive appropriate involvement of workers and ES&H professionals in hazard analysis and selection of controls. In the HNF-PROs, the term "worker" is used very broadly and means anyone who does work, not just craftsmen who are inclusive in this term. However, HNF-4361, *PHMC Expectations for Worker Involvement* reads such that one with a maintenance management background may

FUNCTIONAL AREA: **Hazards Identification and Standard Selection**	OBJECTIVE: **HAZ.3** DATE: 10/28/99

interpret this high-level policy as referring to craftsmen only. During interviews, FDH managers interpreted it as being inclusive of all. **(HAZ.3.2)**

This criterion has been met.

Conclusion

This objective has been met.

Issues

Noteworthy Practices

None.

Opportunities for Improvement

HNF-PRO-079, Table 1 does not completely address the hazards and eliminate "gray" areas where the individual must make the critical decision as to the "type" of hazard analysis performed. **(HAZ.3.1)**

Observation

In the HNF-PROs, the term "worker" is used very broadly and means anyone who does work, not just craftsmen who are inclusive in this term. HNF-4361 reads such that one with a maintenance management background may interpret this high-level policy as referring to craftsmen only. During interviews, FDH managers interpreted the policy as being inclusive of everyone doing work. **(HAZ.3.2)**

Submitted: Burt Hill **Burt Hill** ***Team Member***	**Approved:** John D. Rothrock **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

OBJECTIVE

MGO.1 - The contractor's ISMS Description is consistent and responsive to DOE Policies 450.4-5-6; the DEAR; and the direction to the contractor from the Approval Authority. The contractor's policies and procedures ensure that the ISMS Description is maintained and implemented, and that implementation mechanisms result in integrated safety management. (CE I-1)

Criteria

1. The ISMS Description is consistent and responsive to DOE Policies 450.4-5-6; the DEAR; and the direction to the contractor from the Approval Authority.

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

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

4. The contractor has established a process that establishes documents, and implements 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.

5. The contractor ISMS adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting.

Approach

Record Review

- Review the FDH ISMS 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 ISMS Description and associated items, including provisions for the annual review and update to DOE. Review charters and "output documentation" from any ISMS coordinating committees.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

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

- Review implementation planning efforts and any corrective action plans, which 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 ISMS Description.

- Interview contractor line mangers who are or will be responsible for administering the mechanisms of the ISMS.

- Interview chairman and key members of any ISMS coordinating committees, if established.

Documents Review

- 99ESH-025, *DOE Letter of Direction*, May 28, 1999
- Electronic Mail message from Vice President, 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 15, 1999
- Fluor Daniel Hanford, Inc., Contract DE-AC06-96RL13200, Modification MO86, October 1, 1999
- HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, Rev. 2, October 15, 1999
- HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, Rev. 2A, October 20, 1999
- 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 Flowdown 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

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan*, Rev. 2, September 1, 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-052, *Corrective Action Management*, Rev. 2, August 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-067, *Managing Lessons Learned*, Rev. 1, November 24, 1998
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 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 24, 1999
- HNF-PRO-224, *Document Control Program Standards*, Rev. 2, June 7, 1999
- HNF-PRO-246, *Management Assessment*, Rev. 1, June 18, 1999
- 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. 0, signed September 29, 1999, effective 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. 1, September 14, 1998
- HNF-PRO-653, *Deficiency Tracking System*, Rev. 1, July 12, 1999
- PHMC ESH&Q Performance Indicator Plan (no document number or date).

Interviews Conducted

- Deputy Operations Manager, 105-KE
- Director , Training Services
- Director, Emergency Preparedness
- Director, Occupational Safety & Health
- Director, Performance Assurance
- Director, Strategic Steering Group
- Director, Systems Integration
- Individual Contributor, Technical Safety Group
- Manager, 222-S Analytical Services

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

- Manager, 222-S Business Management
- Manager, 222-S Facility Operations
- Manager, Analysis and Feedback
- Manager, Analytical Services Maintenance
- Manager, ISMS Project
- Manager, Occurrence Reporting and Emergency Operations Center
- Manager, Performance & Evaluation for ES&H
- Manager, Performance Analysis and Reporting
- Manager, PHMC Human Resource Services
- Principal Engineer, Occupational Safety & Health
- Project Manager, 222-S Analytical Service Project
- Senior Project Director, Analytical Services
- Technical Writer/Editor, Analytical Services
- Vice President, ES&H.

Observations

None.

Discussion of Results

Criterion 1: The FDH Director, Systems Integration, when interviewed, stated that HNF-MP-003, *Integrated Environment Safety and Health Management System Plan* was prepared consistent with DOE Policy 450.4, 450.5, and 450.6, the Department of Energy Acquisition Regulation (DEAR) clauses, and direction to FDH from the DOE-RL Approval Authority. The Director identified several examples throughout HNF-MP-003 that aligned directly with the DOE Policies. The FDH ISM System Description added two additional core functions (Establish ES&H Policy and Management Review) and four additional guiding principles (Worker Involvement, Communication and Stakeholder Involvement, Continuous Improvement, and Senior Management Involvement) from those described in DOE Policy 450.4.

The FDH contract (DE-AC06-96RL13200) clause I.99 contains specific requirements for the integration of environment, safety, and health 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.

Subteam review of the FDH ISM System Description, DOE Policy 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 revealed, however, that HNF-MP-003 does not provide adequate program crosswalk to the subcontractor implementing documents. The FDH crosswalk developed in HNF-MP-003

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

identified several HNF-PROs. Interviews conducted with FDH and 222-S Laboratory personnel revealed, however, they rarely directly use the HNF-PROs for implementation of requirements at the facility/activity level. When asked what governing procedures were used for control of work activities during interviews held at the 222-S Laboratories, all managers interviewed answered that Waste Management procedures were used, not the FDH HNF-PROs. **(MGO.1.2)**

A new management directive HNF-MD-5260, *Use of the Project Hanford Management System Plan*, has been issued. All 222-S Laboratory managers interviewed did understand the directive. However, it was not apparent from the interviews that the 222-S Laboratory procedures will be "mapped" to the FDH ISMS Plan during or after restructuring. **(MGO.1.3)**

The current ISM System is very complex and difficult to follow. This may lead to poor adherence and potential non-compliance with numerous implementing procedures identified in HNF-MP-003.

FDH has adopted the ISMS guiding principle that line management is responsible for safety and environmental performance. Several expectations address this responsibility across the related core functions in HNF-MP-003. Additionally, HNF-MP-003 defines 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, the FDH ISM System does not relate this definition of line management to any of the defined FDH management functions or organizations. Interviews conducted with FDH management provided a range of definitions for FDH line management, indicating a poor understanding of who is assigned the roles, responsibilities, and accountability of line management within FDH. Clarification is needed within the FDH ISM System to identify who is FDH line management. **(MGO.1.1)**

The current FDH ISM System Description (HNF-MP-003) was found to contain the basic attributes for a safety management system as outlined in DOE Policy 450.4, 450.5, 450.6, and the DEAR clauses. It was not clear, however, that flowdown to major subcontractors, as contained in separate subcontracts, will result in an overall integrated safety management program. For example, it is not clear if projects, service organizations, and functional groups, as applicable, will implement ISMS at the facility/activity level directly through HNF-MP-003 or their own local system description.

This criterion has not been met.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

Criterion 2: The FDH Director of Performance Assurance, FDH ISMS Project Manager, and FDH Director of Occupational, Safety, and Health explained the mechanisms within FDH to direct, verify, evaluate, maintain, and improve the integrated implementation of the ISMS as described in HNF-MP-003, Appendix B. The Management Assessment procedure, HNF-PRO-246, *Management Assessment*, was discussed as one of the tools used by FDH management to look at the total picture of how well a management system met customer requirements and expectations. Section 1.2 states, in part, "The purpose of this type of assessment is to identify management aspects of performance and make improvements through an introspective analysis to determine if the management infrastructure is properly focused on achieving the desired results." The FDH President stated that he was personally involved with the management assessment program and that a coordinator had been appointed to integrate and manage assessment results.

FDH has not effectively demonstrated that mechanisms are in place to direct, monitor, and verify the integrated implementation of ISMS in accordance with their ISM System Description (HNF-MP-003, Rev.2). Specific roles and responsibilities in the "new" organization could not always be articulated from several managers interviewed. However, most managers could explain their previous function(s) relative to ISMS. **(MGO.1.2)**

Due to the restructuring effort, several actions are underway to redefine the FDH business management system. This effort will result in the development of a Management Systems Requirements Plan (which will eventually replace HNF-MP-001, *Management and Integration Plan*), facility transition plans, and facility/organizational project execution plans. A significant portion of this effort will directly affect implementation mechanisms relative to ISMS.

While the initiative currently underway is intended to result in a more streamlined and efficient approach to managing and conducting business, the lack of final approved documentation made it difficult for the Subteam to conclude that the Phase I verification objectives were met for this criterion. Additionally, under the current FDH ISMS program, implementation of HNF-MP-001, HNF-MP-003, and the number of policies, implementation/project/management/requirement plans, procedures, and directives drive the hierarchy to be too complex. This hierarchy makes it difficult to understand the integration function across all project, service, and functional organizations. **(MGO.1.2)**

This criterion has not been met.

Criterion 3: The FDH ISMS Project Manager stated that HNF-MP-003 was maintained and controlled in accordance with HNF-4554, *Integrated ES&H Management System (ISMS) Implementation Project Plan*, Rev. 2. A review of HNF-4554, Rev. 2, revealed that responsibilities for maintaining the ISMS Plan were in conflict with HNF-MP-001. HNF-4554 was revised during the review to correct this discrepancy concerning responsibility for maintaining and updating HNF-MP-003. The change clarified the role of FDH Systems

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

Integration (ISMS implementation) and FDH ES&H (maintenance and update of HNF-MP-003). It was noted that the FDH ISMS Plan had been revised twice since the original DOE-RL approval in September 1997. The team found the FDH ISMS Plan comprised of PHMC, facility, and activity level expectations. A crosswalk had also been prepared by FDH that mapped these expectations to specific FDH policies, directives, and implementing procedures. Notwithstanding the above, the FDH ISMS Plan had not been updated annually as required by the contract requirements until July 1999. Furthermore, HNF-4554 is an implementation project plan and not a part of the permanent management system. **(MGO.1.4)**

This criterion has been met.

Criterion 4: The FDH Manager, Performance & Evaluation for ES&H and the FDH Manager, Performance Analysis and Reporting explained the FDH process for establishing, documenting, and implementing the ES&H performance objectives, performance measures, and commitments in response to DOE program and budget execution guidance. Several FDH management directives support the FDH budget and work authorization process including HNF-MD-016, *Annual Budget Submittal,* HNF-MD-018, *Performance Reporting* and HNF-MD-019, *Project Work Authorization.* In addition, a review of HNF-PRO-050, *Managing Employee Performance,* HNF-PRO-357, *Completion and Closure of Performance Agreements,* HNF-PRO-519, *Schedule Development,* and HNF-PRO-522, *Multi-Year Work Planning,* were found to be consistent with HNF-MP-003. The Director of Performance Assurance stated that the Quality Assurance Organization is responsible for ensuring that disagreements regarding quality problems and their solutions are promptly resolved. This was found to be consistent with HNF-MP-599, *Project Hanford Quality Assurance Program Description,* Section 2, *Functional Responsibilities for QA.*

HNF-PRO-186, *Preparing a Statement of Work for Services,* was found to require that the scope of work identify the hazards and applicable ES&H requirements. Management Directive HNF-MD-4821, *Guidance for Flowdown of ISMS Requirements to Lower Tier Subcontracts,* contains guidance that enables appropriate personnel to evaluate proposed work activities and determine whether the work activity requires full ISMS implementation within the appropriate budget guidance.

This criterion has been met.

Criterion 5: The contractor ISMS adequately sets forth the contractor's comprehensive approach for occurrence reporting, including near miss reporting. HNF-PRO-060, *Reporting Occurrences and Processing Operations Information,* was reviewed and found to contain three reporting processes: 1) Base Program Operational Emergencies (DOE Order 151.1, *Comprehensive Emergency Management System*), 2) Abnormal Event notification process, and 3) Occurrence Reporting process. During discussions with the Manager of Occurrence Reporting and Emergency Operations Center, HNF-PRO-074, *Safety Responsibilities,* was discussed which included the provision for reporting "near-misses" and following up with the appropriate

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.1** DATE: 10/28/99

investigation. Also, HNF-PRO-077, *Reporting, Investigating, Managing Events*, which is also used to summarize performance requirements for reporting, investigating, and managing Occupational Injury/Illness cases or events that have safety or health significance.

This criterion has been met.

Conclusion

The objective has not been met.

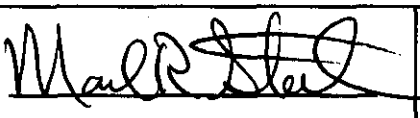
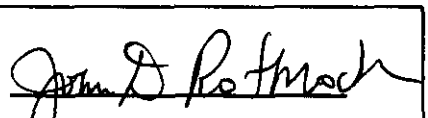
Issues

Noteworthy Practices

None.

Opportunities for Improvement

- The FDH system does not clearly identify FDH line management with respect to defined functions, roles, and responsibilities. **(MGO.1.1)**
- FDH plans, procedures, and roles and responsibilities do not reflect the current FDH organization. **(MGO.1.2)**
- Facility-specific procedures have not been "mapped" to the FDH ISMS Plan. **(MGO.1.3)**
- The FDH ISMS Plan (HNF-MP-003) has not been updated annually as required. **(MGO.1.4)**

Submitted: 	**Approved:** 
Mark R. Steelman ***Team Member***	**John D. Rothrock** ***Team Leader***
 **Steve Veitenheimer** ***Team Member***	

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

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. Contractor ISMS 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. Contractor ISMS procedures identify line management as responsible for ensuring that the implementation of hazard controls is adequate to ensure that work is planned and approved and conducted safely. ISMS procedures require that line managers are responsible for the verification of adequate implementation of controls to mitigate hazards prior to authorizing work to commence.

3. Contractor ISMS procedures identify line management as responsible for ensuring that hazard controls remain in effect so long as hazards are present.

4. Contractor ISMS procedures ensure that personnel who supervise work have competence commensurate with the responsibilities.

5. Contractor ISMS procedures define a process to ensure that ES&H responsibilities flow down to each person (employees, subcontractors, temporary employees, visiting researchers, vendor representatives, lessees, etc.) performing work.

6. Contractors and subcontractors are held accountable for ES&H through appropriate contractual and appraisal mechanisms.

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.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

- 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 those managers and the work force is 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 who 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.

Observations

- Observe scheduled activities that demonstrate that clear roles and responsibilities are established and understood, that line managers are actively involved with decisions affecting safety, and that managers and workers are competent to perform their duties.
- Activities such as weekly planning meetings, plans of the day, event critiques, safety training, and safety meetings are typical events that may provide good examples of the safety training and decision making process.

Documents Review

- Clause H.5, *Integration of Environment, Safety, and Health into Work Planning and Execution*, DEAR 970.5204
- *FDH Restructuring Implementation Plan*, Rev. 2
- Form A-6002-699, "ISMS Clause Flow Down Prescreening Questions"
- FSP-004, *Subcontractor Safety and Health Oversight*, Rev. 2
- 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

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Plan*, Rev. 2, September 1, 1999
- HNF-MP-011, *PHMC Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-078, *Subcontractor Safety and Health Management*, Rev. 2, August 10, 1999
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 1, September 8, 1999
- HNF-PRO-192, *Buyers Technical Representative Assignment and Duties*, Rev. 1, September 24, 1999
- HNF-PRO-246, *Management Assessments*, Rev. 1, June 18, 1999
- HNF-MP-599, *Project Hanford Quality Assurance Program Description*, Rev. 3, March 10, 1999
- HNF-PRO-706, *PHMC Acquisition System Requirements*, Rev. 0, October 17, 1997
- *Integrated Environment, Safety and Health Management System (ISMS) Training Program Description*, Rev. 0
- Part III, Section J, Appendix C, *DOE Directives*
- PHMC Job Descriptions
- PHMC Performance Appraisal Form A-6002-709
- Restructuring Workshop Presentation, Roles & Responsibilities
- SP-5A, Special Provisions- On-Site Services-Complete ISMS
- SP-5B, Special Provisions-On-Site Services-Standard ES&H
- Subcontract with BWHC, Subcontract No. 80232764, Modification No. 018
- Subcontract with DynCorp, Subcontract No. 80232764, Modification No. 020
- Subcontract with Numatec, Subcontract No. 80232764, Modification No. 015
- Subcontract with Protection Technology Hanford, Subcontract No. 80232764, Modification No. 04.

Interviews Conducted

- Coordinator, Automated Job Hazard Analysis
- Deputy Operations Manager, K-East
- Director, ESH&Q ISM
- Director, Occupational Safety and Health
- Director, Systems Integration
- Director, Training Services
- Manager, Acquisition Subcontracts
- Manager, FDH ISMS Project
- Manager, Management Information Systems, FDH Training

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

- Manager, Salary Administration Human Resources Integrated System
- Manager, Subcontracts
- Principal Engineer, Occupational Safety and Health
- Senior Engineer, BWHC
- Training Matrix Specialist
- Training Specialist, Requirements and Standards.

Observations

- Automated Job Hazard Analysis Demonstration
- Integrated Training and Evaluation Matrix Demonstration.

Discussion of Results

Criterion 1: Interviews conducted with the Director of Systems Integration and the FDH ISMS Project Manager revealed uncertainty as to the ownership of HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan.* It is stated in HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan,* that FDH Systems Integration is responsible for the preparation, maintenance, and coordination of the performance to the tasks described in the Project Plan (HNF-4554). FDH revised HNF-4554 during the verification to clarify the roles and responsibility as to implementation and maintenance of HNF-MP-003. **(MGO.2.1, MGO.1.2)**

Senior management conducted a series of restructuring workshops that entail FDH values, roles and responsibilities. The presentation material reviewed presents the roles and responsibilities of the Office of the President, Project and Operations Directors, Functional Managers, Project Discipline Leads, Strategic Steering Group, ES&H Advisory Board, and all employees. The documentation reviewed was presented by the Executive Vice President of FDH.

The Manager of Acquisition Subcontracts, along with Training Specialists in Requirements and Standards, are performing a functional analysis of the Buyer Technical Representatives duties so that they can develop an effective training program to provide interpretation of technical requirements.

Each job description within the Duties and Responsibilities Section requires that the individual maintain knowledge of safety policies and procedures and performs assigned duties in a safe manner, and if supervising others, has responsibility for safety of those being supervised and ensures they comply with established safety policies and procedures and practice safe work habits.

This criterion has been met.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

Criteria 2 and 3: In an interview with the Occupational Director of Safety and Health, the team verified that HNF-PRO-074, *Safety Responsibilities* outlines the responsibilities of both line managers and supervisors, as well as individual employees for implementing safety. Section 3.0 identifies line management as responsible for ensuring that implementation of hazard controls is adequate to ensure work is planned, approved, and conducted safely. HNF-PRO-074 states that managers/supervisors will furnish a place of employment free from hazards that may cause serious physical harm to workers. The procedure also states that employees can and should use Stop Work Authority if necessary.

HNF-PRO-074 currently does not include references to the ISM plan. This was a repeat deficiency noted in the FDH Phase I Readiness Review. The BWHC Senior Engineer was aware of this deficiency. He was able to provide an example using FSP-004, *BWHC Subcontractor Safety and Health Oversight,* procedure that had been revised to incorporate the requirements HNF-MD-4821, *Guidance for Flowdown of ISMS Requirements to Lower Tier Subcontracts.* This BWHC procedure was originally established to implement the requirements of HNF-PRO-074. FSP-004 is an example that confirms the management directive is an ISMS requirement flowdown mechanism in which the subcontractors can ensure they have clearly defined roles and responsibilities of all personnel for safety. Prior to the expiration of HNF-MD-4821, the deficiency must be addressed in the permanent management system. **(MGO.2.2)**

These criteria have been met.

Criterion 4: HNF-MP-011, *PHMC Sitewide Qualification and Training Plan,* establishes the process to ensure worker competence is commensurate with responsibilities. The Director of Training Services was able to show how the plan establishes both the responsibility and the process for identification of training requirements.

The new Training Matrix System, Integrated Training and Evaluation Matrix, will incorporate ISM and tracking of qualifications, resulting in an improved tracking tool.

This criterion has been met.

Criterion 5: The PHMC contract (DE-AC06-96RL132000) clause H.5, *Integration of Environment Safety, and Health into Work Planning and Execution,* contains requirements for the integration of environment safety, and health into work planning and execution. Clause H.5 requires FDH to perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment, and to be accountable for the safe performance of work. It requires FDH to develop and submit for DOE approval a Safety Management System, to comply with ES&H requirements of all applicable Laws, Regulations, and DOE Directives, and to ensure all lower-tier subcontractors also comply with applicable requirements.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

A standardized clause (Part II, Clause 7.0, *Integration of Environmental, Safety, and Health into Work Planning and Execution*) has been incorporated into the BWHC, Numatec, Protection Technology Hanford, and DynCorp contracts. The major subcontractors are required, through the above clause, to flowdown to lower-tier subcontractors the applicable requirements of the ISMS plan and Hanford Site policies and procedures.

HNF-MD-4821, Rev. 0, is the mechanism that allows adequate flowdown from the FDH DEAR clause to reach the lower-tier subcontractors. This management directive is effective until it is formally incorporated into a living document. The guidance in HNF-MD-4821, Rev. 0, provides an understandable and usable document that uses a graded approach to determine whether the full ISMS requirements should be flowed down in a lower-tier subcontract. **(MGO.2.1)** BWHC has taken this directive to include the ISMS requirements in procedure FSP-004, Rev. 2, *Subcontractor Safety and Health Oversight*. Training is included in both PHMC provisions covering services performed on the Hanford Site. This is positive because regardless of the tailoring that occurs in the graded approach process as to which provision to use SP-5A (includes complete ISMS requirements) or SP-5B (includes standard ES&H requirements), training will not be excluded.

This criterion has been met.

Criterion 6: The Manager of Salary Administration in Human Resource Integrated Systems discussed the performance appraisal process that ensures that FDH and the major subcontractors are held accountable for ES&H through appropriate appraisal mechanisms. The process also ensures that safety is maintained at all levels. The PHMC Safety/Quality Performance Review Addendum is a part of the employee's performance appraisal. It reviews the employee's overall work safety performance based on the ISMS Guiding Principles (form A-6002-710). 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.

See additional discussion relative to contractual mechanisms under criterion 5.

This criterion has been met.

Conclusion

This objective has been met.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.2** DATE: 10/28/99

Issues

Noteworthy Practices

The guidance in HNF-MD-4821, Rev. 0, provides an understandable and usable document that uses a graded approach to determine whether the full ISMS requirements should be flowed down in a lower-tier subcontract. **(MGO.2.1)**

Opportunities for Improvement

None.

Observations

Prior to the expiration of HNF-MD-4821, the deficiency must be addressed in the permanent management system. **(MGO.2.2)**

Submitted: Carrie Swafford-Chube **Carrie Swafford-Chube** ***Team Member***	**Approved:** John D. Rothrock **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

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

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

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

4. Contractor ISMS procedures require line and independent oversight or assessment activities at all levels. Oversight and assessment activities verify that work is performed within agreed upon controls.

5. Contractor ISMS procedures ensure oversight or assessment results are managed to ensure lessons are learned and applied, that issues are identified and managed to resolution, that fundamental causes are determined, and effective corrective action plans are developed and implemented.

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

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

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

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.

Documents Review

- Conduct of Operations Council Charter
- Corrective Action Record File Document Control, October 25, 1999
- Environmental Committees Responsibility and Membership Chart
- Facility Evaluation Board Charter, November 14, 1997
- FDH-2188, *Management Assessment*, Rev. 2, August 16, 1999
- FDH-5096, *Feedback and Improvement Process*, October 15, 1999

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

- Hanford Central Environmental Committee Charter
- Hanford Chemical Safety Management Council Charter, October 20, 1999
- HNF-4467, *Feedback and Improvement Policy*, May 7, 1999
- HNF-5053, *Policy for Environment, Safety and Health*, Rev. 2, October 18, 1999
- HNF-5053, *Policy for Environment, Safety and Health*, Rev. 2, October 18, 1999
- HNF-5054, *PHMC Team Environmental Policy*, August 19, 1999
- HNF-MD-016, *Annual Budget Submittal*, Rev. 0, March 31, 1997
- HNF-MD-017, *Multi Year Work Plan*, 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-028, *PHMC Engineering Leadership Team*, April 1, 1997
- HNF-MD-032, *Presidents and Employee Zero Accident Councils*, July 1, 1997
- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan*, Rev. 2, September 21, 1999
- HNF-MP-011, *Site-Wide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-MP-599, *Project Hanford QA Program Description*, Rev. 3, March 4, 1999
- HNF-POL-CRIT-SFT, *Nuclear Criticality Safety Policy*, September 30, 1998
- HNF-POL-EMPLOY, *Employee Training Policy*, Rev. 0, May 16, 1997
- HNF-POL-ENVIRO, *Environmental Management Policy*
- HNF-POL-OPEN , *Open Door Policy*, Rev. 0, May 16, 1997
- HNF-POL-PERFORM, Independent Performance Assessment Policy, Rev. 0, May 16, 1997
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-052, *Corrective Action Management*, Rev. 2, August 3, 1999
- HNF-PRO-057, *Hanford General Employee Training*, Rev. 0, December 31, 1997
- HNF-PRO-067, *Managing Lessons Learned*, Rev. 1, November 24, 1998
- 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. 0, October 17, 1997
- HNF-PRO-168, *Employee Training*, Rev. 0, February 16, 1998
- HNF-PRO-246, *Management Assessment*, Rev. 1, June 18, 1999
- HNF-PRO-2595, *Air Quality Program – Non-radioactive Emissions*, Rev. 0, October 20, 1998
- HNF-PRO-315, *Completed Decision Making, Packages*, Rev. 0, August 15, 1997
- HNF-PRO-357, *Completion and Closure of Performance Agreement*, Rev. 1, September 24, 1999
- HNF-PRO-410, *Resolving Employee Concerns*, Rev. 0, March 1, 1998
- HNF-PRO-4294, *Performance Indicator Process*, Rev. 0, December 1, 1999
- HNF-PRO-430, *Safety Analysis Program*, Rev. 1, October 15, 1997

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

- HNF-PRO-450, *Air Quality – Radioactive Emissions*, Rev. 0, March 18, 1999
- HNF-PRO-451, *Regulated Substance, Management*, Rev. 0, (canceled October 19, 1999 and replaced with HNF-PRO-3152 and HNF-PRO-3153)
- HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, Rev. 1, February 2, 1999
- HNF-PRO-453, *Spill and Release Reporting*, Rev. 1, September 1, 1997
- HNF-PRO-455, *Solid Waste Management*, Rev. 0, September 1, 1997
- HNF-PRO-456, *Water Quality Program*, Rev. 0, October 22, 1998
- HNF-PRO-459, *Environmental Training*, Rev. 2, September 2, 1999
- HNF-PRO-4616, *Supervision of Field Work Activities*, Rev. 2, June 30, 1999
- HNF-PRO-602, *Radiation Protection Center of Expertise Operations*, Rev. 0, July 31, 1997
- HNF-PRO-603, *Roles Responsibilities-Radiation Protection Center of Expertise*, Rev. 0, July 31, 1997
- HNF-PRO-653, *Deficiency Tracking System*, Rev. 1, July 12, 1999
- PAAA Steering Committee Letter, October 25, 1999
- *PHMC ESH&Q Performance Indicator Plan*, Rev. 3, August 17, 1999
- PHMC Maintenance Management Board, September 9, 1999
- PRGH-9602-ADM-0001, *Radiological Control Center of Expertise Charter*, February 15, 1996
- Safety Center of Expertise Operations, September 30, 1999
- Voluntary Protection Program Annual Survey Report, September 30, 1999
- Voluntary Protection Program First Quarterly Survey Report CY98
- Voluntary Protection Program Survey Results- Baseline Report
- WHC-CM-1, *Company Policies and Charters-QA COE*, Rev. 1, December 2, 1996.

Interviews Conducted

- Chief Engineer
- Coordinator, Chemical Management System
- Coordinator, Enhanced Work Program
- Coordinator, Environmental Management System/ISO 14001
- Coordinator, Lessons Learned
- Coordinator, Public Involvement
- Coordinator, Voluntary Protection Program
- Director, Environmental and Regulation
- Director, Nuclear Safety Regulatory Compliance
- Director, Occupational, Safety, and Health
- Director, Operations and Maintenance
- Director, Performance Assurance

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

- Director, Regulatory Compliance
- Facility Compliance Services (Environmental)
- Manager, Automated Job Hazard Analysis
- Manager, Deficiency Tracking System
- Manager, Employee Concerns
- Manager, Occurrence Reporting and Emergency Operations Center
- Manager, Performance Analysis and Reporting
- Manager, Planning and Performance ES&H
- Program Manager, Analysis and Integration
- Senior Technical Advisor, Environmental and /Regulation
- Subject Expert Matter, Occupational, Safety and Health
- Subject Expert Matter, Radiation Protection
- Vice President, Chief Operating Officer
- Vice President, ES&H.

Observations

None.

Discussion of Results

Feedback processes are covered by numerous procedures, directives, and policies. The documentation provides adequate descriptions and provides good coverage of roles and responsibilities and requirements for worker competence. However, there is a lack of full integration and undocumented systems have been built to compensate.

Criterion 1: Roles and responsibilities are well described within the governing procedures and policies. However, corrective actions and issues are controlled through various consensus groups. The function and use of these various committees, management boards, councils, Centers of Expertise, and coordination meetings is admirable **(MGO.3.1)** but is not recognized as a major element of the FDH feedback process nor legitimized through coordinated documentation. Interviews with the various department managers, directors, and SMEs indicated that a strong web of governing bodies has been formed to manage issues and provide guidance through the complex FDH organization. The documentation reviewed did not demonstrate that this system is utilized as a single concept or that an overall conscience decision has been made as to its full function and potential as a feedback mechanism. **(MGO.3.3)**

There are good examples within the FDH system where specific committees, etc. have documentation to administer their function, such as the Quality Assurance Centers of Expertise and Radiological Control Centers of Expertise. Some are promulgated through the upper-level management documents, such as the President's Zero Accident Council. However, there are

numerous groups that have independently chartered activities or act in an ad hoc status. All of these groups, whether strongly or loosely recognized, have the appearance of meeting a basic management need in an effective manner. These groups also demonstrated a strong understanding of the governing principles of ISM and strongly illustrated the principle of worker involvement. These committees tended to be points at which consensus decisions were reached and actions formed that were progressive and integrated resources and systems for the betterment of the Hanford Site.

Top level documentation (HNF-MP-001, *Management and Integration Plan*, and HNF-MP-003, *Integrated ES&H Management System Plan*) is not current. FDH plans, procedures, and roles and responsibilities at this level do not reflect the current FDH organization. **(MGO.1.2)**

This criterion has been met.

Criterion 2: The FDH procedures and policies provide appropriate coverage for competence commensurate with responsibilities. Interviews indicate that transition potentially aligns individuals with less experience and mismatched skills with essential functions. A further discussion of roles and responsibilities can be found in MGO.2 and SME-TQ.

This criterion has been met.

Criterion 3: Actions and improvements generated by the various feedback programs are not formally tied into budget and requirement systems. FDH program managers and points of contact have an established responsibility to correct actions as displayed by HNF-PRO-052, *Corrective Action Management,* but no mechanism exists within the FDH infrastructure that enables or instructs these individuals in the process of modifying project scope and funding to accommodate corrective actions. The corrective action process also provides for the ranking of findings but again does not directly link to budget and program. No process was identified that demonstrated the balancing of priorities between annual plans and emerging corrective actions. Feedback processes (i.e., the Employee Concerns program) do not directly feed (or are controlled by) Corrective Action Management. **(MGO.3.4)**

This criterion has not been met.

Criterion 4: The need for and expectation to implement a management assessment program is defined in HNF-PRO-246, *Management Assessment.* The procedure states that deficiencies identified during this process will be addressed in accordance with HNF-PRO-052. As such, evaluation and trending of assessment results will be documented.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

The FEB Charter, issued on November 14, 1997, establishes the expectation of an independent oversight group that utilizes established performance objectives and criteria. The FEB evaluates activity level performance and programmatic or functional areas of ESH&Q when required.

This criterion has been met.

Criterion 5: *To ensure that oversight and/or assessment results are managed to ensure lessons* are learned and applied, FDH has developed HNF-PRO-067, *Managing Lessons Learned.* The procedure provides guidelines for processing incoming lessons learned documents and for generating lessons learned from events that occur. However, the procedure does not provide an expectation as to what events feed the lessons-learned process. For example, Paragraph 3.1 of HNF-PRO-067, Paragraph 3.1, *Reviewing and Distributing Lessons Learned,* lists sources that should be screened for applicability and should include Occurrence Reporting and Processing System, Safety Notices, Safety Bulletins, Operating Experience Weekly Summaries, and lessons learned documents from other sites. The procedure should provide better direction to ensure onsite activities, such as Enhanced Work Planning/Automated Job Hazard Analysis activities, post-job reviews, and classroom and mock-up training are fed into the lessons learned program.

The procedure also does not provide sufficient direction as to when lessons learned should be applied to a work activity. For example, paragraph 3.1.10 of HNF-PRO-067 states that when new activities are being planned, previous lessons learned are reviewed to find those related to the activities being planned. However, the procedure lacks similar direction for work activities that have been performed before.

Once a lessons learned has been issued relative to an assessment finding, it is up to the Facility/Organization manager to initiate appropriate actions within their activity if they think the lesson applies to them. The procedure does not have a follow-up element to ensure that all appropriate managers applied the lesson learned to their activity. **(MGO.3.5)**

HNF-PRO-052 and HNF-PRO-653, *Deficiency Tracking System,* provides an effective process to identify and management deficiencies to closure. This process ensures that on a graded approach, root cause analysis is performed, corrective actions are established and worked to resolution and then the closure and effectiveness of the actions taken are evaluated. These processes were revised in response to the recent Secretary of Energy Compliance Order.

Numerous independent feedback processes exist within the FDH hierarchy. Most of these processes are formal and are controlled by procedure and are adequately described in the flow-down of requirement and function. Some are informal (as with the councils, etc). The broad list of documents reviewed demonstrates the number and variety of feedback-related procedures, directives and policies.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

Potentially lost within this set of independent processes is the ability to extract useful information for activity and facility levels. Although the flowdown of requirements is adequately demonstrated, the integration and consolidation (and therefore the final corrective action) of the various data streams was not evident. Documentation did not adequately describe how feedback data (positive and negative) is incorporated into the management decision process. The numerous feedback procedures are not fully integrated. **(MGO.3.6)** Individual programs demonstrated that information is collected and tracked.

The Automated Job Hazard Analysis program is commendable and contains strong internal feedback mechanisms. **(MGO.3.2)** However, formal links have not been established to the overarching FDH mechanisms (Deficiency Tracking System, lessons learned, etc.). **(MGO.3.7)**

This criterion has been met.

Criterion 6: The ES&H process and procedures for generating and controlling performance indicators and measures are robust. The procedures that require tracking and analyzing performance measures are well written. Information feeding the system includes data from the Deficiency Tracking System and the occurrence reporting system. The occurrence reporting process is mature and well documented. The Deficiency Tracking System process, although young, has the appropriate directions and guidance. The feedback process tracks information effectively for those events and issues above established thresholds. However, sources of data including Non-Conformance Reports and Radiological Control Reports are not used widely at this time. These data sets represent significant sources of information that are used effectively as leading indicators across the DOE complex. Consideration should be given to this lower-tier data in the feedback process. **(MGO.3.8)**

This criterion has been met.

Criterion 7: The governing procedures and policies reflect a strong commitment by FDH for regulatory compliance. The use of committees, Centers of Expertise, etc., to manage and build consensus functions well within the PHMC organization and between the PHMC and the other major site contracts and regulators. As mentioned previously, the committees represent a positive attribute of the FDH management and should be legitimized within the formal infrastructure.

Incidents, events and issues with impacts below the occurrence reporting and regulatory guidelines are not fully tracked or used to predict and prevent excursion beyond the regulatory and contractual reporting thresholds. Draft plans were discussed and viewed indicating that this issue has been recognized within specific topical areas.

This criterion has been met.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

Criterion 8: The Employees Concerns program is functional and appropriately documented. One concern centers on the preclusion of data from the Employee Concerns program being used in the Deficiency Tracking System process. Although the requirement to maintain anonymity is appropriate, safety concerns that result in specific actions should be incorporated into the FDH processes for tracking and trending. **(MGO.3.9)**

This criterion has been met.

Conclusion

The objective has been met.

Issues

Noteworthy Practices

- Formation and use of Centers of Expertise, councils, committees, etc. is praiseworthy and exemplifies the integration of business, safety, operations, and worker involvement. **(MGO.3.1)**
- The Automated Job Hazard Analysis program combines internal feedback mechanisms. **(MGO.3.2)**

Opportunities for Improvement

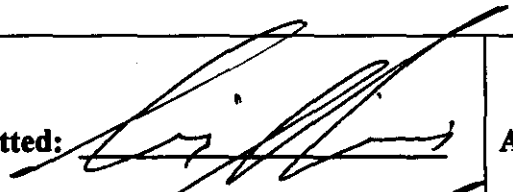
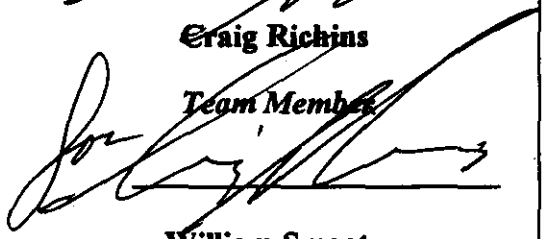
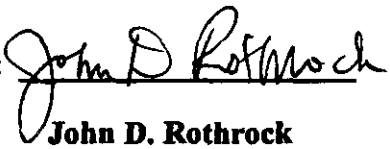
- The function of various centers of expertise, committees, etc. is not recognized as a major element of the FDH feedback process nor legitimized through integrated documentation. **(MGO.3.3)**
- Feedback processes are not formally integrated with the Business, Budget and Project systems. **(MGO.3.4)**
- Lessons learned procedures do not provide an expectation on required input or the appropriate point of application or follow through. **(MGO.3.5)**
- Procedures governing feedback are numerous and not fully integrated. **(MGO.3.6)**
- The Automated Job Hazard Analysis program has not established a formal link between the post job reviews and the formal feedback mechanisms (lessons learned, Deficiency Tracking System, etc.) **(MGO.3.7)**

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.3** DATE: 10/28/99

- Performance analysis and corrective action is not taken for events and conditions below the event level (i.e., Non-conformance Reports, Radiological Problem Reports). **(MGO.3.8)**

- Corrective actions resulting from safety concerns within the Employee Concerns process are not tracked in conjunction with the corrective action management process. **(MGO.3.9)**

Submitted:  **Craig Richins** ***Team Member***  **William Smoot** ***Team Member***	**Approved:**  **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

OBJECTIVE

MGO.4 - Contractor ISMS procedures provide a method to ensure 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. Contractor ISMS procedures ensure that controls are adequate to mitigate all identified hazards associated with the individual work.

2. Contractor ISMS 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. Contractor ISMS 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. Contractor ISMS procedures provide mechanisms or processes for gaining authorization to conduct operations or perform work.

5. Contractor ISMS mechanisms for the control of work specify that line management is responsible for ES&H.

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

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

Approach

Record Review

- Review contractor manuals of practice that define requirements too 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.

Documents Review

- DOE RLIP 1.1, *Hanford Incident Command System and Event Recognition and Classification*, Rev. 4, July 1, 1999
- DOE/RL-94-02, Hanford Emergency Response Plan, Release 13
- Electronic Mail message, Vice President, ES&H, *ISMS*, October 19, 1999
- FDH-2188, *Management Assessment*, Rev. 2, August 16, 1999
- FDH-5096, *Feedback and Improvement Process*, Rev. 0, October 15, 1999
- Fluor Daniel Hanford, Inc., Contract DE-AC06-96RL13200, Modification MO86, October 1, 1999
- HNF-4554, *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, Rev. 2, October 15, 1999
- HNF-4554 *Integrated Environment, Safety and Health Management System (ISMS) Implementation Project Plan*, Rev. 2AOctober 20, 1999
- HNF-IP-0263-GEN, *Building Emergency Plan Guidance*, Rev. 2, July 1, 1998
- 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 Flowdown of ISMS Requirements to Lower Tier Subcontract*, Rev. 0, July 30, 1999

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

- 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. 1, May 14, 1999
- HNF-MP-003, *Integrated Environment, Safety and Health Management System Plan*, Rev. 2, September 1, 1999
- HNF-MP-599, *Project Hanford Quality Assurance Description*, Rev. 3, March 10, 1999
- HNF-PRO-050, *Managing Employee Performance*, Rev. 1, August 25, 1999
- HNF-PRO-052, *Corrective Action Management*, Rev. 2, August 3, 1999
- HNF-PRO-055, *Facilities Start-Up Readiness*, Rev. 1, December 18, 1998
- 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. 0, July 1, 1997
- HNF-PRO-067, *Managing Lessons Learned*, Rev. 1, November 24, 1998
- HNF-PRO-069, *Maintenance Management*, Rev. 2, June 23, 1999
- HNF-PRO-074, *Safety Responsibilities*, Rev. 1, July 1, 1997
- HNF-PRO-075, *Safety Communication*, Rev. 2, December 31, 1997
- HNF-PRO-076, *Safety Inspections*, Rev. 2, September 15, 1998
- HNF-PRO-077, *Reporting, Investigating, Managing Events*, Rev. 2, March 31, 1999
- HNF-PRO-079, *Job Hazards Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-088, *Electrical Work Safety*, Rev. 2, September 18, 1998
- HNF-PRO-111, Occupational Medical Qualification and Monitoring, Rev. 0, July 1, 1997
- HNF-PRO-1623, *Radiological Work Planning Process*, Rev. 1, August 17, 1999
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 24, 1999
- HNF-PRO-224, *Document Control Program Standards*, Rev. 2, June 7, 1999
- HNF-PRO-2258, *Chemical Management*, Rev. 0, August 31, 1998
- HNF-PRO-246, *Management Assessment*, Rev. 1, June 18, 1999
- HNF-PRO-259, *Graded Quality Assurance*, Rev. 0, March 24, 1999
- HNF-PRO-2595, *Air Quality Program – Non-radioactive Emissions*, Rev. 0, October 20, 1998
- HNF-PRO-265, *Standards/Requirements Identification Document Process*, Rev. 3, April 16, 1999
- HNF-PRO-2701, *Authorization Envelope and Authorization Agreement*, Rev. 0, July 26, 1999
- HNF-PRO-357, *Completion and Closure of Performance Agreements*, Rev. 1, September 30, 1999
- HNF-PRO-409, *Exposure Monitoring, Reporting, and Exposure Records Management*, Rev. 0, June 30, 1997

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

- HNF-PRO-424, *Emergency Preparedness Program*, Rev. 2, July 1, 1998
- HNF-PRO-4294, Rev. 0, *Performance Indicator Process*, Rev. 0, signed September 29, 1999, effective December 1, 1999
- HNF-PRO-430, *Safety Analysis Program*, Rev. 1, October 15, 1997
- HNF-PRO-440, *Engineering Document Change Control Requirements*, Rev. 3, August 9, 1999
- HNF-PRO-450, *Air Quality – Radioactive Emissions*, Rev. 0, March 18, 1999
- HNF-PRO-451, *Regulated Substance, Management*, Rev. 0, (canceled October 19, 1999 and replaced with HNF-PRO-3152 and HNF-PRO-3153)
- HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, Rev. 1, February 2, 1999
- HNF-PRO-453, *Spill and Release Reporting*, Rev. 1, October 13, 1999
- HNF-PRO-455, *Solid Waste Management*, Rev. 0, September 1, 1997
- HNF-PRO-456, *Water Quality Program*, Rev. 0, October 22, 1998
- HNF-PRO-4616, *Supervision of Field Work Activities*, Rev. 2, June 30, 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. 1, September 14, 1998
- HNF-PRO-653, *Deficiency Tracking System*, Rev. 1, July 12, 1999
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*, Rev. 1, December 29, 1997
- HNF-PRO-701, *Safety Analysis Process – Existing Facility*, Rev. 0, October 15, 1997
- HNF-PRO-702, *Safety Analysis Process – Facility Change or Modification*, Rev. 0, October 15, 1997
- HNF-PRO-703, *Safety Analysis Process – New Project*, Rev. 0, October 15, 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. 1, February 27, 1998
- PHMC ESH&Q Performance Indicator Plan (no document number or date).

Interviews Conducted

- Director, Emergency Preparedness
- Director, Occupational Safety & Health
- Director, Performance Assurance
- Director, Strategic Steering Group
- Director, Systems Integration
- Individual Contributor, Technical Safety Group
- Manager, Analysis and Feedback
- Manager, ISMS Project
- Manager, Performance & Evaluation for ES&H

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

- Manager, Performance Analysis and Reporting
- Principal Engineer, Occupational Safety & Health
- Vice President, ES&H.

Observations

None.

Discussion of Results

Criterion 1: The FDH Individual Contributor, Technical Safety Group stated that the work planning process required the use of a graded approach because the Hanford Site contains a variety of projects, facilities, and hazards. A primary procedure used by FDH for identifying, evaluating, controlling, and communicating potential hazards and environmental impacts associated with routine, non-routine, and skill-of-the craft work operations is HNF-PRO-079, *Job Hazards Analysis*. Through the use of the Automated Job Hazards Analysis tool workers from various disciplines gather to discuss and identify hazards associated with discreet scopes of work. These two documents are based on applicable requirements and controls derived from analysis of facility-specific hazards and impacts, work scope, and conditions within which facility operations or activities are authorized. It was determined that hazard and environmental impact identification and analysis are performed per HNF-PRO-430, *Safety Analysis Program*, HNF-PRO-704, *Hazard and Accident Analysis Process*, and HNF-PRO-452, *NEPA, SEPA, Cultural and natural Resources*. HNF-PRO-705, *Safety Basis Planning, Documentation, Review, and Approval*, was also reviewed and found to be used by FDH to classify hazards as required by DOE Order 5480.23. Furthermore, HNF-PRO-704 was used to systematically identify hazards within a given operation and it is used to describe those measures taken to eliminate, control, or mitigate the identified hazards.

This criterion has been met.

Criteria 2 and 3: A variety of FDH 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 Start-Up Readiness*, requires that appropriate procedures, controls, operational requirements or other positive actions be present before beginning or resuming operations for new or changed activities. FDH uses the Automated Job Hazard Analysis in the work planning process to identify hazards associated with discreet scopes of work. As described by the ISMS Project Manager and the Director for Occupational, Safety, and Health, use of the Automated Job Hazard Analysis tool ensures that controls remain in effect unless hazards change or are mitigated. The Job Hazard Analysis process was found to apply in a cross-disciplinary fashion to the performance of work activities involving general plant maintenance, operations, construction, and environmental remediation activities.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

A review of HNF-PRO-4616, *Supervision of Field Work Activities*, revealed that the "Field Work Supervisor" requirements only apply to nuclear facilities and support systems work activities that use field supervision for guidance and control of production, testing, operations, surveillance, construction, and maintenance activities. As a result, there is no written guidance for supervision of non-nuclear work. **(MGO.4.1)**

These criteria have been met.

Criterion 4: The Director of Performance Assurance and the Director of the Technical Safety Group explained the FDH procedures for authorizing operations and work. The primary procedure that was documented in HNF-MP-003 was the *Authorization Envelope and Authorization Agreement* (HNF-PRO-2701). The purpose of the Authorization Envelope is to establish the scope, applicability, approval, and documentation requirements for nuclear, non-nuclear, radiological, and industrial facilities. It was determined that Category 2 nuclear facilities documented their Authorization Envelope in an Authorization Agreement. The relationship between the Authorization Agreement and Authorization Envelope is inconsistently addressed between the FDH ISMS Plan and HNF-PRO-2701. **(MGO.4.2)** The requirements and controls necessary for safe, environmentally protective operation of a facility and adequate protection of the workers, the public, and the environment were specified in the Authorization Envelope reviewed.

This criterion has been met.

Criterion 5: The FDH Director of Systems Integration and the Vice President ES&H explained that the principle of safety is a line management responsibility. HNF-MP-003 states, in part, "Line management is responsible for the protection of workers, the public, and the environment. PHMC Team Line management includes those employees managing or supervising employees performing work." HNF-MP-599, *Project Hanford Quality Assurance Program Description*, states in Section 2.1.3, "Management at all levels is responsible for promoting the achievement of quality in PHMC work and integrating quality requirements into daily work." Furthermore, HNF-5053, *Environmental, Safety and Health Policy*, states, "...and line management responsibility for safety." The Vice President of ES&H stated that Section 2.1.1 of HNF-PRO-079, *Job Hazards Analysis*, describes the requirement for integrating ES&H requirements into work planning.

This criterion has been met.

Criterion 6: The *PHMC Sitewide Qualification and Training Plan*, HNF-MP-011, establishes the process to ensure worker competence is commensurate with responsibilities. The Director of Training Services was able to show how the plan establishes both the responsibility and the process for identification of training requirements.

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

The Manager of Salary Administration in Human Resources Integrated Systems discussed the performance appraisal process, which ensures contractors are held accountable for ES&H through appropriate appraisal mechanisms. The process also ensures that safety is maintained at all levels. The PHMC Safety/Quality Performance Review Addendum is part of the employee's performance appraisal. It reviews the employee's overall work safety performance based on the ISMS Guiding Principles (form A-6002-710). 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. Human Resources Integrated Services provide management with a help list describing each guiding principle to support them in the evaluation process.

Each job description within the Duties and Responsibilities Section requires that the individual maintain knowledge of safety policies and procedures and perform assigned duties in a safe manner, and if supervising others, has responsibility for safety of those being supervised and ensures they comply with established safety policies and procedures and practice safe work habits.

This criterion has been met.

Conclusion

The objective has been met.

Issues

Noteworthy Practices

None.

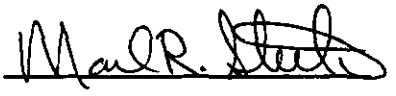
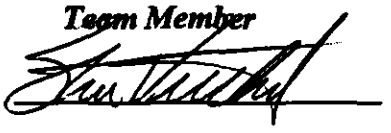
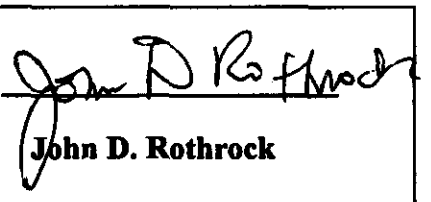
Opportunities for Improvement

- There is no written guidance for supervision of non-nuclear work (similar to HNF-PRO-4616). **(MGO.4.1)**

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Management Oversight**	OBJECTIVE: **MGO.4** DATE: 10/28/99

- The FDH ISMS Plan (HNF-MP-003), Appendix B, Section 3.4.4, is inconsistent with *HNF-PRO-2701 relating to Authorization Envelope and Authorization Agreement.* **(MGO.4.2)**

Submitted:  **Mark R. Steelman** ***Team Member***  **Steve Veitenheimer** ***Team Member***	**Approved:**  **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-EP** DATE: 10/28/99

OBJECTIVE

SME-EP - Environmental Protection - Within the Environmental Protection 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. FDH policies and procedures are established for allocating resources for environmental regulatory required provisions. (BBC.2)

2. FDH policies and procedures ensure that environmental controls are adequate to mitigate all identified hazards associated with the planned work.

3. FDH policies and procedures for Environmental Protection contain clear roles and responsibilities and specify that the line management is responsible for environmental protection/requirements.

4. FDH mechanisms are established to communicate environmental requirements to employees at all levels.

5. FDH procedures are established to ensure that Environmental Protection personnel are required to have competence commensurate with the assigned responsibility.

6. FDH policies and procedures are established to ensure that the Contractor and subcontractors are held accountable for environmental regulations through appropriate contractual and appraisal mechanisms. (MGO.2)

7. FDH procedures and/or mechanisms for Environmental Protection require that within the subject area, feedback and continuous improvement occurs.

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.

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-EP** DATE: 10/28/99

- Review assessment and feedback mechanisms to assess the effectiveness within the Environmental Protection area.

- Review training records of personnel in Environmental Protection to determine if 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.

Document Review

- HNF-5053, *Policy for Environment, Safety and Health,* Rev. 2, October 18, 1999
- HNF-5054, *PHMC Team Environmental Policy*, Rev. 0
- HNF-MD-4821, *Guidance for the Flow Down of ISMS Requirements to Lower Tier Subcontractors,* Rev. 0, July 30, 1999
- HNF-MP-001, *Management and Integration Plan*, Rev. 1, May 14, 1999
- HNF-MP-003, *Integrated ES&H Management System (ISMS) Plan,* Rev. 2, September 1, 1999
- HNF-MP-011, *Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-MP-015, *Requirements Management Plan*, Rev. 1, August 19, 1999
- HNF-POL-OPS, *Conduct of Operations Policy*, Rev. 0, May 16, 1997
- HNF-PRO-055, *Facility Start-Up Readiness*, Rev. 1, December 18, 1998
- HNF-PRO-069, *Maintenance Management*, Rev. 2, June 24, 1999
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-1793, *Building Management,* Rev. 0, September 30, 1998
- HNF-PRO-1794, *Facility Shutdown, Standby, and Transfer*, Rev. 0, October 24, 1997
- HNF-PRO-1819, *PHMC Engineering Requirements,* Rev. 3, June 22, 1999
- HNF-PRO-246, *Management Assessment*, Rev. 1, June 18, 1999
- HNF-PRO-2595, *Air Quality Program – Non-Radioactive Emissions*, Rev. 0, October 20, 1998
- HNF-PRO-265, *S/RIDs Process*, Rev. 2, April 16, 1999
- HNF-PRO-3152, *Polychlorinated Biphenyls*, Rev. 0, October 19, 1999
- HNF-PRO-424, *Facility Emergency Preparedness*, Rev. 2, July 1, 1998
- HNF-PRO-450, *Air Quality – Radioactive Emissions*, Rev. 0, March 18, 1999
- HNF-PRO-451, *Regulated Substance Management*, Rev. 0 (canceled 10/19/99 and replaced by HNF-PRO-3152, HNF-PRO-3153, and HNF-PRO-3154)

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-EP** DATE: 10/28/99

- HNF-PRO-452, *NEPA, SEPA, Cultural and Natural Resources*, Rev. 1, February 2, 1999
- HNF-PRO-453, *Spill and Release Reporting*, Rev. 1, October 13, 1999
- HNF-PRO-455, *Solid Waste Management*, Rev. 0, September 1, 1997
- HNF-PRO-456, *Water Quality Program*, Rev. 0, October 22, 1998
- HNF-PRO-459, *Environmental Training*, Rev. 2, September 2, 1999
- HNF-PRO-462, *Pollution Prevention*, Rev. 0, September 23, 1997
- HNF-PRO-473, *Performing Excavation Activities*, Rev. 0, September 30, 1997
- HNF-PRO-696, *Conduct of Operations Policy*, Rev. 0, September 30, 1997
- Modification M086, DE-AC06-96RL13200, *Project Hanford Management Contract*, FDH, Redacted, October 1, 1999.

Interviews Conducted

- Automated Job Hazard Analysis (AJHA) Administrator
- Director of Training
- Director, Environment and Regulation
- Director, Site Operations and Maintenance
- Individual Contributor, Environmental Integration
- Individual Contributor, Environmental Policy Development
- Manager, Requirements Management and Procedure Development
- Manager, Subcontracts
- Manager, Planning and Budget
- Manager, Systems Engineering
- Team Lead, Compliance Field Services.

Observations

- AJHA Demonstration (10/22/99)
- Integrated Training Electronic Matrix (ITEM) Demonstration (10/25/99).

Discussion of Results

Criterion 1: The contract requires that FDH comply with all the environmental regulations and they have allocated resources to the Environmental Compliance Program to monitor that requirement. Review of policy and procedures below contract level are captured within BBC.2.

This criterion has been met.

Criterion 2: Environmental controls are not adequately integrated within Operations and Maintenance FDH-level policies and procedures. **(SME-EP.4)** From the interview, the Director's roles and responsibilities of establishing sitewide policy on Conduct of Operations, Operational Readiness Reviews, and the Lessons Learned Program, it was apparent there was not

a good understanding of how fundamental components of environmental protection should be adequately integrated within their systems. On the FDH Organizational Chart, the Integrator Functional Groups, such as Operations and Maintenance under Project Support, have responsibilities that include the following:

- Set policy
- Establish top level requirements
- Functional leads and SMEs
- Provide functional resources to projects
- Level resources across projects
- Maintain access to specialized resources
- Provide assessments and feedback; oversight.

Operations and Maintenance responsibilities are to include those listed above; therefore, there is a concern that environmental integration is not being driven from the top down. FDH has Conduct of Operations and Conduct of Maintenance Councils to address company-wide feedback and improvement. Review of Operations and Maintenance policies and procedures indicate there is still a lack of environmental integration. Of the documents reviewed, only one (HNF-PRO-069, *Maintenance Management*) referenced the ISMS Plan and it failed to carry through to the Maintenance Implementation Plan. Procedures do not reflect the reorganization changes in Technical Authorities and management. Some policies still have the former FDH President approval and HNF-PRO-1793, Rev. 0, *Building Management Procedure* still refers to Westinghouse Hanford Company. **(MGO.1.2)** The Director of Operations and Maintenance concurred that policies and procedures require improvement to incorporate environmental considerations and requirements.

Project Supports Engineering Division, a sister division to Operations and Maintenance, has procedures (i.e., HNF-PRO-1819, *PHMC Engineering Requirements*) encompass environmental requirements.

The AJHA does an excellent job at the activity level of ensuring that environmental controls are adequate to mitigate all identified hazards associated with the planned work. The AJHA link to the environmental requirements, forms, permits and regulations is a Noteworthy Practice. The AJHA also triggers the environmental SME for review and approval before the work can be performed. **(SME-EP.1)**

This criterion has not been met.

Criterion 3: All environmental procedures reviewed have a table of roles and responsibilities that identified the line manager responsible for environmental protection/requirements. **(SME-EP.2)** Interviews confirmed that FDH personnel have a clear understanding that line management is responsible for environmental protection/requirements. In an interview with the Director of Environment and Regulation, it was noted that FDH management will be centralizing

the Environmental Compliance Officers under the Environmental Function. This would be an improvement for consistency across the site for developing procedures, issuing new regulatory requirements to the facilities, communicating lessons learned, and providing feedback/continuous improvement.

Environmental Services, which supports all of the projects, is an integration/coordination function that is "buried" within the Waste Management project. As a provider of a central service, this function is currently attached to a singular project organization. This is not in alignment with the overall concept of sitewide integration functions as described in the new FDH organization structure.

This criterion has been met.

Criterion 4: Through FDH policies and the Hanford General Employee Training (HGET), environmental awareness is communicated to employees. The FDH AJHA process does an excellent job of communicating environmental requirements to employees at the activity level.

This criterion has been met.

Criterion 5: For the environmental function personnel, each position has defined roles and responsibilities. When hiring for an environmental position, the posting defines the minimum environmental requirements. As part of the employee's Performance Review, one of their requirements is to keep current on environmental regulations in their field of expertise through training. The ITEM is also an excellent tool for identifying environmental training to ensure competence commensurate with the assigned responsibility. Procedure HNF-PRO-459, *Environmental Training* does a good job at defining environmental training requirements for general workers.

This criterion has been met.

Criterion 6: From the documentation reviewed and the interviews, FDH policies and procedures are in place and are understood to ensure contractor accountability for environmental regulations. HNF-MD-4821, *Guidance for Flowdown of ISMS Requirements to Lower Tier Subcontractors,* is a good tool to flow down the environmental requirements. This directive incorporates waste minimization and pollution prevention. This management directive is being converted into a procedure. **(SME-EP.3)**

This criterion has been met.

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-EP** DATE: 11/2/99

Criterion 7: The AJHA system requires input to feedback, continuous improvement, and lessons learned within the procedure prior to completion of the task. The AJHA has also established an e-mail mailbox for receiving inquiries at anytime. The AJHA has an Implementation Team that meets monthly and includes AJHA administration, technical authorities, points of contacts, and SMEs.

Some environmental procedures have an electronic link to the Environmental Technical Authority for instant feedback. This would be a nice feature for all environmental procedures.

The Technical Authority listed in all environmental procedures is no longer in that position; therefore, updates will need to be made reflecting the changes in the reorganization. **(SME-EP.5)** Environmental Compliance Officers from each facility have monthly meetings to provide feedback and continuous improvement.

This criterion has been met.

Conclusion

The objective has been met.

Issues

Noteworthy Practices

- The AJHA does an excellent job at the activity level of ensuring that environmental controls are in place. The AJHA link to the environmental requirements, forms, permits and regulations is a Noteworthy Practice. The AJHA also triggers the environmental SME for review and approval before the work can be performed. **(SME-EP.1)**

- All environmental procedures reviewed had a table of roles and responsibilities that identified the line manager responsible for environmental protection/requirements. These procedures also included references to other procedures, permits, and forms and to the point of contact or technical authority for feedback. **(SME-EP.2)**

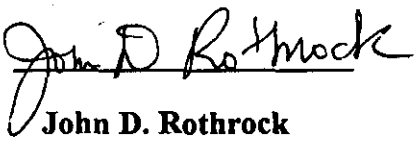
- A noteworthy management directive, HNF-MD-4821, is a good tool to drive down the environmental requirements to FDH subcontractors. **(SME-EP.3)**

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-EP** DATE: 10/28/99

Opportunities for Improvement

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

Submitted:  **Ellen Mattlin** ***Team Member***	**Approved:**  **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: ***Subject Matter Expert***	OBJECTIVE: **SME-RP** DATE: 10/28/99

OBJECTIVE

SME-RP - Radiation Protection policies and procedures are in place for the planning of radiological work, including adequate resource allocation and 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 the Radiation Protection area, line managers are responsible for safety, clear roles and responsibilities have been established, and there is a satisfactory level of competence. (CE I-2, CE I-3, CE I-4, CE I-5, CE I-6).

Criteria

1. The contractor's prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Policies and procedures for Radiation Protection require adequate planning of individual work items to ensure that hazards are analyzed and controls are identified.

3. Policies and procedures for Radiation Protection contain clear roles and responsibilities. Radiation Protection is effectively integrated with line support managers to ensure that line managers are responsible for safety.

4. Policies and procedures for Radiation Protection require controls to be implemented prior to work commencing, these controls are effectively integrated, and readiness is confirmed prior to performing work.

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

6. FDH policies and procedures are established to ensure that the Contractor and subcontractors are held accountable for radiation protection regulations through appropriate contractual and appraisal mechanisms. (MGO.2)

7. Policies and procedures for Radiation Protection require that personnel who are assigned to the subject area have a satisfactory level of competence.

8. Policies and procedures for Radiation Protection require that within the subject area, feedback and continuous improvement occurs at all levels.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

Approach

Record Review

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

Interviews

- Interview personnel and responsible managers assigned to Radiation 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 Radiation Protection to assess level of competence.

Documents Review

- CDMP-9902-TRN-0336, *Functional Analysis For Radcon Technical Staff And Managers*
- ESHQ-RP-MA-99002 (September 1999)
- FDH ISMS Phase I Verification Self-Assessment (April 1999)
- FDH Radiation Protection Program FY 2000 Annual Work Plan, Rev. 1
- HNF-1950, *Price-Anderson Amendments Act Guidance for the Determination of Significance and Reportability of 10 CFR 835 Potential Noncompliances*
- HNF-4361, *PHMC Expectations For Worker Involvement*
- HNF-4467, *Feedback And Improvement Policy*, Rev. 0, May 7, 1999
- HNF-5053, *Policy for Environment, Safety and Health*, Rev. 2, October 18, 1999
- HNF-IP-1246, *Internal Self-assessment Procedure*, Rev. 1, July 31, 1998
- HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts*, Rev. 0, July 30, 1999
- HNF-MP-001, *Management and Integration Plan*, Rev. 1, June 23, 1997

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

- HNF-MP-003, *Integrated Environment, Safety And Health Management System Plan*, Rev. 2, September 1, 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 14, 1999
- HNF-PRO-1623, *Radiological Work Planning Process*, Rev. 1, August 17, 1999
- HNF-PRO-1623, *Radiological Work Planning Process*, Rev. 1, August 5, 1999
- HNF-PRO-1819, *PHMC Engineering Requirements*, Rev. 3, June 22, 1999
- HNF-PRO-2243, *Nuclear Safety Requirement Noncompliances*, Rev. 0, March 1, 1998
- HNF-PRO-248, *Management Assessment*, Rev. 1, June 8, 1999
- HNF-PRO-319, *Radiation Protection Self-Assessments*, Rev. 1, February 24, 1999
- HNF-PRO-602, *Radiation Protection Center of Expertise Operations*, Rev. 0, July 31, 1997
- HNF-PRO-603, *Roles and Responsibilities of the Radiation Protection Center of Expertise*, Rev. 0, July 22, 1997
- HNF-PRO-700, *Safety Analysis and Technical Safety Requirement*, Rev. 1, December 29, 1997
- HNF-PRO-XXX, *Facility Modification Design Process*, September 28, 1999
- Management Assessment, Radiation Protection Implementation of ISMS Principles.

Interviews Conducted

- Administrator, Automated Job Hazards Analysis
- Director, Emergency Preparedness
- Director, Nuclear Safety Regulatory Compliance
- Director, Performance Assurance
- Director, Project Support
- Director, Radiation Protection
- Director, Strategic Steering Group
- Director, Technical Safety Programs
- Manager, DOE Emergency Management Support
- Manager, Engineering Project Support
- Manager, Operations and Maintenance
- Manager, Project Management
- Manager, Radiation Protection Technical Services and Integration
- Manager, Radiological Technical Group
- Nuclear Safety Specialist
- Radiation Protection Radiological Work Planning Process Site Technical Authority
- Radiation Protection Training Site Technical Authority
- Technical Support, Automated Job Hazards Analysis
- Vice President, Environmental, Safety & Health.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

Observations

None.

Discussion of Results

Criterion 1: The FDH Director, Radiation Protection and the FDH Manager, Radiological Technical Group, described the mechanism in which funding is provided for the FDH Radiation Protection Program. A baseline budget for indirect funding is developed to support a technically sound central radiation protection/radiological control program, including program development, implementation, and oversight functions. Proposed work scope is provided by the program Technical Authorities (Radiation Protection FY-2000 Improvement Initiatives) and prioritized and approved by the FDH Director, Radiation Protection. The approved work is described in an annual work plan under WBS 6.5.3.5.1 and 6.5.2.5.2 cost accounts in accordance with the FDH budget guidance. The Radiation Protection Director demonstrated changes to the program baseline budget. The baseline budget and change requests are both approved by the FDH Radiation Protection Director and the FDH Vice President for ES&H. How the Radiation Protection budget and scope are integrated into the overall FDH budget and prioritization process is addressed in the BBC discussion.

This criterion has been met.

Criteria 2 and 5: The FDH process for radiological hazard identification and analysis for work planning activities is adequately described in HNF-PRO-079, *Job Hazards Analysis*, Rev. 4. This procedure requires the implementation of the Automated Job Hazard Analysis computer-based system. The Automated Job Hazard Analysis is an excellent tool for team planning of a job. It addresses hazards of all types, is structured around the five ISMS core functions, and drives integration of these functions to occur in the workplace. The Automated Job Hazard Analysis includes the Radiation Work Permit, identifies appropriate dosimetry for the job, and requires the concurrence of a Radiation Protection SME prior to approval. HNF-PRO-079 directs the user to HNF-PRO-1623, *Radiological Work Planning Process*. This procedure combines the basic requirements for radiological work planning into a single process and can be used by the various projects and facilities in developing more specific radiological work planning procedures.

These criteria have been met.

Criteria 3 and 7: Roles and responsibilities for the Radiation Protection Program and radiological control functions are appropriately identified and processes are in place to ensure competency of personnel performing radiation protection functions. The responsibilities of the central FDH Radiation Protection organization are listed in HNF-MP-003, *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System,* Attachment C-1. Other pertinent radiation protection roles and responsibilities are identified

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

HNF-PRO-1619, *ALARA Organization and Responsibilities* and HNF-PRO-1623, *Radiological Work Planning and Process.* In particular, HNR-PR0-1623 addresses the responsibilities of each radiation protection/radiological control function as well as the required qualifications and training for these functions.

A unique process has been developed by FDH to address site wide Radiation Protection policy and decisions for all FDH projects. This process is called the Radiation Protection Center of Expertise. The Center of Expertise is a FDH-chartered organization, chaired by the FDH Director of the Functional Integration Group and has core representation from each of the major FDH projects and service providers. This organization establishes radiation protection policies and procedures, addresses common issues and lessons learned, establishes training standards, ensures consistency, coordinates all activities necessary for implementation of requirements into company activities, and addresses radiological control cost and schedule needs across FDH. Each member of the Center of Expertise must fulfill specific training and qualification standards. The roles and responsibilities of the Center of Expertise are addressed in HNF-PRO-603 and Center of Expertise operations are addressed in HNF-PRO-602. Formal documentation is developed for all Center of Expertise business transactions, including identification of issues, the decision making process, and the technical basis for these decisions as well as for all radiation protection policies and procedures developed by the Center of Expertise. The Center of Expertise is an excellent business management process for integrating Radiation Protection functions into all aspects of FDH projects and activities. **(SME-RP.1)**

These criteria have been met.

Criteria 4 and 5: At the activity level, HNF-PRO-079 adequately addresses identification of controls for radiological work. The process requires use of the Automated Job Hazard Analysis computerized system and is discussed in Criteria 2.

At the project level, establishment of engineered controls for radiological hazards is adequately driven by the requirements established for the FDH engineering process in HNF-PRO-1819, *PHMC Engineering Requirements.* This procedure requires that design criteria shall consider As Low As Reasonably Achievable (ALARA) in evaluating alternative solutions during the development of a project design. The primary method for maintaining ALARA radiation exposure is through physical design features. Use of administrative controls and procedural requirements are to be employed only as supplemental methods to control radiation exposure. The HNF-PRO-1819 makes reference to HNF-PRO-1622, *Radiological Design Review Process* where additional requirements are available. Additionally, the engineering procedure provides a link to the applicable section of 10 CFR 835. Drivers for ALARA consideration and use of the Automated Job Hazard Analysis are also being incorporated into the draft procedure for the HNF-PRO-XXX, *Facility Modification Design Process*, dated September 28, 1999.

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

Similar requirements driving consideration for ALARA and other radiological controls during FDH operations and maintenance activities were not identified in procedures developed by the FDH Operations and Maintenance Functional Group. According to the FDH Director, Operations and Maintenance, this Functional Group has the responsibility for developing operations and maintenance policy, procedures and mechanisms for use in all FDH projects and facilities. However, requirements for radiological controls are not factored into the operations/maintenance program procedures unless specifically requested by the projects or facilities. Such a request usually results from a corrective action in support of an issue or incident; e.g., instructions on use of radiological control hold points. These actions are evaluated by either the Conduct of Operations Council or Conduct of Maintenance Council. Both councils have representatives from each of the major projects and the Operations and Maintenance Functional Group. This approach does not provide a proactive approach to ensure ALARA radiation exposures, control of radiological hazards and prevention of radiological incidents. Integration of radiological controls and use of ALARA practices need to be integrated into the FDH Operations and Maintenance Program procedures. **(SME-RP.2)**

FDH Facility Authorization Basis documents define administrative controls that are required for controlling facility safety basis parameters. Often radiological controls established through the Radiation Protection Program are identified as facility level administrative controls for a nuclear Facility Authorization Basis. Examples of such controls would be routine radiological surveillances, or monitoring of specified safety structures, systems, or components (e.g., continuous air monitoring instrumentation). FDH establishes the requirements that each of the nuclear facilities is responsible for managing and implementing their Facility Authorization Basis in HNF-PRO-700, *Safety Analysis and Technical Safety Requirements*. However, the integration of Facility Authorization Basis administrative controls from ES&H programs other than the nuclear safety program is not documented at the FDH institutional level. **(SME-RP.3)** Consequently, it is not understood that a potential Facility Authorization Basis violation may result if these integrated administrative controls are not performed as required. Interviews with the FDH Radiation Protection personnel confirmed a lack of recognition for the integration of radiological controls as Facility Authorization Basis administrative controls.

Criterion 4 has not been met. Criterion 5 has been met.

Criterion 6: The PHMC clearly drives the requirement for FDH and all subcontractors to comply with all ES&H laws, regulations and directives identified in the contract. Information related to 10 CFR 835 is made available to FDH employees via the FDH Radiation Protection web site (http://www.rl.gov/radcon/rad-links.html). The following two processes adequately address the flow of radiation protection requirements to subcontractors, including specific FDH implementing procedures to 10 CFR 835: HNF-PRO-123, *The Material Request/Purchase Requisition/Contract Requisition Process*, and HNF-MD-4821, *Guidance for Flow Down of ISMS Requirements to Lower Tier Subcontracts.*

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

The process for addressing nuclear safety noncompliances is addressed in HNF-PRO-2243, *Nuclear Safety Requirement Noncompliances.* This procedure establishes the process for identification, evaluation, reporting, and tracking of potential noncompliances with DOE nuclear safety requirements, including requirements of 10 CFR 835. Additionally, this procedure provides links to the FDH procedure HNF-PRO-052, *Corrective Action Management*, and to the DOE handbook. However, HNF-PRO-2243 is outdated and does not reflect the current program or organizational hierarchy. A draft guidance document is also available on the FDH Radiation Protection web site that specifically provides reportability instructions for noncompliances to 10 CFR 835. This draft guidance is not acknowledged by HNF-PRO-2243. Currently, the only official training provided on the requirements of the DOE Price Anderson Amendment Act or reporting of nuclear safety noncompliances is a module in the Hanford General Employee Training and a module for Radiation Control Technician circuit training.

The FDH Nuclear Safety Regulatory Compliance Program was recently restructured to support the DOE Compliance Order issued to FDH in 1999. As a result, many program improvements were established; however, these improvements are not captured in the FDH documented program or management system. These improvements include a current revision to HNF-PRO-2243, additional training on case studies, development of an Executive Steering Committee to involve FDH senior management in the regulatory compliance area, and the development of a Center of Expertise, modeled after the Center of Expertise for Radiation Protection. FDH needs to complete development and implementation of the nuclear safety regulatory compliance program improvements. **(SME-RP.4)**

Criterion 8: FDH uses several mechanisms to address feedback and continuous improvement in the Radiation Protection area. The primary mechanism is HNF-PRO-248, *Management Assessment* which is used to address PHMC contractual requirements for an assessment function. In addition, two other procedures are used to specifically address the radiation protection function, HNF-IP-1246, *Internal Self-assessment Procedure* and HNF-PRO-319, *Radiation Protection Self-Assessments.* Lessons learned involving radiological hazards are made available via the FDH Radiation Protection web site and through the Radiation Protection Center of Expertise. Informal mentoring in the area of radiation protection is also provided to facilities and projects upon request or as needed to support needed improvements.

This criterion has been met.

Conclusion

In a letter to the DOE Richland Operations Office dated March 21, 1997, FDH specifically proposed to integrate radiological controls into a single integrated FDH system, using ISMS as the foundation. In reviewing the documentation provided and interviewing various FDH managers, it is evident that FDH has succeeded with this integration.

This objective has been met.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-RP** DATE: 10/28/99

Issues

Noteworthy Practices

The Center of Expertise is an excellent business management process for integrating Radiation Protection functions into all aspects of FDH projects and activities **(SME-RP.1).**

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 **(SME-RP.2).**
- The integration of Facility Authorization Basis administrative controls from ES&H programs other than the nuclear safety program is not documented at the FDH institutional level. **(SME-RP.3)**
- FDH needs to complete development and implementation of the nuclear safety regulatory compliance program improvements **(SME-RP.4).**

Submitted: Diane L. Clark **Diane Clark** ***Team Member***	**Approved:** John D Rothrock **John D. Rothrock** ***Team Leader***

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 10/28/99

OBJECTIVE

SME-TQ - Training and qualification policies, plans, procedures, and programs for FDH and contractor personnel are in place to ensure competence commensurate with responsibilities, to ensure a practice of continuous performance improvement is implemented, and to ensure the responsibility for ownership of training and verification of qualification prior to work assignment lies with line management.

Criteria

1. Contracting mechanisms are in place to ensure the identification of training and qualifications required for all FDH personnel and subcontractors. (BBC.1)

2. The contractor training 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. (BBC.3)

3. Contractor training procedures are in place to ensure that contractor personnel responsible for analyzing the hazards and developing, reviewing, or implementing the controls, have competence that is commensurate with their responsibilities. (HAZ.3)

4. 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. (MGO.2)

5. Contractor training procedures ensure that the appropriate training requirements are identified and are adequate to mitigate all identified hazards associated with the individual work.

6. Contractor training procedures are in place to ensure that training is completed prior to commencing work.

7. Contractor personnel who conduct work are required to have competence commensurate with the assigned responsibilities.

8. Contractor plans, policies, and procedures contain clear roles and responsibilities, which specify line management responsibility for ensuring the training and qualification of personnel reporting to them.

9. The contractor has an established mechanism to ensure corrections to and suggestion for improvements to training programs and courses are fed back into the training system.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 10/28/99

10. The contractor has a training program designed to ensure implementation of ISMS, including understanding of guiding principles and core functions.

Approach

Record Review

Review training, personnel, procurement, medical qualification, and other FDH level procedures containing roles and responsibilities for qualification, requirements for competence, and conduct of the process of training for Hanford site contractors for ISMS application.

Interviews

Interview training, procurement, ES&H, Industrial Relations, and Emergency Preparedness personnel to determine understanding of roles and responsibilities.

Documents Review

- HNF-1184, *Training Requirements* (on Intranet)
- HNF-MP-003, *Integrated Environment Safety and Health Management System Plan*, Rev. 2, September 1, 1999
- HNF-MP-011, *Sitewide Qualification and Training Plan*, Rev. 1, April 6, 1999
- HNF-PRO-021, *Employment & Personnel Placement*, Rev. 0, July 15, 1998
- HNF-PRO-057, *Hanford General Employee Training*, Rev. 0, December 31, 1997
- HNF-PRO-068, *Site Maintenance Training*, Rev. 0, September 29, 1997
- HNF-PRO-071, *Radiological Control Technician Training*, Rev. 1, October 30, 1998
- HNF-PRO-079, *Job Hazard Analysis*, Rev. 4, September 9, 1999
- HNF-PRO-082, *Radiological Worker Training*, Rev. 0, September 29, 1997
- HNF-PRO-111, *Occupational Medical Qualification and Monitoring*, Rev. 0, July 1, 1997
- HNF-PRO-118, *Instructional Staff Qualification*, Rev. 1, June 30, 1998
- HNF-PRO-153, *Nuclear Process Operator Training Program*, Rev. 0, September 29, 1997
- HNF-PRO-155, *Operations Management Fundamentals Training Program*, Rev. 0, September 29, 1997
- HNF-PRO-159, *ALARA Program Description*, Rev. 0, September 29, 1997
- HNF-PRO-161, *Criticality Safety Training Program Description*, Rev. 0, September 29, 1997
- HNF-PRO-164, *Training Matrix Capabilities & Access*, Rev. 0, October 17, 1997
- HNF-PRO-166, *Transportation Safety Training Requirements*, Rev. 0, July 1, 1997
- HNF-PRO-167, *Using the SAT Model for Training*, Rev. 0, September 29, 1997
- HNF-PRO-168, *Employee Training*, Rev. 0, February 16, 1998
- HNF-PRO-169, *Assigning Training Responsibilities*, Rev. 0, September 29, 1997

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 10/28/99

- HNF-PRO-170, *Analyzing Training Requirements*, Rev. 1, June 30, 1998
- HNF-PRO-171, *Designing Training*, Rev. 1, September 23, 1999
- HNF-PRO-172, *Developing Training*, Rev. 0, September 29, 1997
- HNF-PRO-173, *Implementing Training*, Rev. 0, September 29, 1997
- HNF-PRO-174, *Evaluating Training*, Rev. 1, June 30, 1998
- HNF-PRO-175, *Developing a Qualification Program*, Rev. 0, September 29, 1997
- 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-179, *Obtaining Training Equivalencies, Waivers, and Extensions*, Rev. 2, January 7, 1999
- HNF-PRO-183, *Pre-acquisition Planning Requirements*, Rev. 4, June, 18, 1999
- HNF-PRO-186, *Preparing a Statement of Work for Services*, Rev. 2, September 24, 1999
- HNF-PRO-192, *Buyers Technical Representative Assignment and Duties*, Rev. 0, September 24, 1999
- HNF-PRO-249, *Training Course Administration, Registration, and Records*, Rev. 1, June 1, 1999
- HNF-PRO-3359, *Documenting Costs and Developing Work Plans for Training*, Rev. 0, October 1, 1998
- HNF-PRO-459, *Environmental Training*, Rev. 2, September 2, 1999
- HNF-PRO-4616, *Supervision of Field Work Activities*, Rev. 2, June 30, 1999.

Interviews Conducted

- Communications Specialist (formerly Training Specialist)
- Deputy Operations Manager, K East Facility (formerly FDH Training Manager)
- Director, Operations Integration - Training
- Director, Training Services
- Director, Emergency Preparedness
- Director, Industrial Relations
- Manager, Acquisitions – Subcontracts
- Manager, Conduct of Training, FDH Training
- Manager, Management Information Systems, Training
- Manager, PHMC Human Resources Services
- Manager, PHMC Requirements and Standards
- Technical Support Consultant, Automated Job Hazard Analysis (AJHA)
- Training Specialist, Training Matrix System (TMX)
- Training Specialist, Requirements and Standards
- Vice President, ES&H.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 10/28/99

Observations

- FDH ISMS Orientation Training, October 13, 1999
- ITEM demonstration, October 22, 1999.

Discussion of Results

Criterion 1: Training specialists and the Training Manager explained how HNF-MP-011, Rev. 1, *Qualification and Training Plan*; Special Provisions (SP-5 A and B); and Statements of Work interrelate. The work to be accomplished is identified, and based on regulatory drivers and hazards, the training requirements needed are put in the contract. To address training requirements for FDH personnel and permanent contractors, an individual or position training plan is identified through which a worker becomes qualified to perform work. For lower-tier contractors, the Request of Proposal Statement of Work contains these requirements for training based on the SP-5 A or B through which the worker becomes qualified to perform work.

FDH Training and Procurement/Acquisitions are proactively improving the training for Buyer's Technical Representatives (BTR). Although BTRs are trained on the essential systems for performing their duties and responsibilities, ISMS implementation has created new responsibilities in ensuring the flowdown of requirements to subcontractors. A functional analysis of the BTR's duties is being performed to improve the training program. The work is scheduled for completion and implementation by the first of the calendar year. **(SME-TQ.4)**

This criterion has been met.

Criteria 2, 3, and 7: Training personnel and the Human Resources Manager explained that competence commensurate with responsibility is ensured through HNF-MP-003, *Integrated Environment, Safety, and Health Management System*, Section 2.0, "Guiding Principles," Section 3, "Competence Commensurate with Responsibilities"; and HNF-MP-011, Rev. 1, Section 3.1.3.5. FDH managers ensure (1) anyone they assign to perform work is qualified to perform the assignment, (2) their staff is qualified for their jobs, and (3) their staff maintains their job qualification.

HNF-MP-011 and associated plans, procedures, and policies are in place to ensure competence commensurate with responsibilities. Plans, procedures, and policies reflect a commitment by the contractor to ensure all personnel have position descriptions that identify duties and responsibilities, training plans listing the training for the position, and a requirement for management to ensure personnel are qualified prior to job assignments. However, in the area of hiring methodology (specifically the applicant interview process), there appears to be no standardized practice to achieve consistency in guiding managers who create interview questionnaires, or to be certain that they understand the interview process. Managers apparently have the freedom to implement this process in the best fashion they feel is appropriate. There is a Manager's Guide on the Intranet that contains example questions, but there is no driver to use

this guide. There is also an Applicant Evaluation form that must be filled out for every person interviewed. This evaluation form is very generic and is used for hiring decisions.

A more global issue arising with this above-stated issue is the lack of a formal training program for managers. The current training requirements only address regulatory driven requirements for the position. A more robust program could include training on management systems, employee development, the hiring process, etc. This has been recognized by FDH as an area of improvement. A functional tabletop analysis was completed in June 1999, but has had no further action due to focus on compliance order training actions. This analysis identified technical competencies for managers and recommended a formal training program. Further action is necessary on the part of FDH to ensure this program becomes a reality. **(SME-TQ.8)**

HNF-MP-011 does an excellent job of defining roles and responsibilities and defining the implementation of the Systematic Approach to Training process. Appendix B of HNF-MP-011 is under revision to capture the current reorganization and does not yet contain training program descriptions. This must be completed to ensure that this information is contained in a central location. **(SME-TQ.5)**

In December 1998, a Value Engineering session was held involving employee representatives from all facilities to help develop the Integrated Training Electronic Matrix (ITEM) system, which will replace Training Matrix System as the training requirement tracking system for FDH. This will be an improved tracking tool, making it even easier to get useful, timely, and accurate reports to ensure that the workforce is trained and qualified for the work they will be performing. This is an excellent example of the use of the core functions and guiding principles of ISMS in defining the work scope, employee involvement, and feedback and improvement processes. **(SME-TQ.2)**

The FDH Training and Qualification Home Page is an excellent enhancement to help ensure competence commensurate with responsibilities. It provides an easy link to the HNF-PROs , various facility training and qualification programs, the course catalog, and web-based training. It allows line management and working level personnel access to training and qualification information that was not previously readily available. **(SME-TQ.3)**

These criteria have been met.

Criterion 4: Review of documents ensured that HNF-MP-011, Rev. 1, Section 3.1.5.4, "Line/Facility Management Responsibilities" and HNF-MP-001, *Management and Integration Plan*, Section 2.2.1, "Roles and Responsibilities" clearly identify roles and responsibilities. An interview with the FDH Vice President of ES&H confirmed this.

This criterion has been met.

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 10/28/99

Criterion 5: HNF-1184, *Training Requirements*, HNF-PRO-079, *Job Hazard Analysis*, and HNF-PRO-111, *Occupational Medical Qualification and Monitoring (EJTA)* are used together to ensure that training requirements are properly identified and are adequate to address the hazards. Interviews with training personnel clarified this process.

This criterion has been met.

Criterion 6: HNF-1184 is used to identify the requirements and how the Training Matrix System printouts are used to ensure that training is completed prior to commencing work. Interviews with training personnel demonstrated their knowledge of the system.

This criterion has been met.

Criterion 8: Line management is clearly responsible for ensuring the training and qualification of personnel reporting to them through HNF-MP-011, Rev. 1, Section 3.1.3, "Responsibilities" and Appendix E.

This criterion has been met.

Criterion 9: HNF-MP-011, Rev. 1, Section 3.7, "Training Evaluation" and HNF-PRO-174, *Evaluating Training*, provide sufficient direction to ensure feedback is incorporated into training. This process could be strengthened and lead to improved customer service relations by providing some process through which to respond back to the feedback providers as to the disposition of their comments. Feedback mechanisms are provided through the Level I and Level III processes and are adequate. It would merely enhance the process to ensure feedback providers that their comments are taken into consideration. **(SME-TQ.6)**

This criterion has been met.

Criterion 10: The ISMS FDH Orientation Training was observed on October 13, 1999. The ISMS briefing and training materials provided to FDH employees were concisely packaged to effectively communicate the core functions and guiding principles in a short period of time without losing the audience. There is an excellent opportunity to incorporate ISMS principles and core functions in all ES&H and Emergency Preparedness training as a vehicle to emphasize and reinforce the concepts with the workforce. Lessons Learned integration into training is an example of this concept. **(SME-TQ.1, SME-TQ.7 and SME-TQ.8)**

This criterion has been met.

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 11/2/99

Conclusion

This objective has been met.

Issues

Noteworthy Practices

- The ISMS briefing provided to FDH employees was concisely packaged to effectively communicate the core functions and guiding principles in a short period of time without losing the audience. **(SME-TQ.1)**

- The ITEM system is an improved tracking tool, making it easy to get useful, timely, and accurate reports to ensure that the workforce is trained and qualified for the work they will be performing. This is an excellent example of the use of the core functions and guiding principles of ISMS in defining the work scope, employee involvement, and feedback and improvement. **(SME-TQ.2)**

- The FDH Training and Qualification Home Page is an excellent enhancement to help ensure competence commensurate with responsibilities. It provides an easy link to the HNF-PROs, various facility training and qualification programs, the course catalog, and web-based training. It allows line management and working level personnel access to training and qualification information that was not previously readily available. **(SME-TQ.3)**

- FDH Training and FDH Procurement/Acquisitions are working together to proactively improve the training for BTRs to ensure that the BTRs are fully cognizant of their responsibility to verify the flowdown of training requirements to lower-tier subcontractors. **(SME-TQ.4)**

Opportunities for Improvement

- Appendix B of HNF-MP-011 is under revision to capture the current reorganization and does not yet contain all training program descriptions. This must be completed to ensure that this information is contained in a central location. **(SME-TQ.5)**

- FDH does not have a formalized process to respond to individuals providing feedback as to the disposition of their training comments. **(SME-TQ.6)**

- ISMS principles and core functions are not incorporated in all ES&H and Emergency Preparedness training to emphasize and reinforce the concepts with the workforce. **(SME-TQ.7)**

FDH ISMS PHASE I VERIFICATION ASSESSMENT FORM

FUNCTIONAL AREA: **Subject Matter Expert**	OBJECTIVE: **SME-TQ** DATE: 10/28/99

- Further action is necessary to complete the development of a formal training program for managers to ensure they are able to effectively perform all roles and responsibilities. **(SME-TQ.8)**

Submitted: Colleen Meyers **Colleen Meyers** ***Team Member***	**Approved:** John D Rothrock **John D. Rothrock** ***Team Leader***

DOE/RL-99-72, Rev. 0
U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

Fluor Daniel Hanford, Inc.

Integrated Safety Management System Phase I Verification

Review Plan

Richland, Washington
October 19 - October 29, 1999

John D. Rothrock
Integrated Safety Management System
Verification Team Leader

RECORD COPY

ACRONYMS

AJHA	Automated Job Hazard Analysis
BBC	Business, Budgets, and Contracts (subteam)
CRAD	Criteria and Review Approach Document
DEAR	Department of Energy Acquisition Regulations
DOE	U. S. Department of Energy
FDH	Fluor Daniel Hanford, Inc.
FEB	Facility Evaluation Board
ES&H	Environment, Safety, and Health
HAZ	Hazard Identification and Standard Selection (subteam)
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
ISMSV	Integrated Safety Management Systems Verification
MGO	Management Oversight (subteam)
PHMC	Project Hanford Management Contract
RL	DOE, Richland Operations Office
SME	Subject Matter Expert
S/RID	Standard/Requirement Identification Document

1.0 INTRODUCTION

The U. S. Department of Energy (DOE) policy (DOE Policy 450.4) requires that safety be integrated into all aspects of the management and operations of its facilities. In simple terms, the DOE will "Do work safely." The purpose of this Fluor Daniel Hanford, Inc. (FDH) Integrated Environment, Safety, and Health (ES&H) Management System Phase I Verification is to determine whether Integrated Safety Management System (ISMS) programs and processes are in place within the FDH to accomplish the objective of "Do work safely." The ISMS is comprised of the following:

1. Described functions, components, processes, and interfaces (system map or blueprint)

2. List of personnel who perform those assigned roles and responsibilities to manage and control the ISMS.

Therefore, this review evaluated the "paper" and "people" aspects of the ISMS to ensure that the ISMS is implemented and effective within FDH.

The *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan* (HNF-MP-003, Rev. 2 [FDH 1999a]) represents the safety management system documentation required by DOE Acquisition Regulations (DEAR) clause 970.5204-2 for the FDH. HNF-MP-003 (Rev. 0) was originally approved by 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 Project Hanford Management Contract (PHMC) contract was recently modified to incorporate the 970.5204-2 DEAR clause and HNF-MP-003 (FDH 1999a) was revised accordingly.

The PHMC is a performance-based management contract held by FDH. This means that all of the fee or profit that the managing contractor earns is based on its ability to deliver results through its management of the subcontractors. It also means that fee is only earned for specified results, as opposed to simply undertaking activities.

2.0 PURPOSE

The ISMS Phase I Verification of FDH was conducted to verify the adequacy of documentation as submitted to the Approval Authority by FDH. This review is not only a review of the ISMS Description documentation, but is also a review of the procedures, policies, and manuals of practice used to implement safety management in an environment of organizational restructuring. The FDH ISMS should support the *Hanford Strategic Plan* (DOE-RL 1996) to safely clean up and manage the site's legacy waste; deploy science and technology while incorporating the ISMS theme to "Do work safely;" and protect human health and the environment.

The guidance and direction provided in this review plan have been adapted from DOE Policy 450.4, DOE Guidance 450.4, and the *Integrated Safety Management Systems (ISMS) Verification DOE Team Leader's Handbook* (DOE 1999).

3.0 BACKGROUND

FDH is the management and integration contractor that directs, controls, integrates, and supports the activities of the PHMC scope. Most of the project work is performed and accomplished by the following subcontractors:

- B&W Hanford Company is responsible for the Facility Stabilization Project and Fast Flux Test Facility.
- Waste Management Federal Services of Hanford, Inc. is responsible for the Waste Management Project and for environmental services.
- Numatec Hanford Corporation is responsible for engineering and technology support for all projects.
- DynCorp Tri-Cities Services, Inc. is responsible for infrastructure and cross-cutting services, including facility management, site-support services, utility services, transportation infrastructure, and emergency services.

Note: A prime contract was recently established in October 1999 between the Office of River Protection and the Lockheed Martin Hanford Company relative to the Tank Waste Remediation System.

FDH also manages the Hazardous Materials Management and Emergency Response facility where state-of the art training is developed and deployed. The Fast Flux Test Facility is not currently a part of the Facility Stabilization Project, and while its future is being deliberated, it is being managed as a separate DOE and joint FDH and Pacific Northwest National Laboratory standby project and subcontracted to B&W Hanford Company. Environmental restoration work is managed under a separate contract with Bechtel Hanford, Inc.

Major change is ongoing in both the RL and FDH organizations. Organizational restructurings were announced on September 30, 1999 and communicated to employees by the RL manager and senior FDH management.

The impact of the organizational restructuring on the FDH is profound. The contractual relationship between the five major subcontractors and FDH is changing, as are the assignments of many key subcontractor managers. This environment of change and transition to a more streamlined structure offers both challenge and opportunity for doing work safely.

4.0 SCOPE

The scope of this review is associated with FDH in its role as the PHMC management and integration contractor. Review of RL is not within the scope of this review and will be assessed in the future. To date, FDH has undergone two Phase I ISMS verifications at K Basins and the Tank Waste Remediation System, and a Phase II at the Tank Waste Remediation System. Both the K Basins Phase I and Tank Waste Remediation System Phase I and II verifications produced a number of lessons learned. Based upon the results of those verifications, RL and FDH concluded that the most efficient verification strategy was to perform a Phase I verification at the FDH level. Following completion of the FDH verification, Phase II verifications (including a review of Phase I elements, at the facility or subcontractor level, with the exception of the Tank Waste Remediation System) will be performed, for selected facilities and/or PHMC subcontractors.

The review is intended to provide the following:

- Assess if the ISMS Description is consistent with DEAR clauses, DOE Policies 450.4, 450.5, and 450.6, and if implementation will assure work can be done safely.
- Evaluate the adequacy of the ISMS Description.
- Perform a general evaluation of the training and knowledge of FDH management and staff with respect to the ISMS principles, functions, mechanisms, and responsibilities.
- Provide general feedback to the RL manager as to the probability of success in implementing the ISMS given the ongoing organizational restructuring.

5.0 PREREQUISITES

Overall acceptance by DOE to proceed with the FDH Phase I Verification was based on the following:

- FDH declaration of readiness for a Phase I verification.
- Compliance with the requirements of the FDH contract clause H.5.E (DEAR 970.5204-2) substantially demonstrated by a FDH internal readiness review with independent oversight by RL.
- Performance of a gap analysis.
- Corrective actions with known deficiencies will not require changes to the ISMS Description and related policies, plans, procedures, and products to the extent that significant re-review of the ISMS Description would be required.
- Lessons learned from previous ISMS verifications are factored into preparation for the Phase I FDH verification.

6.0 INTEGRATED SAFETY MANAGEMENT SYSTEM ASSESSMENT RESULTS

6.1 OVERALL SUMMARY

This section provides a summary of the DOE Phase I review of the FDH ISMS. The verification focused on the PHMC scope (the institutional level) ISMS Description and deferred consideration of the facility and activity levels because of organizational restructuring.

FDH is in the initial phase of moving from a management and integration organization to a new project-focused organization. A consequence of this restructuring is the dissolution of the PHMC independent, major subcontractor structure and transition into a less complex, flatter, more efficient, project-focused organization. FDH will be assuming roles and responsibilities that, in the past, were the direct responsibility of the major subcontractors. This restructuring is to be done in a planned and controlled manner, with an emphasis on assuring continued safe work performance. The new FDH organization is expected to become a centralized project management structure, using common project controls and management practices.

The FDH ISMS Description evolved from a 1996 PHMC Environment, Safety, and Health Management Plan, written before the ISMS clause was incorporated in the FDH contract. The 1996 Plan addressed the ES&H aspects of the Hanford Strategic Plan and principles, processes, systems, and commitments for ES&H risks within the scope of the PHMC. From this original

document, FDH developed HNF-MP-003 (FDH 1999a), which incorporates Appendix B, the *ISMS Description*. This is the system description evaluated by the Team. This description includes ISMS principles brought forward in the Defense Nuclear Facilities Safety Board Recommendation 95-2, and elements of International Standards Organization 14001, the DOE Voluntary Protection Program, Enhanced Work Planning, and other best practices.

FDH uniquely expands upon the DOE Core Functions and Guiding Principles resulting in 7 Core Functions and 11 Guiding Principles and establishes discrete levels of responsibility, called "expectations," at the PHMC scope level, facility level, and activity level. This unique approach is acceptable, but not optimum, and it perpetuates an overly layered, complex, and often confusing picture. A significant opportunity for improvement exists for FDH to simplify their ISMS Description as they restructure.

Interviews indicate that FDH management is striving for operations that are well run and safe. The work force is actively involved and supports integrating safety into all work activities. Management meets regularly with bargaining unit representatives and receives strong, constructive feedback. A major challenge is not to impact safety as a result of restructuring. Transition planning is proceeding in a satisfactory manner but many unanticipated issues are expected to emerge. Senior management is substantially involved in gathering feedback to know the truth about what is really going on. They act on the information they receive to achieve continuing improvement. FDH intends to reduce the layers of management and redeploy resources to the projects. Significant attention will be required to assure that clear roles and responsibilities are maintained.

Summaries of functional area reviews are contained in the following sections of the report with a detailed Assessment Form provided in Volume II. The Criteria and Review Approach Documents (CRAD) were based on the FDH uniquely expanded to 7 Core Functions and 11 Guiding Principles.

6.2 FUNCTIONAL AREA SUMMARIES

6.2.1 Business, Budgets, and Contracts

The FDH ISMS Description meets the intent of the criteria established for evaluation of the Business, Budgets, and Contracts (BBC) CRADs. The evaluation found that FDH work processes can effectively translate mission expectations into specific work scopes. Additionally, the work prioritization and resource allocation decisions clearly reflect the linkages to DOE priorities and work commitments to external stakeholders (e.g., Defense Nuclear Facilities Safety Board, *Hanford Federal Facility Agreement and Consent Order* [Ecology et al. 1998] commitments). The inherent openness of the budget planning and formulation processes through extensive engagement of DOE and local community stakeholders is noted. FDH's process for assuring flow down of ISMS requirements to subcontractors is tailored and addresses risks and complexity of the subcontractor's workscope.

However, the evaluation did find specific areas in the FDH ISMS Description that need to be strengthened. The following areas are deemed critical to long-term success and robustness of the FDH ISMS, especially in light of ongoing organizational restructure. These include, but are not limited to the following:

- There is a lack of high-level ES&H expectations established at the FDH institutional level within the business management system. This results in an ineffective measurement of ES&H performance, as well as ineffective measurement of line management accountability.

- Existing business systems and approaches are not fully developed. An example is a lack of FDH institutional level procedures addressing work prioritization, resource allocations, and ES&H impacts. The strength of existing practices are primarily due to the knowledge and experience of the current staff. Loss of these personnel could adversely impact corporate knowledge and continued robustness of FDH's business management systems.

Opportunities for Improvement (noted below) warrant management attention. However, the intent of the BBC objectives has been met through FDH's work practices.

Noteworthy Practices

- The contractor work-planning decisions process (i.e., work prioritization and budget formulation and planning) is very open and clearly reflects and links RL priorities, strategic plans, and external commitments (e.g., Tri-Party Agreement [Ecology et al. 1998], Defense Nuclear Facilities Safety Board, DOE-Headquarters reviews).

- ES&H is integral and visible in work planning. The contractor has the ability to identify the ES&H component of projects from its existing business systems by fully utilizing its current databases.

- Change control process is logically driven and well documented.

Opportunities for Improvement

- ES&H expectations and performance goals are not established at the institutional level. This can prevent effective measurement of system performance as well as ensuring line management accountability for work commitments.

- HNF-PRO-533, *Change Control* (FDH 1999f) and HNF-MD-029, *Hanford Site Technical Baseline Change Control* (FDH 1999g) are not linked.

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

- 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.

- HNF-PRO-706, *PHMC Acquisition System Requirements* (FDH 1999h) does not mention flow down of ISMS requirements, nor does it reference all of the procurement procedures that affect the acquisition system.

- The integration and linkages among FDH procedures need to be more fully developed.

- The FDH procedures do not provide for secondary review at the FDH level for ensuring that ES&H support needs are adequately accounted for as part of work planning.

- ES&H considerations need to be more visible in the HNF-PRO-054, *Sharing of Fee with Employees* (FDH 1999i), to highlight its priority.

- The FDH procedures do not provide clear definition and/or criteria for "tailored" hazard controls. This lack of clear and consistent definition/criteria could adversely impact the cost-effectiveness of resource allocated to implementation of hazard controls.

6.2.2 Hazard Identification and Standard Selection

The documented FDH ISMS Description was reviewed to determine if a comprehensive system had been established for the identification and evaluation of hazards; identification of applicable controls, standards and requirements; and to ensure that the personnel responsible for performing these functions have competence that is commensurate with their assigned responsibilities.

FDH policies, plans, and procedures reviewed indicated that the hazards associated with the planned work are identified with acceptable rigor and methodology. Contractor processes, in particular the Automated Job Hazards Analysis (AJHA) computerized system, require the identification of all hazards associated with its facilities and projects and require appropriate involvement of workers, as well as the ES&H Subject Matter Expert (SME).

FDH uses a three-tier approach for identifying standards and requirements, which ensures responsive transition of requirements from the institutional level to the facility and activity levels. At the institutional level, standards, and requirements are maintained in Section J of Appendix C, of the PHMC (Lists A and B). At the Hanford Site level, and in nuclear facilities, FDH implements a Standard/Requirement and Identification Document (S/RID) process that contains the higher-level requirements applicable to the site and to discreet individual nuclear facilities. Facilities without an approved S/RID are required to comply with the ES&H standards in Lists A and B and controls at the activity level. The AJHA process is the driving tool to establish the applicable standards, and requirements at the activity level.

FDH has developed the process of Authorization Envelopes to define the requirements and controls that are necessary for safe, environmentally protective operation of a facility, and adequate protection of the workers, public, and environment. This process defines the authorization requirements for nuclear, radiological, non-nuclear and industrial facilities. Specifically for Hazard Category 2 nuclear facilities, an Authorization Agreement signed between DOE and FDH is the vehicle by which the Authorization Envelope is approved.

FDH procedures have defined roles and responsibilities for personnel assigned to oversee, review, and approve the analysis of hazards, and establish controls associated with projects, facilities, and activities. Additionally, these procedures require personnel to have competence that is commensurate with their responsibilities.

The three objectives related to the identification, evaluation, and control of hazards have been met. The following is a listing of Noteworthy Practices and Opportunities for Improvement that were generated from the review.

Noteworthy Practices

- The AJHA is a very effective tool for capturing worker safety requirements and encouraging worker participation and feedback.

- The AJHA process provides a powerful and valuable tool to ensure integrated organizational functions are used to identify and control hazards, as well as providing streamlined logistical capabilities regarding work package development, worker involvement, approvals, and feedback.

Opportunities for Improvement

HNF-PRO-079, *Job Hazard Analysis*, Table 1 (FDH 1999j) does not completely address the hazards and eliminate "gray" areas where the individual must make the critical decision as to the "type" of hazard analysis performed.

6.2.3 Management Oversight

The Management Oversight (MGO) functional area subteam assessed the institutionalization of the FDH ISMS Description through document reviews and interviews with FDH personnel. The MGO subteam review focused on four major areas: the ISMS Description, roles and responsibilities, feedback and improvement, and procedures related to hazard controls and work.

The MGO subteam review of the FDH ISMS Description, DOE Policy 450.4, 450.5, and 450.6, and the DEAR clauses 970.5204-2 and 970.5204-78 revealed that HNF-MP-003 (FDH 1999a) does not provide adequate program crosswalk to subcontractor implementing documents. Additionally, the management system that has been implemented to satisfy ISMS is overly complex and difficult to follow. This may lead to poor adherence and potential noncompliance with the numerous implementing procedures identified in HNF-MP-003 (FDH 1999a).
FDH has not effectively demonstrated that mechanisms are in place to direct, monitor, and verify

the integrated implementation of ISMS in accordance with their ISMS Description (HNF-MP-003 [(FDH 1999a]). Specific ISMS roles and responsibilities in the "new" organization could not always be articulated from several FDH managers interviewed. However, most managers could explain their previous function(s) relative to ISMS.

Due to the restructuring effort, several actions are underway to redefine the FDH business management system. This effort will result in the development of a Management Systems Requirements Plan (which will eventually replace HNF-MP-001 [FDH 1999b]), facility transition plans, and facility/organizational project execution plans. A significant portion of this effort will directly affect implementation mechanisms relative to ISMS. While the initiative currently underway is intended to result in a more streamlined and efficient approach to managing and conducting business, the lack of final, approved documentation made it difficult for the subteam to conclude that all MGO Phase I verification objectives were met. Additionally, under the current FDH ISMS Description, the large number of policies and procedures drive the hierarchy to be too complex. This hierarchy makes it difficult to understand the FDH integration function across each project, service, and functional organization.

Contractor roles and responsibilities did not reflect the current FDH organization. However, the team was able to verify through procedural review that safety responsibilities of both line managers and supervisors as well as individual employees are present. There was a basic understanding of the flow down of ISMS requirements to lower-tier contracts. Management Directive HNF-MD-4821, *Guidance for Flowdown of ISMS Requirements to Lower Tier Subcontract* (FDH 1999c), was found to contain the ISMS requirement flow down mechanism for subcontractors.

FDH Human Resources demonstrated an appraisal process that ensures contractors are held accountable for ES&H through appropriate appraisal mechanisms. The PHMC Safety/Quality Performance Review Addendum is a part of the employees' performance appraisal.

Procedures and policies have been promulgated that manage the feedback process. These documents cover the range of expected programs and processes. However, the large number of independent feedback processes demonstrates a lack of integration and diminishes the effectiveness of the system. No mechanism has been established to tie feedback processes to the FDH budget and programs. Roles and responsibilities are defined for feedback processes. However, in practice, management used ad hoc committees and other forums as a primary tool for continual improvement.

A variety of FDH procedures are used 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 Start-Up Readiness* (FDH 1998), requires that appropriate procedures, controls, operational requirements or other positive actions be present before beginning or resuming operations for new or changed activities. FDH uses the AJHA in the work planning process to identify hazards associated with discreet scopes of work. The Job Hazard Analysis process was found to apply in a cross-disciplinary fashion to the performance of work activities involving general plant maintenance, operations, construction, and environmental remediation activities.

In summary, three of the four objectives were met. However, the overall objective associated with the ISMS description, MGO.1, was not met. This was primarily due to the following:

- A result of roles and responsibilities not aligning as described in HNF-MP-003 (FDH 1999a)
- Numerous plans, procedures, policies, and directives required to implement ISMS
- Uncertainties relative to ISMS Description for projects, service organizations, and functional groups
- Impact of the current restructuring effort on the FDH business management system.

Noteworthy Practices

- The guidance in HNF-MD-4821 (FDH 1999c), provides an understandable and usable document that uses a graded approach to determine whether the full ISMS requirements should be flowed down in a lower-tier subcontract.
- Formation and use of Centers of Expertise, councils, committees, etc. is praiseworthy and exemplifies the integration of business, safety, operations, and worker involvement.
- The AJHA program combines internal feedback mechanisms.

Opportunities for Improvement

- The FDH ISMS Description does not clearly identify FDH line management with respect to defined functions, roles, and responsibilities.
- FDH plans, procedures, and roles and responsibilities do not reflect the current FDH organization.
- Facility-specific procedures have not been "mapped" to the FDH ISMS Plan.
- The FDH ISMS Plan (HNF-MP-003 [FDH 1999a]) has not been updated annually as required.
- The function of various centers of expertise, committees, etc. is not recognized as a major element of the FDH feedback process nor legitimized through integrated documentation.
- Feedback processes are not formally integrated with the Business, Budget and Project systems.
- Lessons learned procedures do not provide an expectation on required input or the appropriate point of application or follow through.
- Procedures governing feedback are numerous and not fully integrated.

- The AJHA program has not established a formal link between the post-job reviews and the formal feedback mechanisms (lessons learned, Deficiency Tracking System, etc.)

- Performance analysis and corrective action is not taken for events and conditions below the event level (i.e., Non-conformance Reports, Radiological Problem Reports).

- Corrective actions resulting from safety concerns within the Employee Concerns process are not tracked in conjunction with the corrective action management process.

- There is no written guidance for supervision of non-nuclear work (similar to HNF-PRO-4616, *Supervision of Field Work Activities* [FDH 1999d]).

- The FDH ISMS Plan (HNF-MP-003 [FDH 1999a]), Appendix B, Section 3.4.4, is inconsistent with HNF-PRO-2701, *Authorization Envelope and Authorization Agreement* (FDH 1999e), relating to Authorization Envelope and Authorization Agreement.

6.2.4 Subject Matter Experts

Three SME reviews were conducted to evaluate the integration of ISM across the selected ES&H functional areas. The three SME reviews were Environmental Protection (SME-EP), Radiation Protection (SME-RP), and Training and Qualification (SME-TQ). These reviews address integration of selected ES&H functional area and not the integration of a specific ES&H program or organization; e.g., Radiation Protection Program. Thus, an Opportunity for Improvement called out as an SME-RP for example, may reflect on multiple FDH functions or programs and not specifically the ES&H program.

6.2.4.1 Subject Matter Expert – Environmental Protection. The documented FDH ISMS Description was reviewed to determine if environmental protection was adequately integrated within the system. It was a comprehensive review that crosscut BBC, HAZ and MGO to assure that resources were allocated for environmental regulation requirements, identification of applicable environmental controls and requirements, communication of environmental requirements, clear roles and responsibilities, opportunities for feedback and continuous improvement, and a satisfactory level of competence.

A baseline budget is developed to support a technically sound central Environmental Compliance Program. The approved work is described in an annual work plan in accordance with the FDH budget process. Changes to the program baseline budget or work scope are done through the FDH Budget Change Request process.

FDH policies, plans, and procedures reviewed indicated that environmental protection/requirements were adequately integrated, with the exception of Operations and Maintenance level policies and procedures. The concerns that environmental protection is not being adequately integrated within Operations and Maintenance at the FDH level could lead to lack of communication of environmental requirements to employees, and environmental controls may not be adequate to mitigate all identified hazards associated with the planned work.

The AJHA achieves the environmental integration at the activity level. The AJHA ensures environmental controls are adequate by linking to the environmental requirements, forms, permits, procedures, and regulations required for the planned work. The AJHA triggers the environmental SME for review and approval before the work can be performed. The AJHA system requires input to feedback, continuous improvement, and lessons learned within the procedure prior to completion of the task.

All environmental procedures reviewed had within the Procedure Section a table of roles and responsibilities that identified the line manager responsible for environmental protection/requirements.

The SME-EP objective of integrating environmental protection through the ISM system was met. The following is a list of Noteworthy Practices and Opportunities for Improvement that were generated from the review.

Noteworthy Practices

- The AJHA does an excellent job at the activity level of ensuring that environmental controls are in place. The AJHA link to the environmental requirements, forms, permits and regulations is a Noteworthy Practice. The AJHA also triggers the environmental SME for review and approval before the work can be performed.

- All environmental procedures reviewed had a table of roles and responsibilities that identified the line manager responsible for environmental protection/requirements. These procedures also included references to other procedures, permits, and forms and to the point of contact or technical authority for feedback.

- A noteworthy management directive, HNF-MD-4821 (FDH 1999c), is a good tool to drive down the environmental requirements to FDH subcontractors.

Opportunities for Improvement

Environmental controls are not being adequately integrated within Operations and Maintenance FDH level policies and procedures.

6.2.4.2 Subject Matter Expert – Radiation Protection. The Radiation Protection SME review evaluated FDH policies and procedures to determine if the radiation protection functional area is adequately integrated throughout the core functions and guiding principles of the FDH ISM system. Eight criteria were developed to support this objective.

A baseline budget is developed to support a technically sound, central Radiation Protection/Radiological Control Program, including program development, implementation, and oversight functions. The approved work is described in an annual work plan and changes to the program baseline are addressed through a formal budget change request process.

Radiological hazard identification and analysis, and establishment of appropriate radiological controls at the project, facility, and activity levels are adequately integrated into the FDH

processes, with the exception in the Operations and Maintenance program area. Due to the lack of integrating radiological controls (prior to performing work) into the Operations and Maintenance Program procedures, this criterion was not met.

FDH uses an AJHA computerized system to address and integrate radiological hazards and controls into work planning activities. The AJHA includes the Radiation Work Permit, identifies appropriate dosimetry for the job, and requires the concurrence of a Radiation Protection SME prior to approval.

The Radiation Protection Center of Expertise is an excellent process that has been established for integrating Radiation Protection functions into all aspects of FDH projects and activities. The Center of Expertise represents all FDH projects and addresses all aspects of the radiation protection functional area. This business process is serving as a model for development of additional Centers of Expertise in other ES&H functional areas.

Roles and responsibilities for radiation protection and radiological control functions are appropriately identified and processes are in place to ensure competency of personnel performing radiation protection functions.

Several mechanisms are used to address feedback and continuous improvement in the radiation protection area; i.e., the FDH company-wide processes as well as some additional processes developed by the Radiation Protection Program. These include procedures addressing radiation protection self-assessments, lessons learned, and a radiation protection web site that provides access to multiple types of information.

In summary, the objective was met. The following is a list of Noteworthy Practices and Opportunities for Improvement that were generated from this review.

Noteworthy Practices

The Center of Expertise is an excellent business management process for integrating Radiation Protection functions into all aspects of FDH projects and activities.

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.

- The integration of Facility Authorization Basis administrative controls from ES&H programs other than the nuclear safety program is not documented at the FDH institutional level.

- FDH needs to complete development and implementation of the nuclear safety regulatory compliance program improvements.

6.2.4.3 Subject Matter Expert – Training and Qualification. The Training SME Review evaluated FDH training policies, plans, procedures, and programs to ensure that they are adequately integrated into the FDH ISM system. Specifically, the following were evaluated:

- Processes for ensuring competence commensurate with job responsibilities
- Processes for ensuring a practice of continuous performance improvement is implemented
- Processes for ensuring that the responsibility for ownership of training and verification of qualification prior to work assignment lies with line management.

The review included record reviews of training, personnel, procurement, medical qualification, and other FDH-level procedures containing roles and responsibilities for qualification, requirements for competence, and conduct of the process of training for Hanford Site contractors for ISMS application. The review also included interviews with training, procurement, ES&H, Industrial Relations, and Emergency Preparedness personnel.

HNF-MP-011, *Sitewide Qualification and Training Plan* (FDH 1999k), is clearly in line with ISMS. The work to be accomplished is identified and the training requirements necessary for personnel to support that work and attendant hazards are put in place. Line management has clearly defined responsibility to ensure that the training and qualification of the personnel reporting to them is up to date prior to commencing work. Policies and procedures are in place to ensure that personnel have competence commensurate with their responsibilities. Procedures are also in place to support the feedback processes. FDH has a training program designed to ensure implementation of ISMS, including understanding of guiding principles and core functions. Personnel interviewed displayed a clear understanding of roles and responsibilities with regard to the training objective.

The training objective has been met. The following is a list of Noteworthy Practices and Opportunities for Improvement that were generated from the review.

Noteworthy Practices

- The ISMS briefing provided to FDH employees was concisely packaged to effectively communicate the core functions and guiding principles in a short period of time without losing the audience.
- The ITEM system is an improved tracking tool, making it easy to get useful, timely, and accurate reports to ensure that the workforce is trained and qualified for the work they will be performing. This is an excellent example of the use of the core functions and guiding principles of ISMS in defining the work scope, employee involvement, and feedback and improvement.

- The FDH Training and Qualification Home Page is an excellent enhancement to help ensure competence commensurate with responsibilities. It provides an easy link to the HNF-PROs, various facility training and qualification programs, the course catalog, and web-based training. It allows line management and working level personnel access to training and qualification information that was not previously readily available.

- FDH Training and FDH Procurement/Acquisitions are working together to proactively improve the training for Buyers Technical Representatives to ensure that the Buyers Technical Representatives are fully cognizant of their responsibility to verify the flow down of training requirements to lower-tier subcontractors.

Opportunities for Improvement

- Appendix B of HNF-MP-011 (FDH 1999k) is under revision to capture the current reorganization and does not yet contain all training program descriptions. This must be completed to ensure that this information is contained in a central location.

- FDH does not have a formalized process to respond to individuals providing feedback as to the disposition of their training comments.

- ISMS principles and core functions are not incorporated in all ES&H and Emergency Preparedness training to emphasize and reinforce the concepts with the workforce.

- Further action is necessary to complete the development of a formal training program for managers to ensure they are able to effectively perform all roles and responsibilities.

7.0 CONCLUSION AND RECOMMENDATIONS

The Team offers the following specific recommendations:

- The Manager of RL defer approval of the ISMS Description until restructuring is further along and direct FDH to correct all opportunities for improvement.

- FDH should continue to progress in updating their policies, procedures, and manuals of practice.

- The ISMS Description must be consistent with FDH and DOE organizational restructuring and contract revisions.

- Simplify and streamline the ISMS Description to enhance clarity, coherency, and utility. Consider integrating Appendix B (the Description) into the base document (the Plan) and adding new appendices for major projects.

- Make the ISMS Description consistent with other FDH management system documents, especially HNF-MP-001 (FDH 1999b) after it is revised.

- Continue Phase I/II verification at the project level.

The Team concluded that FDH management has made progress in achieving the DOE objective to "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." Given continued, ambitious effort, and successful resolution of the opportunities for improvement from this review, there is a high probability that a fully described ISMS Description for doing work safely can be achieved in the near future.

8.0 LESSONS LEARNED

- FDH personnel were professional, knowledgeable, and responsive to team members' needs. Requested documents were provided quickly. Interviews and/or demonstrations were arranged whenever needed to clarify an issue or explain a process. This level of support was very important in meeting the tight review schedule.

- Review team management provided team members the operational flexibility to exercise initiative in completing their assignments.

- The major changes underway in RL and FDH organizations caused difficulties for the review due to changes in the management structure and systems.
- Not having time between the team orientation week and the 2-week review caused difficulties in digesting information and formulating strategies for performing the verification. Being able to read documents *before* scheduling interviews would have been extremely beneficial.

- Clear guidance during the first few days to team members and subteam leaders about their responsibilities, deadlines, and deliverables would have been very helpful, especially for those team members who were new to ISMS review process.

- Daily subteam meetings did not occur for all subteams; this caused some difficulty in communication between team members.

- Time became an issue due to the large volume of documents that needed to be reviewed by team members, and the need for multiple team members to interview the same set of key personnel.

- Having team members assigned to multiple reviews in various stages of planning and execution caused extreme work overload, leading to long workdays.

- Having daily end-of-day briefings increased communications, but occasionally caused problems with FDH management taking action upon very preliminary statements.

- How procedures tie to the CRADs were not clear to some team members. Having training on this subject would have been beneficial and is recommended for the Phase II Verification team.

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.

Ecology, EPA, and DOE, 1998, *Hanford Federal Facility Agreement and Consent Order*, 89-10, Washington State Department of Ecology, Olympia, Washington; United States Environmental Protection Agency, Region 10; and U.S. Department of Energy, Richland, Washington, as amended.

DOE, 1999, *Integrated Safety Management Systems (ISMS) Verification DOE Team Leader's Handbook*, DOE-HDBK-3027-99, June, 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*, DOE G 450.4-1A, 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.

FDH, 1998, *Facilities Start-Up Readiness*, HNF-PRO-055, Rev. 1, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999a, *Project Hanford Management Contract Integrated Environment, Safety, and Health Management System Plan,* HNF-MP-003, Rev. 2, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999b, *Management and Integration Plan,* HNF-MP-001, Rev. 1, Fluor Daniel Hanford, Inc., Richland, Washington.

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

FDH, 1999d, *Supervision of Field Work Activities,* HNF-PRO-4616, Rev. 2, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999e, *Authorization Envelope and Authorization Agreement,* HNF-PRO-2701, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999f, *Change Control,* HNF-PRO-533, Rev. 0, Fluor Daniel Hanford, Inc. Richland, Washington.

FDH, 1999g, *Hanford Site Technical Baseline,* HNF-MD-029, Rev. 1, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999h, *PHMC Acquisition Systems Requirements,* HNF-PRO-706, Rev. 0, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999i, *Sharing Fee with Employees,* HNF-PRO-054, Rev. 0, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999j, *Job Hazard Analysis,* HNF-PRO-079, Rev. 4, Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1999k, *Sitewide Qualification and Training Plan,* HNF-MP-011, Rev. 1, Fluor Daniel Hanford, Inc., Richland, Washington.