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**Department of Energy**

Washington, DC 20585

March 15, 2001

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DNF SAFETY BOARD

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, NW  
Suite 700  
Washington, D.C. 20004

Dear Mr. Chairman:

Consistent with the Department's implementation plan for Defense Nuclear Facilities Safety Board Recommendation 2000-2, I am forwarding information concerning Deliverable 20, due in February 2001 and February 2002 under the implementation plan.

Commitment 20 calls for Secretarial Officers to review annually the results of environment, safety and health assessments performed at their sites over the past year and provide the Secretary a summary report for each of their sites.

Enclosed are copies of the reports provided to the Secretary under this commitment

The Department has completed Commitment 20 for the year 2001.

Sincerely,

Steven V. Cary  
Acting Assistant Secretary  
Office of Environment, Safety and Health

Enclosures

cc:  
M. Whitaker, S-3.1



SEPARATION

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SEPARATION

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**Department of Energy**  
**National Nuclear Security Administration**  
 Washington, DC 20585

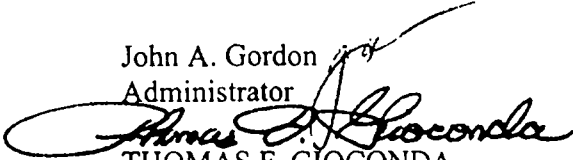
March 1, 2001

MEMORANDUM FOR THE SECRETARY

THROUGH:

John A. Gordon  
 Administrator

FROM:

  
 THOMAS F. GIOCONDA  
 Brigadier General, USAF  
 Acting Deputy Administrator for Defense Programs

SUBJECT:

INFORMATION: Defense Nuclear Facility Safety Board  
 Recommendation 2000-2, Configuration Management,  
 Vital Safety Systems

ISSUE:

Commitment No. 20 of the Department's Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2 states: Annually, Lead Program Secretarial Offices will review the results of Environment, Safety and Health (ES&H) assessments performed during the previous year and provide the Secretary with a summary report for each of their sites. The due date established in the Implementation Plan for Defense Programs (DP) to meet this commitment is the end of February 2001. The summary report for meeting this commitment is attached.

BACKGROUND:

In Recommendation 2000-2, the Board recommended that the Department of Energy (DOE) ensure safety system status, as well as supporting programs, are scrutinized as a regularized part of assessments performed by line management. In accepting DNFSB's Recommendation, DOE committed to a review of line oversight of contractor programs to determine whether safety systems, as well as programs essential to system operability, are being included in those programs.

In order to provide senior leadership with information obtained from these oversight and feedback processes, DOE committed to begin a regular practice of annually reviewing ES&H assessments performed by DOE and the Management and Operating (M&O) contractor at each site and summarizing the results for the Secretary.



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This information will be analyzed to determine whether the operability and reliability of Vital Safety Systems is being adequately addressed by current assessments, and if the issues, corrective actions, and lessons learned (relative to Vital Safety Systems) from the assessments are being properly addressed.

While some DP site ES&H assessment efforts have focused on specific vital safety systems (for example, fire protection systems), there is not a consistent effort within DP to assess specific vital safety system material condition and/or condition inspection on a periodic basis. To address this issue, a small team of Federal DP employees will be formed with the objective of providing the DP Chief Operating Officer a summary recommendation regarding how ongoing ES&H assessments can be improved to specifically target vital safety systems.

SENSITIVITIES: None.

POLICY IMPACT: In accordance with DOE's Implementation Plan for DNFSB Recommendation 2000-2, the Assistant Secretary for Environment, Safety and Health is responsible for institutionalizing the annual review of ES&H assessments as a requirement in the Directives system by the end of July 2001.

RECOMMENDATION: None.

Attachment

cc:  
S. Cary, EH-1



# **OFFICE OF DEFENSE PROGRAMS**

## **ANNUAL SUMMARY REPORT 2000: ENVIRONMENT, SAFETY & HEALTH ASSESSMENTS**

**DEFENSE NUCLEAR FACILITIES SAFETY  
BOARD RECOMMENDATION 2000-2  
COMMITMENT #20**

**FEBRUARY 28, 2001**

**Office of Defense Programs  
Annual Summary Report 2000:  
Environment, Safety and Health Assessments**

Defense Nuclear Facilities Safety Board Commitment #20: *Annually, Lead Program Secretarial Offices will review the results of Environment, Safety and Health (ES&H) assessments performed during the previous year and provide the Secretary with a summary report for each of their sites.*

**Background:**

In Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2, Configuration Management Vital Safety Systems, the Board recommended that the Department of Energy (DOE) ensure that safety system status and support programs are scrutinized as a regularized part of assessments performed by line management. In order to provide senior DOE management with information obtained from these oversight and feedback processes, DOE committed to review ES&H assessments performed by the maintenance and operation (M&O) contractor and DOE site organizations and to summarize the results for the Secretary.

**Introduction:**

This ES&H assessment summary is provided to fulfill the commitment for calendar year 2000 for the Office of Defense Programs (DP). The DP site assessment summary reports address the following objectives:

- Summarize the scope and schedule for ES&H assessments performed over the previous 12 months by the M&O contractor, DOE line management, and the Office of Independent Oversight;
- Summarize the results obtained from these assessments, both by program and vital safety system. Using a site-specific list of vital safety systems, the summary report will provide a crosswalk of how ES&H assessment programs at each site review the condition of their vital safety systems and note actions taken to address significant issues; and
- Identify issues where the field element manager has asked for assistance.

**Office of Defense Programs ES&H Assessment Summary Results:**

Each of DP site organizations submitted a summary report of ES&H assessments for calendar year 2000 as required by the DOE Implementation Plan for DNFSB Recommendation 2000-2. Table 1 lists each of the reports provided and links to the Appendices of this overall DP summary report. In some instances lengthy attachments to individual site organization reports are noted on Table 1, but are not included with the appropriate Appendix (available on request).

A review of the DP site organization summary reports indicates that:

- All DP sites have assessment programs instituted as part of oversight and feedback mechanisms that address the requirements of DOE P 450.5, *Line Environment, Safety and Health Oversight*;
- Each DP site has a program that tracks ES&H assessment findings or open issues and tracks these issues to closure;
- DP ES&H assessment efforts appear to be adequate in addressing preservation programs related to vital safety systems. Examples include ES&H assessments related to Configuration Management Programs, Maintenance Programs, and Quality Assurance Programs;
- Several DP site ES&H assessment summary reports have identified needed improvement related to having effective Configuration Management Programs, particularly those aspects related to improving legacy issues such as fully understanding system boundaries and interfaces, and preservation of as-built drawings. While these aspects of Configuration Management are being assessed as part of 2000-2 vital safety system assessment efforts, continued emphasis is needed as part of each site's overall ES&H assessment program. This issue is receiving top Program Office management attention within DP;
- Assessment of maintenance programs has reinforced the need to improve the investment into system and infrastructure upgrades. While no imminent safety concerns related to vital safety systems were identified, lack of adequate investment may result in degradation of vital safety system reliability;
- The one safety system which deserves some mention is the Fire Protection system at the Y-12 complex. Ongoing assessments of fire protection vital safety systems within 2000-2 priority nuclear facilities confirms that these systems are operable. However, there are site-wide programmatic fire protection deficiencies. A comprehensive site-wide action plan is being prepared to address these deficiencies and is receiving top Program Office management attention within DP; and
- While some DP site ES&H assessment efforts have focused on specific vital safety systems (for example fire protection systems), there is not a consistent effort within DP to assess specific vital safety system material condition and/or condition inspection on a periodic basis. This area for improvement is discussed below.

### **Conclusion and Recommendation:**

Ongoing ES&H assessments within DP adequately address preservation programs related to vital safety systems. In contrast, there has not been a consistent ES&H assessment effort within DP targeted to specific vital safety systems. To address this issue it is recommended that a small team of Federal DP employees be formed with representation from a cross section of Headquarters and Field Office sites. The team size would be 6 to 8 people. The objective of this team will be to review in detail the individual ES&H assessment reports and programs at each



DP site and provide a summary recommendation regarding how ongoing ES&H assessments can be improved to specifically target the operability of vital safety systems. This team will be formed by March 30, 2001, with a scope and charter, and will provide recommendations to the DP Chief Operating Officer via letter report, by October 1, 2001.

**Table-1**

**Listing of DP Field Office Summary Reports of ES&H Assessments**

<b>DP Field Office</b>	<b>DP Site</b>	<b>Information Provided</b>	<b>Appendix</b>
Albuquerque Operations Office		Summary Letter attaching Reports from Pantex, SNL, and LANL (see below)	1
	Pantex	Pantex Plant Performance Analysis Matrix Report: Volume 1 (Summary and Results) as part of Appendix 1. Volume 2 (Functional Area Performance Sheets), copy available on request - not provided with Appendix 1	1
	SNL	Sandia National Laboratory Performance Analysis Matrix Report: Volume 1 (Summary and Results) as part of Appendix 1. Volume 2 (Functional Area Performance Sheets), copy available on request - not provided with Appendix 1	1
	LANL	Summary Table of ES&H Assessments	1
Nevada Operations Office	NV	Summary Report with attachments	2
Oak Ridge Y-12 Area Office	Y-12	Summary Report with attachments	3
Oak Ridge National Laboratory	Bldg. 3019	Summary Report with attachments	4
Lawrence Livermore Area Office	LLNL	Summary Report with attachments	5

# memorandum

DATE:

REPLY TO:

SUBJECT: DOE Implementation Plan to DNFSB Recommendation 2000-2 Response to Commitment 20

TO: Jeff Kimball, DP-45  
X. Ascanio, DP-24  
D. Miotla, DP-17

Commitment 20 identifies the deliverable of a summary report of ES&H assessments performed during the previous year for each site. The discussion in the DOE Implementation Plan addressing this commitment states the following:

- Summarize the scope and schedule for ES&H assessments performed over the previous 12 months by the M&O contractor, DOE line management, and the Office of Independent Oversight.
- Summarize the results obtained from these assessments, both by program and vital safety systems (VSSs). Using a site-specific list of vital safety systems (commitment 3), the summary report will provide a crosswalk of how ES&H assessment programs at each site review the condition of their vital safety systems.
- Note actions taken to address significant issues.
- Identify issues where the field element manager has asked for assistance.

The Albuquerque Operations Office and its area offices have developed a Performance Analysis Matrix (PAM) process and/or a similar process at LAAO/LANL as a means to systematically review, evaluate and document what DOE believed was the contractor's ES&H functional area status and performance based on the information that DOE's ongoing oversight activities/systems have provided. The PAM process and report provide the following:

- 1) Evaluate the effectiveness and completeness of DOE oversight activities;
- 2) Provide consistent and unified (field and area office) contractor performance evaluations; and
- 3) Establish an annual baseline for contractor performance within the Integrated Safety Management System (ISMS).

The PAM Report compiles information from the following DOE oversight

activities: day-to-day Facility Representatives reviews, observations, surveillances, AL assessments, external assessments, occurrence history and other formal and informal assessments. The information in the PAM Report is used to select ES&H functional areas for inclusion into the Annual ES& Appraisal (per DOE P 450.5) and in a time of limited resources provides for a systematic determination as to where best to perform assessments.

The report results are presented in two parts:

- Volume 1: A high-level graphical summary (simple color matrix) depicting performance and risk information organized by ES&H functional areas.
- Volume 2: Performance sheets providing detailed performance summary, evaluation of information, risk analysis information, trend determinations and overall conclusions.

The PAM Report for the Pantex Plant (dated June 2000) and SNL (dated April 2000) are attached and are provided in terms of addressing commitment 20. Additionally, the specific draft section addressing Technical Area V nuclear facilities of the SNL PAM Report to be issued in March 2001 is also attached. The PAM Reports describe the type/scope of ES&H assessments performed during the year being evaluated. Results are summarized in table format (color matrix) of functional areas and provided in Volume 1. Detailed discussions supporting each functional area evaluation are included in Volume 2.

Also, KAO publishes annually a master activity plan (MAP) which includes a requirement to complete a vertical slice review of a safety-significant system, structure or component each quarter and can include periodic reviews of critical support programs. Examples of reviews done in the past include the ventilation confinement systems for three nuclear facilities and the Plant Protection System for the Annular Core Research Reactor and the Sandia Pulse Reactor. The MAP can be provided if needed.

The LAAO/LANL PAM is currently being developed. It will be slightly different from the PAMs for the Pantex Plant and SNL. The LANL PAM still consists of determining risk and performance for a functional area. Risk is determined from a risk model called the Computer Aided Risk Management Analysis (CARMA). CARMA takes into account several different elements (complexity of the operation, operations per year, number of impacted workers, etc.) for determining the risk. The performance is determined from several elements as well (Facility Representative reviews, observations, etc.). For each functional area there will be a "performance/risk sheet" that documents the data for both the risk and performance data. Functional areas will be ranked based on overall ratings of red, yellow or green and this will be used as the priority for the assessment schedule and what areas need to be looked at. While this process is still being worked, a table of ES&H assessments for LANL for 2000 is attached in response to commitment 20.

Commitment 20 also discusses providing a crosswalk of how ES&H assessment programs at each site review the condition of their vital safety systems. The ES&H functional areas reviewed as part of the PAM process primarily are the programs developed and implemented in assuring facilities can be safely operated. These functional area/program assessments address aspects of VSS operability and/or reliability. The following general crosswalk of programs and systems can be made:

<u>Functional Area</u>	<u>VSS Operability/Reliability</u>
Radiation Protection	Radiation Air Monitors
Fire Protection	Fire Detection/Fire Suppression
Authorization Basis	TSR/USQ Implementation
Nuclear Criticality Safety	Criticality Alarm System
Configuration Management	Cranes/Hoists (example)
Maintenance	Electrical Distribution (example)

Specific crosswalks of how VSS operability and/or reliability is covered under ES&H assessment programs can be incorporated into future assessments; however, functional area/program assessments, in general, already identify VSSs as elements of program implementation.

Actions taken to address significant issues identified through the assessment process are discussed in the PAM Reports and the LAAO/LANL process provides for issue identification/resolution. Specific correction action plans are discussed as appropriate. It is important to note that the Pantex Plant PAM Report, Performance Sheet Section - Configuration Management and System Engineering, specifically recognizes the issuance of the DNFSB Recommendation 2000-2 and the associated concerns raised with implementation of an effective configuration management program.

The last item requiring action under commitment 20 addresses the field element manager identifying issues that require assistance. The most prominent issue for the past couple of years has been the lack of investment in order to sustain the facilities and infrastructure of the Weapon's Complex. In response, a consolidated DP team (including Operation and Area Office personnel) has been formed to secure additional money and to develop institutional processes that will properly identify and fund management entities.

If there are any questions, please call me at (505) 845-5194.

Pat Higgins

## Attachments

Cc w/att.

M. Zamorski, Area Manager, KAO

D. Gurule, Area Manager, LAAO

D. Glenn, Area Manager, AAO

T. Zimmerman, AAO

B. Mullen, KAO

K. Zamora, LAAO

C. Soden, ESHD

L. Kirkman, AM OTMO

E. Whiteman, AM OTSP

J. Eggleston, ESHD

C. Cruz, NPD

L. LeDoux, NPD

SEPARATION

PAGE

# **Sandia National Laboratories**

**Volume 1**

## **Summary & Results**



**April 2000**

## Foreword

This is the FY99 issue of the Performance Analysis Matrix (PAM) report for Sandia National Laboratories (SNL). The PAM process and report are joint initiatives between the Albuquerque Operations Office (AL) and the Kirtland Area Office (KAO) to:

- evaluate the effectiveness and completeness of Department of Energy (DOE) oversight activities;
- provide consistent and unified (KAO and AL) contractor performance evaluations; and
- establish a baseline for SNL performance.

The PAM process tests the effectiveness of DOE management systems in providing DOE with information on SNL's performance. The PAM report reflects DOE's understanding of SNL's performance based on available information. In some cases, DOE systems might not be providing sufficient information, or the information might not be assimilated well enough to portray SNL's performance accurately. The PAM process is used to improve or supplement DOE's systems to ensure that DOE can identify the strengths and vulnerabilities of SNL performance.

The format of the report is intended to be consistent, straightforward, and complete. It communicates information obtained from documented performance evaluations, but it does not repeat evaluations or create new information. The general organization is as follows:

*Volume 1, Summary and Results*, describes the report's purpose and content, explains the results, and describes why certain technical, Integrated Safety Management Systems, or functional areas presently do not meet or only partially meet DOE's expectations.

*Volume 2, Fact Sheets and Appendices*, provides the detailed information to support the information in Volume 1.

The PAM report will be issued annually. AL is committed to improving the effectiveness of DOE oversight activities and the usefulness of oversight reporting, and will continue to work towards achieving this goal. Suggestions for improving the PAM report's format and content are welcome.



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## **1.0 Introduction**

This is the FY99 issue of the PAM Report for SNL and is Volume 1 of the second issue of this report. This report reflects DOE's understanding of SNL's performance based on available information. In some cases DOE systems might not be providing sufficient information, or the information might not be assimilated well enough to portray SNL's performance accurately. The PAM process will be used to improve or supplement DOE's systems to ensure that DOE can identify the strengths and vulnerabilities of SNL performance.

The report compiles information from DOE oversight activities. These include day-to-day oversight activities, Facility Representative reviews and observations, AL assessments, external assessments, and other formal and informal assessments. The PAM report will be issued annually.

## **2.0 Description of the Data**

DOE management systems and oversight activities collect data relative to SNL performance. The PAM process functions as an administrative funnel. Disparate activities and packets of data are consolidated into a complete and straightforward evaluation of SNL performance (see Figure 1, *AL/KAO PAM Process*).

Following are the key features of the PAM process:

1. The process communicates information obtained from documented performance evaluations, occurrence reports, regulatory evaluations, and the facility representatives. It does not duplicate evaluations or create new information or results.
2. KAO and AL agree on the information in the report.
3. The report presents the performance and risk results in a consistent, complete, and straightforward manner.
4. The information is validated with SNL to ensure consistent understanding between DOE and SNL and to ensure that all important performance information has been captured.
5. The final report establishes a baseline that can be used to improve SNL performance. It also serves as the primary source document used to select functional areas for review in the annual Contractor Performance Assessment Process appraisal.

The report results are presented in two parts:

- SNL PAM, which is a high-level graphical summary depicting performance and risk information organized by areas. The PAM format is discussed in Section 2.1 below, and shown in Section 3.
- Fact sheets, which provide detailed performance and risk information supporting the PAM conclusions. The Fact Sheet format is discussed in Section 2.2 and the Fact Sheets are in Volume 2.

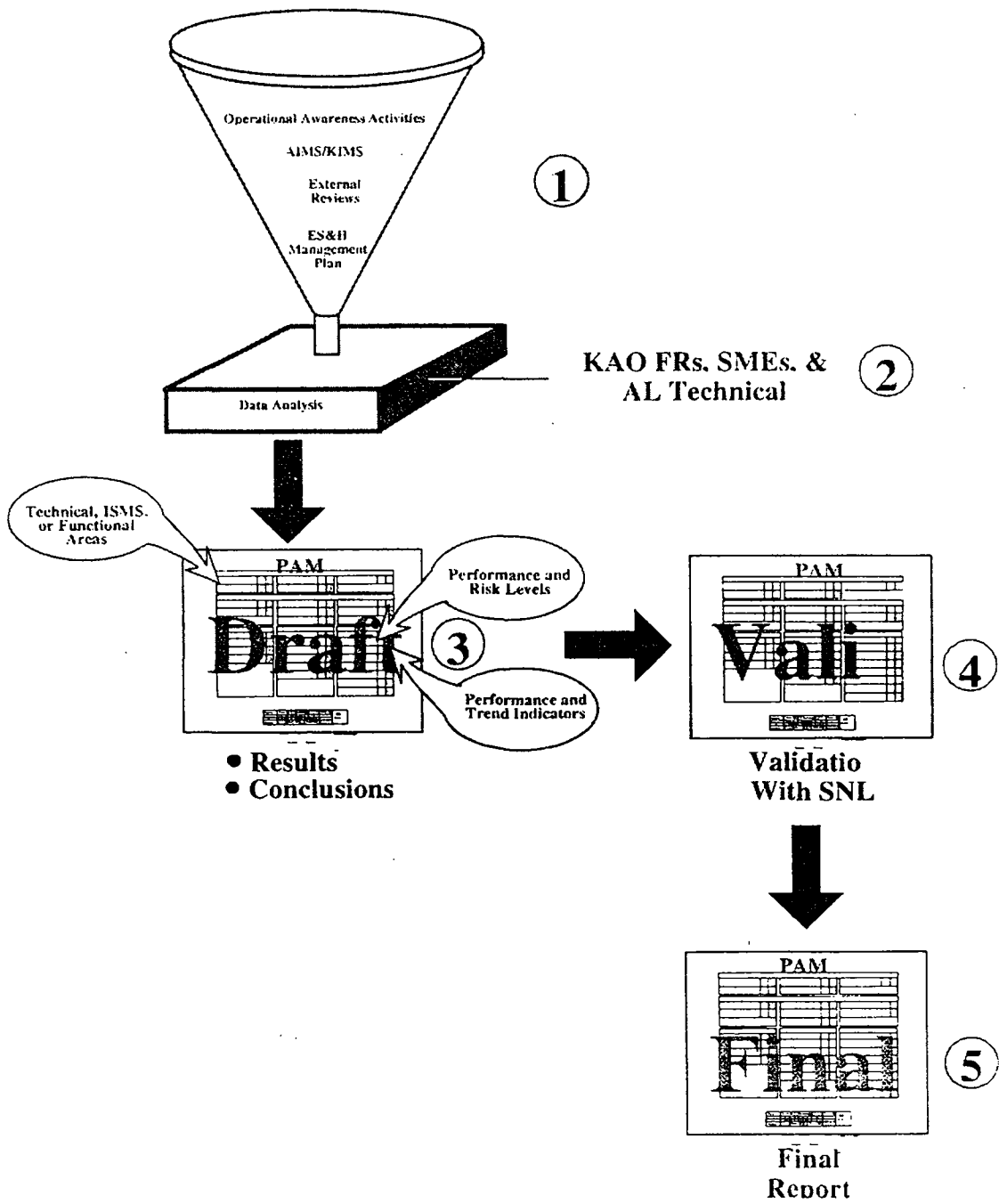


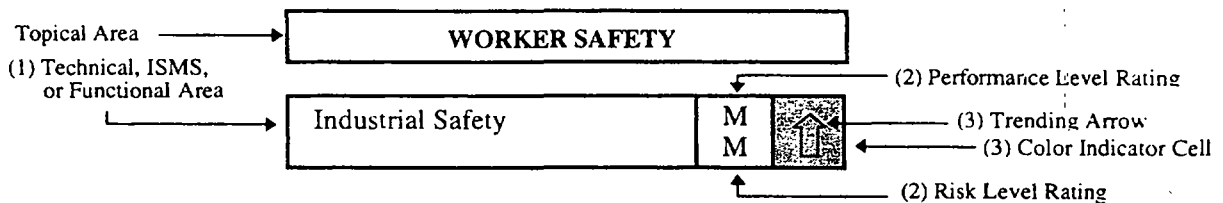
Figure 1. AL/KAO Performance Analysis Matrix Process

## 2.1 SNL PAM Format

The PAM is organized by Technical Areas, Integrated Safety Management Guiding Principles, and Functional Areas, as shown in Section 3.0.

These areas provide a framework and format for evaluating and reporting SNL Environmental, Safety, and Health performance. Definitions of each area are provided in Volume 2.

A sample cell from the PAM is shown in Figure 2 below. Cells are subdivided into three sections: (1) the are title; (2) the performance and risk level ratings (high, medium, or low); (3) and a corresponding color-coded indicator cell that depicts DOE's evaluation of SNL's level of performance and the risk level. A directiona arrow in the colored cell indicates if the trend in performance represents improvement or decline in meeting DOE's expectations.




**Figure 2. Sample PAM Level 1 Cell**

 Blue

*Exceeds Expectation* . This indicates exceptional overall performance in a technical area, Integrated Safety Management, or functional area program. Activities are conducted with a high regard fo Environmental, Safety, and Health requirements, and are accomplished in a cost-effective manner.

 Green

*Meets Expectation* . This indicates effective overall performance in a technical area, Integrated Safety Management guiding principle, or functional area program. There might be specific issues or deficiencie that require attention and resolution, but these do not degrade the overall effectiveness of the system or program.

 Yello

*Partially Meets Expectations*. This indicates a need for improvement in a technical area, Integrated Safety Management guiding principle, or functional area program, and signifies an opportunity for line management to correct and improve performance before it results in a significant weakness.

 Red

*Does Not Meet Expectation* . This indicates a need for upper management to focus the attention and resources necessary to resolve management system or programmatic weaknesses. A significant weakne would normally represent an aggregate of a number of issues identified in a technical area, Integrated Safety Management guiding principle, or functional area program.

 Gray

*To be determined.* This indicates there is insufficient data to draw a supportable conclusion regarding SN performance.

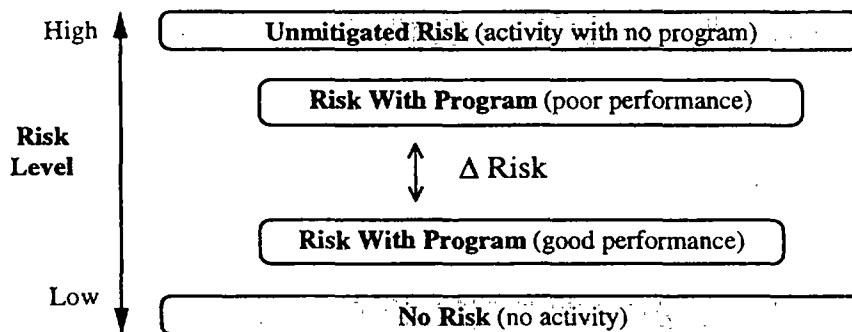
The color code is determined by the risk and performance levels, which are discussed in more detail in Section 2.2.

## 2.2 Fact Sheet Format

Fact Sheets (Volume 2) provide detailed information to support the summary depicted in the PAM. KAO and AL technical personnel documented technical area, Integrated Safety Management guiding principle, or functional area strengths and weaknesses based on

- Performance,
- Risk, and
- Other factors.

The relationship between risk and performance and how the information is used to assess overall Environmental, Safety, and Health performance is illustrated in the following diagram.



In the diagram, the first level, "No Risk," represents a baseline situation where no activities are being conducted. The highest level, "Unmitigated Risk," represents the inherent risk in conducting an activity (such as high explosive machining or operating a forklift) with no program established to reduce the risk of that activity. Once a risk-reduction program is established, such as an explosive safety or an Occupational Safety and Health Act program, the risk is reduced by some margin. The amount of risk reduction is a function of the program's effectiveness. AL's intent is to identify and highlight those areas in which the risks are high and the risk-reduction program is performing poorly

The **Performance** section of the Fact Sheet consists of four subsections: Facility Representative review history, assessment history, occurrence history, and document reviews and interviews. These are described below.

**Facility Representative Review History:** This section summarizes information from KAO Facility Representative observations and walkthroughs, and addresses the following questions.

- Describe any observations and walkthroughs

- What were the major issues, findings, or trends identified?
- Have these issues/findings been resolved, and what is the current status?
- Were there any particularly noteworthy practices observed
- How have issues, findings, or particularly noteworthy practices been communicated to the laboratory?

The results of the observations and walkthroughs are documented in the Kirtland Information Management System (KIMS) database. Any similarities and common trends with other sections of the Fact Sheet are discussed.

**Assessment History:** This subsection summarizes relevant information from previous assessments, and should address the following questions.

- What assessments have been performed in the last year
- What agency performed these assessments
- What were the major issues, problems, or trends identified
- Have these issues been resolved, and what is the current status
- Were there any particularly noteworthy practices observed

The Assessment Information Management System (AIMS) database collects AL assessment history and is a starting point for obtaining this type of information. Any similarities and common trends with other sections of the Fact Sheet are discussed.

**Occurrence History** This subsection summarizes occurrences and incidents that provide insight into underlying Environmental, Safety, and Health issues and concerns related to activities in the technical area Integrated Safety Management guiding principle, or functional area. Any similarities and common trends with other sections of the Fact Sheet should be discussed. Information from Occurrence Reporting and Processing System (ORPS) or other DOE reporting systems is used to complete this section.

**Document Review and Personnel Interviews:** This section summarizes information from any source not addressed in the preceding sections (1.1, 1.2, and 1.3). Special efforts to perform document reviews, interviews, or observe activities are not required for the PAM but may be performed and documented here if the Subject Matter Expert for the area deems it necessary. Examples of the types of information that may be included in this section are:

- results from reviewing SNL safety basis documentation, Integrated Safety Management descriptions, and other SNL documents for the area;
- interviews with KAO personnel in response to questions developed from research and data analysis in developing the Fact Sheet; and
- interviews to collect data not otherwise available.

Any similarities and common trends with other sections of the Fact Sheet should be discussed.

The **Other Factor** section includes information such as the following.

- Program Cost: The cost of the program, if known, and a conclusion regarding its cost effectiveness.
- Program Maturity: Factors such as the length of time the program has been in place, the extent of management involvement, the qualifications of the personnel in the program, and employee involvement in the program's procedures and practices.
- Program Stability: Factors such as major changes in personnel, changes in the program's administrative organization, changes in the program's scope, new or changing requirements, and changes in program funding.
- DOE Priorities: New initiatives in the functional area that are a high priority for DOE.

The AL technical divisions completed the first drafts of the Fact Sheets. KAO personnel provided additional information and reached agreement on the Fact Sheets with the responsible AL technical divisions. Once each Fact Sheet was complete, KAO and the responsible AL technical division assigned a high, medium, or low risk and performance rating based on the information on the Fact Sheet. The performance and risk ratings determined the final color rating for the area, as shown in Figure 3. For example, a medium performance and a low risk rating would correspond to a green rating for the area. However, a medium performance and risk rating can correspond to either a green or a yellow rating based on a technical interpretation of the information. This flexibility allows for greater sensitivity in communicating the assigned ratings.

Ranking	Exceeds Expectations			Partially Meets Expectations			To be Determined		
Performance	H	H	H	M	M	M	L	L	L
Risk	L	M	H	L	M	H	L	M	H
Ranking	Meets Expectations			Does not Meet Expectations					

Arrows indicate upward or downward trends

**Figure 3. Color Ratings**

Every attempt was made to achieve uniformity and consistency in Fact Sheet structure, but certain SNL Fact Sheets required a modified format to better accommodate the available information.

### 3.0 Performance Analysis Matrix

TECHNICAL AREA OPERATIONS AND ACTIVITIES											
Technical Area I (Y↑)	M	M↑	↑ Y	Technical Area IV/ Accelerators (G)	M	L	G	Waste Management (G)	M	M	G
Production Sector/ Neutron Generator Facility (Y)	M	M	G	Technical Area V (G↑)	M	L↑	G	Balance of Plant (G)	M	L	G
Explosive Component Facility (G)	M	L	G	Environmental Restoration (G)	M	M	G	SNL/California (Gy)			Gy
Technical Area III and Other Remote Areas (G)	M	M	G								

INTEGRATED SAFETY MANAGEMENT								
Balanced Priorities (G)	M L	G	Hazard Controls Tailored to Work Being Performed (Y↑)	M H	Y ↑	Line Management Responsibility for Safety (G↑)	M M	↑ G
Clear Roles and Responsibilities (G)	M M	G	Identification of Safety Standards and Requirements (G)	H H	G	Operations Authorization (G↑)	M M	↑ G
Competence Commensurate with Responsibilities (G)	M M	G						

AUTHORIZATION BASIS								
Accelerator Facility Safety (G)	M L	G	Nuclear Facility Safety (G)	M M	G	Safety Bases (G)	M M	G
Nonnuclear Facility Safety (G)	M L	G	Readiness Review (G)	M L	G	Safety in Facility Design (G)	M L	G
Nuclear Criticality Safety (G)	M M	G						

WORKER SAFETY								
Construction Safety (G)	M H	G	Firearms Safety (Y)	M M	Y	Industrial Safety (G)	M M	G
Explosives Safety (Y)	M H	Y	Industrial Hygiene and Occupational Medicine (G↑)	M L	G ↑	Occupational Radiation Protection (G)	M M	G

ENVIRONMENTAL/PUBLIC PROTECTION								
Air Quality Programs (G)	M L	G	Environmental Radiation Protection (G)	M L	G	Packaging and Transportation (B)	H M	
Ecological and Cultural Resources (G)	M L	G	National Environmental Policy Act (Y↑)	M M	Y ↑	Water Quality (G~)	M L	↓ G



CROSS-CUTTING FUNCTIONS										
Conduct of Operations (Y)	M	Y		Fire Protection (Y↑)	M	Y		Quality Assurance (Y)	M	Y
	M				M	↑			M	
Configuration Management (Gy)	M	G		Maintenance (Gy)		Gy		Training and Qualification (Gy)		G
	H									
Emergency Management (Y↑)	M	Y								
	M	↑								

#### 4.0 Results and Conclusions

The contractor's performance was determined to exceed expectations in the following area

**Environmental/Public Protection**  
Packaging & Transportatio

The contractor's performance was determined to meet expectations in the following areas:

**Technical Area Operations and Activities**

Production Sector/Neutron Generator Facility  
Explosive Components Facility  
Technical Area III and Other Remote Areas  
Technical Area IV/Accelerators  
Technical Area V  
ER/WM  
Balance of Plant

**Integrated Safety Management**

Balanced Priorities  
Clear Roles and Responsibilities  
Competence Commensurate with Responsibilities  
Identification of Safety Standards and Requirements  
Line Management Responsibility for Safet  
Operations Authorization

**Authorization Basis**

Accelerator Facility Safet  
Nonnuclear Facility Safet  
Nuclear Criticality Safet  
Nuclear Facility Safet  
Readiness Reviews  
Safety Basis  
Safety in Facility Design

**Worker Safety**

Construction Safety  
Industrial Hygiene and Occupational Medicine  
Industrial Safety  
Occupational Radiation Protection

**Environmental/Public Protection**

Air Quality Programs  
Ecological and Cultural Resources

Environmental Radiation Protection  
Water Quality

The contractor's performance was determined to partially meet expectations in the following areas:

**Technical Area Operations and Activities**

Technical Area I

**Integrated Safety Management**

Hazard Controls Tailored to Work Being Performed

**Worker Safety**

Explosives Safety

Firearms Safety

**Environmental/Public Protection**

National Environmental Policy Act

**Crosscutting Functional Areas**

Conduct of Operations

Emergency Management

Fire Protection

Quality Assurance

The level of the contractor's performance could not be determined in the following areas:

**Technical Area Operations and Activities**

SNL/California

**Crosscutting Functional Areas**

Configuration Management

Maintenance

Training & Qualification

#### 4.1 Partially Meets Expectations

**Technical Area Operations and Activities**

***Technical Area I***

Although it is recognized that the data presented in this report may not be indicative of all operations in TA-I, weaknesses are clearly indicated. The overall rating for TA-I was determined to be "yellow" (partially meets expectations) because of the issues and deficiencies associated with authorization basis management, ISM hazard identification and control, enforcement of procedure implementation, and conduct/formality of operations.

DOE acknowledges that 45 percent of the oversight activities indicated either acceptable or positive findings. This is an improvement from the FY98 PAM report for TA-I. However, 55 percent of DOE oversight activities indicated findings requiring improvements and corrective actions. Of specific concern are the Category 1 findings involving authorization basis problems, lack of hazard control for the perchlorate wash water disposal and the elevated work without use of fall protection.

KIMS trend conclusions indicate that 84 % of the findings were ISM related, of which 50% cross referenced to Conduct/Formality of Operations requirements. Slight improvements have been noticed, but electrical safety and hazardous waste management continue to be areas of concern. A large majority of the

acceptable practice findings involved formal observations of work activities (from start to finish) of MDL or CSRL operations. The majority of the noteworthy practice findings resulted from ISM Feedback and Improvement.

There have been several incidents of radiological or hazardous material problems, electrical shock, or security concern at TA-I. Prominent root causes involve poor work planning, inadequate hazard identification and control, and inadequate management enforcement of procedure implementation. Although these incidents have not resulted in serious effects, these were the same prominent root causes identified in the FY98 PAM report.

Performance based observations by the FRs and information provided in this report point out weaknesses in consistent implementation of integrated safety management, conduct/formality of operations, and work control. The requirements of these three programs map almost exactly. Because SNL has an aggressive plan for ISMS implementation, these areas will be evaluated very closely over the next year.

In general, deficiencies in these areas require management system improvements in order to improve performance. Consequently, TA-1 was assigned a medium performance rating. In addition, the risk level was determined to be medium based on the nature of operations and associated hazards. The performance trend was determined to be up, indicating that there have been recent improvements in meeting DOE expectations.

### **Integrated Safety Management**

#### ***Hazard Controls Tailored to Work Being Performed***

The number of occurrence reports and Facility Representative findings for this performance area continue to decline. However, the 1999 CPAP and the November 1998 ISM Verification report noted deficiencies in the process for identifying and analyzing hazards and developing hazard controls. While the Authorization Basis functional area of the 1999 CPAP noted fewer concerns for control of hazards than in 1998, other functional areas (Explosives Safety, Radiation Protection, Firearms Safety) identified deficiencies in PHS/HA documents or in the implementation of the controls required by these documents. An aggressive corrective action plan in response to the ISM Verification is addressing these deficiencies and should continue to improve the process through FY 2000. Performance rated medium with high risk. This year's overall rating is still partially meets expectations ("yellow") with an upward trend

### **Worker Safety**

#### ***Explosives Safety***

The concern regarding storage, which was identified during the 1998 review, continues to exist. Additional concerns in the areas of Hazard Analysis and Lightning Protection were identified. Integrated Safety Management System Principles are not completely integrated into the explosives safety program, based on the Findings and Observation identified during this appraisal. The CPAP Findings are indicative of weaknesses in the areas of analyzing and controlling the hazards. Therefore, based upon a medium performance rating and a high risk level, the Explosives Safety program partially meets expectations ("yellow").

#### ***Firearms Safety***

Based on the information available to development of this PAM, the SNL protective force firearms safety program appears to be performing in accordance with DOE expectations. It is rated meets expectations ("green") with a stable trend. The non-security use of firearms should be rated partially meets expectations ("yellow") due to the deficiencies noted in the TBF program) with an upward trend (due to the noteworthy practice demonstrated by the North Slope Project). The Firearms Safety Program performance is rated a medium with a medium risk level. The overall rating is partially meets expectations ("yellow").

## Environmental/Public Protection

### *National Environmental Policy Act (NEPA)*

In the NEPA program area, available information indicates that compliance with regulatory requirements and support for DOE requirements in DOE Order 451.1, 10 CFR Part 1021, and 40 CFR Part 1500-1508 are partially being met at a medium level of performance. The SNL/NM Site-wide Integration Team has provided good support to the DOE and its contractor involving contributions to the Site-wide Environmental Impact Statement. Based on the 1998 CPAP appraisal, environmental assessments, and other NEPA documents, the SNL NEPA program needs, and is working on, formal lab-wide process improvements. Risk aspects of the program as it is currently being conducted, are considered medium. A Corrective Action Plan has been approved by KAO. The Plan is being in the process of being implemented but has not been verified. Overall ranking for this functional area is partially meets expectations ("yellow", up arrow), medium performance, and medium risk.

## Crosscutting Functional Areas

### *Conduct of Operations*

While there is evidence of gradual improvement in Conduct of Operations over the last few years and some noteworthy programs are in place, assessments, reviews, and occurrences continue to indicate inconsistent implementation of Conduct of Operations. Also a lack of compliance to procedures and Conduct of Operations requirements, and some resistance at the working level toward Conduct of Operations principles are also evident. In addition, there is a need to improve work planning with respect to the identification and evaluation of hazards and the implementation of engineering and administrative controls. The configuration control of equipment and system status and the documentation and trending of operating performance for continuous improvement are also potential areas of weakness. The corrective actions in response to events reported in the Price Anderson Amendments Act tracking system, and the continued implementation of ISM should result in improvements in Conduct of Operations performance, both within these facilities and sitewide.

The SNL Formality of Operations Manual is to be applied to moderate and high-hazard nonnuclear facilities, nuclear facilities, and accelerator operations, while ILMS is applied to the remaining operations. Implementing these programs and Integrated Safety Management should strengthen Conduct of Operations, but will require substantial management support and involvement.

The overall rating for the Conduct of Operations program is partially meets expectations ("yellow"). Performance is medium with medium risk.

### *Emergency Management*

The SNL Emergency Management Program has been adequate for providing response to small accidents/emergencies. Results of the "Heaven Scant" and "Crying Cloud" exercises conducted in early April 1998 and September 1999 respectively accurately reflect the status of the SNL's Emergency Management Program. Weaknesses in the program were identified in three out of four aspects of the Emergency Management Program, i.e. planning, preparedness, and response. (Recovery, the fourth aspect, was considered appropriate.) The weaknesses were numerous and broad in scope. Most of the weaknesses identified by Headquarter offices were known to SNL prior to the exercise and can therefore be considered chronic.

The Emergency Management Program has responded to these findings by improving program management, resources and funding. Serious efforts on root causes analysis were performed to identify effective corrective actions and are being implemented during the FY00 time period.

As a result of the corrective actions already taken and the attention being given to the program the Emergency program at SNL partially meets expectations ("yellow") with an improving trend.

### *Fire Protection*

Although the SNL fire-loss ratio historically compares to that of all other AL and DOE sites, it is important to note that SNL has several unique, high-value, mission critical facilities that could obliterate this record with a single event. Therefore, it is essential that SNL grasp and maintain all opportunities to enhance and reinforce their fire protection program.

Documents and reports indicate that the elements for a fire protection program as defined in DOE O 420.1 are being supported. However, the effectiveness of the program, although presently acceptable, is very sensitive to adequate funding. The 32.5% funding reductions of FY 97 have not been restored and the program funding remains essentially flat. The program is operating in a work-around mode using staff augmentation to fulfill the fire protection assessment portion of the fire protection program obligation. While this is acceptable, it introduces the potential for interruption and inconsistent implementation of this key program element due to contract personnel availability and experience.

Based on this performance analysis of the fire protection program, the program is accomplishing more with less. The program performance is considered medium and improving based on current conditions and their expected continuance. The risk level is medium. The overall rating for the Fire Protection program is partially meets expectations ("yellow") with an upward trend.

### *Quality Assurance*

DOE has a mixed picture of the level that Quality Assurance requirements are implemented at the SNL. The data analyzed indicates a good effort for Quality Assurance program implementation in the Cat II and Cat III nuclear facilities, with significant weaknesses in procedure implementation, compliance, and training in many other areas across the Lab. The overall Quality Assurance program at SNL is rated medium performance with medium risk (partially meets expectations "yellow").

SEPARATION

PAGE

## 1.6 TECHNICAL AREA V FACILITIES ("GREEN")

### 1.6.1 Performance

Technical Area V (TA-V) includes the Annular Core Research Reactor (ACRR), Sandia Pulsed Reactors (SPR), the Hot Cell Facility (HCF), the existing Gamma Irradiation Facility (GIF), the new GIF (Bldg 6596), and a planned auxiliary Hot Cell (AHC). Due to funding constraints associated with DOE/NE ending the Molybdenum-99 program at TA-V, the Hot Cell Facility was placed in a non-nuclear cold-standby condition in December 1999. Construction of a new GIF at TA-V was completed in March of 2000 and all radioactive sources were removed from the existing GIF by the end of November 2000. Construction of the AHC was started in March 2000 and was planned for completion in January 2001.

#### 1.6.1.1 Facility Representative Review History

In the last year, the TA-V Facility Representatives' activities were conducted per the Fiscal Year 2000 TA-V Master Activity Plan that was approved by the KAO Nuclear Facilities Manager. The Master Activity Plan outlined Facility Representative monthly and quarterly routine activities and specific observation activities. The Facility Representatives documented the results of the quarterly activities in Facility Representative quarterly reports 00-1-TA-V, 00-2-TA-V, and 00-3-TA-V. Each of these reports was briefed to TA-V management. The following is a summary of the results of these reports:

##### Report 00-1-TA-V October 1, 1999 to December 31, 1999

This report involved a review of the activities associated with restoring the pulse mode of operation at the ACRR, activities associated with the preparations for removing the ACPR fuel from the GIF pool, and a scheduled review of the implementation of the criticality safety program at the SNL nuclear facilities.

The FRs noted strong conduct of operations and management oversight during the performance of low power, high power, and pulse work-up procedures at the ACRR. As a result, issues were identified, evaluated, and corrected in a timely manner resulting in the safe, on time establishment of the pulse testing capability.

The FRs identified two issues characterized as open items in this report. The first involved the need to complete a thorough evaluation of the operability of the percent power safety channel at higher power levels. The second involves the need to complete the detailed planning for the final steps needed to remove the ACPR fuel from the GIF pool. The FRs also identified six opportunities for improvement (OFIs) in this report and closed two previous Open Items.

##### Report 00-2-TA-V, January 1, 2000 to March 31, 2000

This report included a scheduled review of the installation of the Iodine 125 process in the ACRR, a detailed review of the implementation of the ISM concept during neutron generator (NG) testing in the ACRR, a review of the installation of an experiment handling glove box in the SPR, and a scheduled review of the status of closure of all occurrence report corrective actions.

The FRs noted that the facility operators continued to demonstrate a strong safety focus in response to day-to-day operational issues during this period. However, the FRs noted that facility operators were not applying the same attention to detail and rigor in the performance of annual surveillance requirements for the cavity purge and high bay ventilation exhaust system. The FR subsequently characterized this issue as an Open Item in this report.

The FRs also noted weaknesses with the implementation of the USQD process related to the installation,

testing, and production of I-125 at the ACRR. The FRs identified several other weaknesses in the overall execution of projects at TA-V that may have been caused by inappropriately applying the USQD process. These examples were characterized as an OFI in the report. The FRs also closed three previous Open Items during this reporting period.

#### Report 00-3-TA-V, April 1 to June 30, 2000

This report included a review of FREC II installation activities, the start-up of the I-125 process, a review of the status of the GIF Risk Mitigation Plan, and a review of routine operations and maintenance activities.

The FRs noted that the facility operators continued to demonstrate a strong safety focus in response to day-to-day operational issues during this period. The FRs also noted that some progress has been made in the conduct of management self assessments, but that more performance-based observations needed to be incorporated into subsequent assessments

The FRs noted that TA-V operators could make improvements in the implementation of hoisting and rigging requirements and in the formality of logging the status of safety significant SSCs. Additionally, SNL can more efficiently utilize their limited assessment resources by reviewing past audits, narrative logs, and quarterly reports when selecting particular areas for reviews. These issues were characterized as OFIs in the report.

The FRs identified one Open Item involving the need to complete all the preparations for moving the cobalt sources from the old GIF, specifically the Safety Evaluation for moving the sources. Additionally, SNL has not proposed a path forward regarding the recovery of the leaking GIF pool. The FRs closed two previous Open Items during this reporting Period

#### Summary of Strengths and Weaknesses

The following is a summary of the major strengths and weaknesses identified during FY 00 at TA-V and the status of the contractor actions to address the weaknesses:

##### *Weaknesses*

#### USQD Process Implementation

The FRs noted examples where TA-V personnel did not properly implement the USQD process related to potentially inadequate safety analysis (PISA). One example was the failure to characterize a significant reduction in the cavity purge flow rate during performance of the annual calibration as an as found discrepant condition and perform safety evaluation which is an entry condition under a PISA for performing a USQD safety evaluation. Another involved the failure to characterize revised critical heat flux calculations as "new information" which is another entry condition under a PISA for performing a USQD safety evaluation. These issues are documented as Open Items 00-02-01, 00-02-02, 00-02-03, and OFI 00-01-01.

TA-V has also not completed a USQD safety evaluation for the ACRR and SPR committee charter since the committee charter establishes criteria for the level of review and approval required to conduct the experiment. As a result, the committee charters effectively establish screening criteria for answering the USQD primary screening question related to whether a proposed activity was an experiment described in the facility safety analysis. This issue was initially communicated to TA-V management in the spring of 1999 and was still not completed. This issue is documented in Open Item 99-03-01.

The FRs also identified examples where TA-V management inappropriately used the USQD process to manage projects such as the ACRR modifications for I-125 production. This issue was documented as OFI 00-02-01 and OFI 00-02-02.



## Reliability of Safety Systems

ACRR operators noted several problems with the Plant Protection System (PPS) such as channel noise spikes and channel drifting at high power. Additionally, there were several problems with the operation of the Transient Rods that resulted in occurrence reports and operational delays. TA-V management has developed an equipment upgrade plan to address these reliability issues. The funding is approved for FY 01 and TA-V is developing a project plan for completion. These reliability issues were documented as OFI 00-01-02.

## TSR Surveillance Requirement Acceptance Criteria

The FR noted that the procedure for performing the annual SR for the ACRR CP and HBVES did not have specific acceptance criteria for HEPA filter flow and differential pressure (DP). The FR further identified in March of 1999 that the existing flow and DP exceeded the HEPA filter standard and the manufacturer's recommended flow and DP. Operators modified the system in March of 2000 to reduce the HEPA filter flow and DP to within the manufacturer's specifications but did not change the surveillance procedures to reflect these acceptance criteria. This issue is documented as Open Items 00-02-01, 00-02-02, and 00-02-03.

The FRs also identified examples where the basis of alarms were not formally developed and documented. For example, the basis for the ACRR pool CAM alarm set point was not documented. This issue was documented as OFI 00-02-01.

## Management Self Assessment (MSA) and Corrective Action Tracking Process

TA-V management developed and published a schedule for performing MSAs in Calendar Year 2000. However, most of the schedule MSAs were not completed and those few that were completed lacked performance based input. This issue was documented as OFI 00-03-02.

The FRs also noted that TA-V management was not effectively managing the TA-V action tracking list (ATL) to ensure that corrective actions are identified and completed to address the issues. This issue is being tracked as Open Item 99-04-03.

## TA-V Occurrence Reporting Process

The FRs continued to identify the fact that TA-V personnel do not perform formal critiques immediately following events. As a result, the FR rejected three out of six occurrence reports during this reporting period for not identifying the correct root cause based on the facts or for not identifying corrective actions for each causal factor. The FRs documented the need to conduct critiques to ensure all the correct information is available for the RCA as OFI 00-01-06.

## *Strengths*

### Strong ISM Principles during Operational Activities

The FRs noted that in general the TA-V operators and first line managers displayed good formality in work planning, good conduct of operations during reactor operations, maintenance and surveillances, and prompt identification, review and corrective of operational anomalies. For example, ACRR operators displayed good attention to detail during pulse workup procedures and identified and corrected PPS non-linearity and channel noise problems. Additionally, ACRR operators strictly adhered to ISM principles during the installation and testing of the Fuel Ring External Cavity (FREC) Version II. As a result, the schedule for performing critical testing was met. Finally, operators safely conducted the transfer of ZrH fuel from the old GIF pool into the FREC II cavity in the ACRR pool and the removal of Co-60 and Cs-137 sources fro

the GIF pool with minimal exposure to the workers.

### Project Planning Improvement

TA-V management displayed excellent project planning and scheduling principles during the design, construction, and validation of the In Ground Storage Vault (IGSV) and in the installation and testing of FREC II in the ACRR. However, TA-V management still needs to formalize the project planning process into the conduct of non-routine operations, maintenance, and testing activities at the various nuclear facilities.

#### **1.6.1.2 Assessment History**

TA-V received external reviews on the topics of nuclear criticality safety, the GIF pool leak, and the ACRR readiness assessment.

#### Assessment of GIF Pool Leak

In August of 2000 personnel from the DOE HQ Office of Environment and Health (EH) conducted an onsite review to determine whether SNL has taken effective remedial actions to stop the GIF pool leak and to assess the impact of the leak on the environment. The results of this review were documented in the "Inspection Report on the GIF Pool Leak" dated September 2000.

The team identified 5 positive attributes in the reporting and subsequent actions by NE, KAO, and SNL in response to the GIF pool leak. The team also identified two weaknesses regarding the lack of a detailed plan of action to stop the leak from the GIF pool and the lack of a detailed safety analysis for relocating the Co-60 sources into Dry Storage. SNL planned to complete these actions but was waiting for the completion of the new GIF to allow the Co-60 sources to be transferred directly into the new facility instead of into dry storage. However, the readiness review process for the new GIF was delayed and KAO subsequently persuaded SNL to move the Co-60 sources into dry storage by the end of October 2000. The team also identified four opportunities for improvement ranging from verification of the Co-60 integrity prior to movement and notification of the NMED. By the end of CY 2000, SNL had removed all the sources from the GIF pool and completed all the recommended actions identified in the EH report.

#### Id-125 Production Readiness Assessment

A team led by the Albuquerque Operations Office, ISRD, conducted a DOE RA of the Id-125 production operation at the ACRR from April 17-21, 2000. The DOE RA followed a TA-V Line Management Self-Assessment (MSA) and a SNL independent RA.

The Team accepted one pre-start finding from the SNL RA involving the completion of shielding for the iodine gas transfer line and identified seven additional pre-start findings and three post start findings. The most significant finding involved the need to complete a comprehensive safety analysis of the planned Id-125 operations that included an analysis of the worker safety issues associated with personnel exposure during the operation. The TA-V also identified this issue during a review of the USQD associated with the Id-125 operation. SNL subsequently submitted a corrective action plan and addressed all the pre-start findings in a closure package that was submitted to KAO. KAO validated closure of the findings and authorized SNL to start Id-125 operations in June of 2000.

KAO and SNL line management determined that there was a low level of risk associated with waste handling of the Id-125 since the Id-125 staff had very limited operational experience related to the production and handling of the Id-125. SNL compensated for this risk by requiring routine thyroid counts which subsequently detected two minor uptakes following waste packaging operations. In October 2000, SNL stopped all Id-125 operations and initiated an MSA of the entire Id-125 operations as part of the

feedback and improve element of ISM.

#### ACRR Fueled Ring External Cavity Version II (FREC II) RA

A team led by the Albuquerque Operations Office, ISRD, conducted a DOE RA of the operation of FREC II at the ACRR from October 10-12, 2000. The DOE RA followed a TA-V Line Management Self-Assessment (MSA) and a SNL independent RA.

The DOE RA team identified one finding related to operability of the FREC II Instrumented Elements (IE) during the physics testing following installation of FREC II. SNL subsequently repaired all four IEs and completed all required physics testing and TSR surveillance requirements and requested authorization to operate the ACRR with FREC II coupled to the core on December 6, 2000.

KAO reviewed SNL's request for startup that included a discussion of differences in the steady state readings of two of the IEs. After evaluating these temperature differences, SNL proposed five conditions of approval for operating ACRR with FREC II coupled and on December 11, 2000 KAO authorized operations with FREC II coupled contingent on completion of these five conditions of approval.

#### GIF ORR

A team led by the Albuquerque Operations Office, ISRD, conducted a DOE ORR for operation of the new GIF from November 13-21, 2000. The DOE ORR followed a TA-V Line Management Self-Assessment (MSA) and a SNL independent ORR.

The team decided to make a recommendation to authorize startup of the GIF for routine experimental operations in two phases. Phase I findings were focused on addressing the safety adequacy of transferring the Co-60 sources to the new GIF, the setup of sources for operations and the conduct of needed validation testing of facility safety systems, structures, and components (SSCs). Phase II findings were focused on addressing the safety adequacy of startup of the GIF for experimental routine operations.

The DOE ORR team subsequently identified four phase I pre-start findings, nine phase II pre-start findings, and three post start findings that required corrective action by SNL line management. The ORR team recommended that DOE authorize transfer of the Co-60 sources to the GIF for setup and validation testing of facility safety SSCs after satisfactory closure of phase I pre-start findings. SNL submitted a closure package for all the phase I findings in December 2000 and KAO reviewed and closed the findings and authorized SNL to move the Co-60 sources into the GIF in January 2001. SNL planned on completing the corrective actions for all the phase II findings and starting experimental operations in March 2001.

#### **1.6.1.3 Occurrence History**

Total of six reported occurrences during CY 2000. Three reports were related to stuck regulating rods and were reported under facility condition. Two reports were reported as management concerns and one was an unusual report related to the identification of legacy Cesium sources in the GIF Pool that exceeded the authorization basis for the facility.

The FR rejected three of these reports and one report was rejected twice for not identifying the correct root cause or for not identifying a corrective action for each identified causal factor.

A description of each occurrence is provided below:

#### ALO-KO-SNL-6000-2000-0001 "Transient Rod Dampening Spring Failure

On March 07, 2000 during a routine Annular Core Research Reactor (ACRR) shutdown following a normal reactor steady state operation, the drop time associated with Transient Rod A appeared to be slow (no time measurement was obtained or required). Subsequent inspection of the transient rod performed in the

Maintenance Mode (a submode of the Shutdown Mode) identified a failed spring in the transient rod dampening system resulting in the lower section of the dampening mechanism blocking the main bleed path for air under the transient rod piston.

The root cause was an equipment/material problem specifically a failed part. A coiled spacer failed in the transient rod dampening system that led to the direct cause of the lower section of the dampening mechanism blocking the main bleed path for air under the transient rod piston. This resulted in an increase of the rod drop time from approximately 1 second to about 3 - 5 seconds. The direct cause was also an equipment/material problem. Because the dampening coiled spacer had failed, the lower section of the dampening mechanism blocked the main bleed path for air under the transient rod piston. This resulted in an increase of the rod drop time from approximately 1 second to about 3 - 5 seconds.

#### ALO-KO-SNL-6000-2000-0002 Control Rod Failing to Fully Seat

On June 07, 2000, during a routine reactor shutdown of the Annular Core Research Reactor (ACRR) following a six hour 100% operation, Control Rod (CR) #3 failed to fully seat as indicated by its graphical display and rod down limit switch indication at the reactor console. After the reactor was shut down a visual inspection of CR#3 position at the reactor pool was performed. The operators determined through visual inspection that the CR had fallen approximately 29 of its 30-cm of available travel. Testing of CR #3 performed in the reactor Shutdown Mode approximately 30 minutes following the first indication of the problem resulted in the same characteristics following the shutdown from power. Reactor pool water temperature was 50 C (30 C above its typical shutdown temperature of 20 C) due to operating at 100% power. Testing of CR #3 the next morning following pool cool-down to 20 C resulted in satisfactory performance of the regulating rod.

On July 27, 2000, during the surveillance associated with the corrective action, CR#3 again failed to indicate full down.

The Direct Cause was nylon bushing on CR#3 that had a slightly tighter tolerance on its interior diameter as compared to other nylon bushings on other control rods. The contributing cause was an equipment/material problem, more specifically, a possible contaminant which created a scale buildup on contacting surfaces. This scale may have decreased tolerances of the assembly near the bottom of the rod's travel, preventing it from fully seating. Another contributing cause may have been elevated reactor pool temperature. Heat, along with the discovered scale deposit, and different rates of thermal expansion for the various materials of the control rod, may have further reduced tolerances just enough to prevent the control rod from reaching its last centimeter of travel.

The root cause and direct cause were determined to be the same. That is, an equipment material problem involving a defective part. In this case, a nylon bushing was discovered to have inside dimensions tighter than other nylon bushings on other control rods.

#### ALO-KO-SNL-6000-2000-0003 GIF Pool Cesium-137 Source Identification

On September 29, 2000, GIF operators noted that legacy radioactive sources were Cs-137 sources instead of Co-60 while making preparations to move the sources into dry storage. The GIF Basis for Interim Operation (BIO) states that all cesium sources were removed from the GIF pool and that any new Cs-137 sources will be doubly encapsulated as specified by the DOT in 49 CFR 173.436 or by ANSI N43.6 "Sealed Radioactive Source, Categorization." The cesium -137 found was doubly contained cesium chloride (CsCl) capsules, however, the capsules and pins were not DOT nor ANSI certified. GIF personnel performed a USQD and determined that the presence of the cesium-137 source in the GIF pool involved an unreviewed safety question. As a result, this event was reclassified as an unusual occurrence on October 22, 2000.

The direct cause was an unknown legacy source of cesium discovered in the GIF Pool. The root cause was poor record retention and lack of formality by previous management. No references to the unknown sources

could be found. Had the previous owners of the GIF maintained their records properly, these sources would have been identified as cesium sources at the time of the transfer of ownership. This leads to the direct cause of the incident which was an unknown legacy source.

#### ALO-KO-SNL-6000-2000-0004 I-125 Uptake During Repackaging

On October 18, 2000, the Iodine-125 Processing Staff were repackaging four shielded vials of I-125 product solution received from an external customer when one Sandian and two Contractors received an internal uptake of I-125. The root cause team determined that the uptake occurred when the operators removed the shielded vials from their metallic can and placed them in the glovebox pass-through. SNL's internal dosimetry department subsequently determined that the whole-body burden associated with these uptakes was approximately 1 to 5 millirem.

The I-125 supervisor held a critique of the event from 3:15 - 4:00 on October 18, 2000 with the I-125, radiation protection, DOE-KAO, and the Annular Core Research Reactor (ACRR) personnel to discuss the event and to identify additional actions. Line Management reported the event under Group 10 (Cross-Category Items), Section C (Potential Concerns/Issues), as an Off-Normal Event (2), "Identification of potential concerns or issues, that are deemed to be worthy of reporting by the Facility Manager. Line Management has also followed up the initial critique with comprehensive evaluations of the I-125 process to identify other opportunities for improvement.

The Direct Cause was a Less Than Adequate Working Environment. For example, a fume hood or a negative pressure environment were not available to perform the unpackaging operation. Had a fume hood been available, an uptake by personnel would have been less likely. The Root Cause was a Work Organization/Planning Deficiency since the potential for airborne contamination was not identified during the work planning stage. The Root Cause team also identified an Inadequate Procedure and a Communication Problem as contributing causes.

#### ALO-KO-SNL-6000-2000-0005 On-Site Transfer of Radioactive Material Exceeding Hazard Cat 3

On October 23, 2000, operators transferred waste material, which exceeded DOE Standard 1027-92 Hazard Category 3 Lower threshold (560 milliCuries for I-125), to a non-nuclear storage facility. The operators moved 2.66 curies of Iodine waste from Building 6588 Low Bay (a Hazard Category 2 Nuclear Facility) to the Building 6596 Chapel, which is currently designated as a Radiological Facility. The operators discovered the problem on October 25 and the material was moved back into the ACRR low bay.

Direct Cause was the procedure was not used or used incorrectly. There was a failure to identify the inventory of radioactive material in the barrel as required by the technical work documents. A Contributing Cause was the HCF Material Handling and Storage Procedure provided too much latitude for the movement of a material in which the process knowledge should have been more accurately tracked and implemented. Lastly, the Radiological Control Technician displayed inattention to detail by not conducting a radiological survey as specifically required on the RWP. The root cause of this event is the HCF Procedure for Material Handling and Storage was not properly implemented.

#### ALO-KO-SNL-6000-2000-0006 Transient Rod C - Stuck Rod

On December 06, 2000 during a routine reactor shutdown following a normal reactor steady state operation. Transient Rod (TR) C stuck approximately two-thirds of the way out of the core. The reactor was shutdown using the auto shutdown control system, which drives all eleven regulating rod motors (2 safety rods, 6 control rods, and 3 transient rods) to their lower limits.

The direct cause was that transient rod C failed to fully seat into the reactor core due to the piston binding in the cylinder of the transient rod mechanism. The root cause is the piston and the cylinder sleeve on transient rod C became mis-aligned due to numerous pulse operations recently performed by the Annular

Core Research Reactor (ACRR). This resulted in increased friction between the piston and the cylinder preventing the transient rod from dropping fully into the reactor core.

In summary, the ORPS data supports the need for TA-V to evaluate the reliability of aging reactor systems such as the transient rods. TA-V management has obtained funding for FY 01 to address component and system upgrades and the TR design is included in these upgrades. The Facility Representatives have completed a review of all corrective actions for these occurrence reports and noted that most corrective actions have been completed.

#### **1.6.1.4 Document Reviews, Personnel Interviews and Activity Observations**

No special document reviews personnel interviews or activity observations were conducted.

#### **1.6.2 Risk**

##### **1.6.2.1 Public Protection**

Level V - 5C. TA-V nuclear operations are confined or contained in facility structures. External storage tubes are used for special radioactive component storage. Items kept in storage tubes also have several additional barriers to radioactive material release. All postulated credible accidents for TA-V operations result in consequences to the general public well below the evaluation guideline of 25 rem (CEDE). For example, typical off site doses are less than 50 mrem at the site boundary.

Areas for improvement, findings, and observations do not increase the risk of SNL nuclear operations relative to the public.

##### **1.6.2.2 Personnel Protection**

Level V - 5B. The major risk from SNL nuclear operations is that to operations personnel. During normal operations, most radioactive material is confined, contained, or in a form not prone to dispersal. Abnormal operations could result in personnel radiation doses of concern. The primary worker risk, however, is from industrial hazards independent of nuclear material handling and other non-routine operations. The implementation of the TA-V work control system in October of 1998 explicitly incorporates the five elements of integrated safety management system. In the course of monitoring the implementation of the TA-V work control procedure, the FRs observed good planning and control of hazards at the worker level.

##### **1.6.2.3 Environmental Protection**

Level III - 3B. The majority of TA-V operations are performed in confinement or containment structures with appropriate High Efficiency Particulate Air filtration. Because of the material forms and quantities used during operation, uncontrolled dispersal is extremely unlikely. The most likely risk to the environment is from standard industrial chemicals used for support processes. The majority of TA-V facilities are near end-of-life. Funding to evaluate the adequacy of facilities or assure adequate life extension is not available. Continued use without facility improvements increases the likelihood of confinement degradation.

##### **1.6.2.4 Mission**

Level III - 3A. The primary mission for TA-V facilities has changed from Molybdenum-99 production to DP testing (ACRR). DP testing is the primary mission on which long-term facility operation depends.

Potential problems with planned or proposed isotope production activities at the ACRR similar to Id-125 production present the greatest risk to meeting the DP mission. Additionally, SNL must continue to properly manage major projects such as the proposed system upgrades at the ACRR to minimize the risk to future missions.

### **1.6.2.5 Regulatory Compliance**

Level III - 3A. DOE issued the interim nuclear safety management rule 10 CFR Part 830 in November 2000 and the final rule in February 2001. The rule requires SNL to determine whether the existing authorization basis documents for each of the nuclear facilities complies with the rule by April 10, 2001 and to upgrade the AB documents for facilities that are determined to not comply with the rule by April 10, 2003. Since a majority of the TA-V nuclear facilities have undergone recent AB upgrades and readiness reviews, KAO does not believe that this rule will have a major impact. However, there is some increased risk due to the potential for external review of the AB documents from other DOE elements.

### **1.6.2.6 External Perception**

Level III - 3A. The DP operations at TA-V are viewed favorably since SNL has been able to meet major testing commitments such as the ACORN test in February 2000 and the ISI testing with FREC II in December 2000. However, the delay of removal of sources from the old GIF received high visibility by NE-1 and EH-2 at DOE HQ. Additionally, the problems with Id-125 production were not well received by NE personnel. In conclusion, due to the critical nature of SNL's changing mission at TA-V and recent events, there is still some risk to operations due to negative external perception.

### **1.6.3 Other Factors**

#### **1.6.3.1 Cost**

The primary missions of the TA-V facilities have transitioned from isotope production (ACRR and HCF) to DP testing (ACRR). The Hot Cell has been placed in cold standby. NE has retained landlord ownership of the ACRR and Hot Cell. SPR operations have been suspended until a planned test campaign in FY 03 and a new underground facility is in the early design phases to allow continued operation of SPR after FY 05 with significantly reduced security costs. A new auxiliary Hot Cell is near completion that will enable the packaging and removal of several legacy experiments from TA-V. Finally, DP has funded several control system upgrades to the ACRR to improve overall reliability of the ACRR. DP has several testing campaign windows overall the next 2 to 3 years and as a result DP will continue to fund the majority of operations at ACRR.

#### **1.6.3.2 Program Maturity**

TA-V Management and staff have improved in their day to day management and operation of the TA-V facilities. Current management focus has been on developing and meeting the relatively short-term milestones associated with the DP testing effort. As a result, management has not been able to place more emphasis on addressing longer term issues associated with overall management of the TA-V nuclear facilities such as process improvements, aging facility infrastructure, development of a five year business plan, and improving staffing and funding.

For example, TA-V management scheduled six management self-assessments (MSA) for FY 2000 and only completed two of them and these lacked performance-based input. The FRs will continue to monitor TA-Vs progress on long-term process improvements such as the MSA process.

#### **1.6.3.3 Program Stability**

TA-V has experienced a relatively stable staff for the last two years including the 6400 Center Director and the TA-V line managers. However, at the end of calendar year 2000 several key operators and support staff either retired or left TA-V for other positions within SNL. Several processes such as the TA-V work control process have been well established and have minimized the short-term impact of these personnel changes. However, SNL does not have similar rigor in the area of project planning and management and

will need to bring on experienced project managers to ensure that long-term commitments are safety met.

#### **1.6.3.4 DOE Priorities**

Successful startup of the New GIF and AHCF as well as completing key upgrades to the ACRR is crucial to TA-V's future mission. DOE priorities include the following:

Addressing aging infrastructure and poor material conditions at the SNL nuclear facilities.

Updating safety documentation for SPR

Completing startup activities for the GIF and the AHCF.

Improving the USQD process and institutionalizing the TA-V MSA process.

#### **1.6.4 Summary**

The overall performance of operations and programs at TA-V are meeting expectations with an improving trend. Continued improvement is needed in addressing longer-term process improvements and in the overall management of the SNL nuclear facilities as stated in the previous sections.

In the near-term, SNL has recognized the need for improvement in these areas. More importantly, however, will be SNL's long-term commitment and actions to correct these weaknesses. To be successful, SNL and DOE management need to balance safety requirements with changing mission requirements within the constraints of limited resources.



SEPARATION

PAGE

*Performance Analysis Matrix Report*

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# PANTEX PLANT

## Functional Area Performance Analysis Report



16 June 2000

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***United States Department of Energy  
Albuquerque Operations Office and Amarillo Area Office***

*Confirmed to be Unclassified*

By: C. Phillips  
*(Authorized Classifier)*

Date: 06/16/00

# memorandum

Albuquerque Operations Office  
Amarillo Area Office

DATE: JUN 16 2000

REPLY TO:  
ATTN OF: DOE:OAM

SUBJECT: Issuance of the 2000 Pantex Annual Environment, Safety, and Health Performance Analysis Matrix Report, Volume I and II

TO: R. E. Glass, Manager, Albuquerque Operations Office

Attached are the results of the 2000 Pantex Performance Analysis Matrix (PAM) Reports, Volume I - *Pantex Summary and Results*, and Volume II - *Pantex Performance Sheets*. The PAM process is used to focus and supplement the Department of Energy (DOE) management systems and to systematically ensure that AAO accurately identifies the strengths and vulnerabilities of the contractor's performance. The information in this document is used to select organizational and Environment, Safety, and Health (ES&H) functional areas (FAs) for inclusion in a DOE Annual ES&H Appraisal. I am providing these reports as an annual update on Pantex's performance effectiveness/status and to alert your office that I may need technical support throughout the coming year during the conduct of some FA reviews. AAO requests that DOE Albuquerque Operations Office (AL) coordinate with DOE Defense Programs to maximize integration of the use of this report in scheduling Pantex site reviews.

This evaluation was conducted by DOE AAO, with DOE AL personnel involvement and support as appropriate, using the DOE AL PAM and FA Risk Manuals as guidance. Volume I provides the Pantex 2000 Performance Summary Matrix. The PAM color coding is similar to the green, yellow, and red signal light with the exception that blue denotes exceeding expectations and gray indicates insufficient information was available in order to make a performance determination.

AAO has analyzed the performance and trends for Pantex's FA rated as "Exceeding Expectations" (blue) and determined that these areas do not warrant a formal ES&H review. The Safeguards & Security FA is ranked as one of two FAs that are considered to be "Exceeding Expectations," nonetheless, it has been scheduled for a DOE AL Inspection & Evaluation in late 2000. The AAO has requested an extension to the annual survey for this FA in my memorandum to Larry Kirkman, dated June 2, 2000, Subject: Annual Safeguards and Security Survey Frequency. Analysis has been performed on the FA rated as "Meets Expectations" (green) and determined, with one exception, the areas do not warrant an ES&H review. The one exception is the Occupational Radiation Protection Program (ORPP). It has been several years since a comprehensive review was conducted on the ORPP and this is the basis for recommending a review. AAO has also analyzed the Pantex FAs rated as "Partially

Meets Expectations” (yellow) and some of these areas being recommended for an ES&H review. I maybe seeking your staff’s support in conducting these reviews. These areas are:

- Occupational Safety & Health (Two Areas)
  - 1) Industrial Safety
  - 2) Industrial Hygiene
- Conduct of Operations (CoO)

There is one FA rated as “Not Meeting Expectations,” (red) Fire Protection. This FA is being recommended for an ES&H review due to several nuclear safety noncompliance issues that have resulted in Price Anderson violations. The contractor has implemented corrective actions to address the noncompliance issues and AAO is tracking progress. Additionally, a comprehensive review is also warranted because of the number of occurrences, the changes being introduced to address combustible loading and required facility enhancements. Finally, the Training and Qualification FA was rated as “To Be Determined” (gray) as there is insufficient data to draw a supportable conclusion regarding contractor performance. Facility Representatives and Subject Matter Experts have identified individual training concerns, however, this FA has not had a formal review conducted for several years and the AAO is not currently conducting systematic oversight of the FA.

The following Table lists the other “Partially Meets Expectations” (yellow) Pantex FAs along with AAO’s basis for not recommending the FA for a review. In most cases these FAs will be appropriately reviewed during the scheduled 2000 Pantex Integrated Safety Management Verification (ISMV) Phase 2 scheduled June 2000, which will help validate my subject matter experts FA conclusions and recommendations.

Pantex Functional Area	Basis Statement
Environmental Protection	Prompt review and notification of abnormal environmental sample results (i.e. TCE in ground water) was the predominate weakness in this FA. MHC has initiated action to improve this process.

Safety Analysis and Authorization Basis (AB)	There have been several recent independent reviews conducted by external organizations. In addition, this FA is being closely monitored by DOE and the DNFSB and there are program plans in place to address weaknesses within the program.
Production Operations	This FA will be extensively reviewed during the methodical implementation of the IWAP and site-wide safety enhancements as defined in the 98-2 Implementation Plan.
Construction Safety	This FA is not recommended for DOE review based on the current decreasing trend in the number construction incidents.
Nuclear Material Operations	This FA has shown improvement primarily due to recent management changes.
Maintenance	This program is undergoing active changes and restructuring that is being closely followed by AAO. Many of the recent changes have not been in place long enough to assess their overall effectiveness. However, recent reviews have noted some signs of improvement in several areas reviewed. Therefore, this FA is not recommended for review.
Configuration Management and Systems Engineering	The overall program is undergoing active changes and restructuring that is being closely followed by AAO. Because of current state of flux in the program and several issues yet to be addressed, a review at this time probably would not be beneficial. Additionally, many of the changes have recently been put in place. Therefore, performing a review at this time may be somewhat pre-mature.
Management Self-Assessment (MSAs)	The overall Pantex Independent Assessment process is well developed and effective. The Line FA self-assessment process has shown some signs of improvement with recent changes to the procedure. The procedure to perform Technical Assists for program start-up is currently being modified and will provide a basis for future reviews.
Integrated Safety Management	This FA is the primary focus of the Pantex ISMV Phase 2 assessment scheduled for June 19 - 30, 2000.

The specific individual performance concerns identified in each FA Performance Sheet provided in Volume II have generally been addressed to or by the contractor through other avenues including; the AAO Issues Management Board, DOE EH-10's Noncompliance Tracking System, Occurrence Reports and the 1998 ISMV Report's "Opportunities for Improvement" and "Recommendations."

The results contained within the attached PAM Report will be used to focus future oversight activities of DOE AAO Subject Matter Experts and Facility Representatives. In addition, these results will be included in AAO's internal self-assessment planning process. Again, I maybe seeking your staff's support for specific FA reviews.

If you have any questions regarding this report or AAO's recommendations please feel free to contact me at (806) 477-3180 or John Bernier at extension (806) 477-6672.

*R.T. Brake*  
*for* Daniel E. Glenn  
Amarillo Area Office Manager

**Attachments:**

**Pantex Plant Performance Analysis Matrix Report dated June 2000 - Volume I and II**

cc w/attachments (see page 5):

cc w/attachments:

J. Bernier, DAM, AAO  
M. Blackburn, S&H, AAO  
R. Brock, SSTA, AAO  
D. Brunell, ABSM, AAO  
J. Johnson, E&EM, AAO  
D. Kelly, NMO, AAO  
D. Schmidt, WO, AAO  
D. White, BM&S, AAO  
J. Arthur, OEOS, AL  
M. Baca, WSD, AL  
K. Boardman, WPD, AL  
S. Goodrum, ONDP, AL  
G. Chavez, QTD, AL  
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J. Orban, WMD, AL  
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C. Longenbaugh, ISRD, AL  
C. Soden, ESHD, AL  
P. Wagner, OMA, AL  
E. Whiteman, OTSP, AL  
B. Pelligrini, MHC  
P. Selde, MHC  
J. Dionizio, MHC  
K. Brack, MHC  
S. Stadler, EH-2, HQ  
X. Ascanio, DP-24, HQ  
J. Underwood, DP-24, HQ  
T. Dwyer, DNFSB Site Representative  
M. Reaka, PWT, LTD.

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# PANTEX

## Volume 1

### Summary & Results



16 June 2000

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**United States Department of Energy  
Albuquerque Operations Office and Amarillo Area Office**

*Confirmed to be Unclassified*

By: C. Phillips  
(Authorized Classifier)

Date: 06/16/00

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## Foreword

This is the 2000 issue of the Performance Analysis Matrix (PAM) Report for the Pantex Plant. The PAM process and report are joint initiatives between the Albuquerque Operations Office (AL) and Amarillo Operations Office (AAO) to:

- Evaluate the effectiveness and completeness of U.S. Department of Energy (DOE) oversight activities;
- Provide consistent and unified (AAO and AL) contractor performance evaluations; and
- Establish an annual baseline for Pantex performance within the Integrated Safety Management System (ISMS).

The PAM process is the means DOE uses to systematically review, evaluate and document the Pantex organizational and ES&H functional area (FA) status and performance effectiveness based on the information DOE's ongoing oversight activities/systems have provided management. The PAM report reflects DOE's understanding of Pantex performance based on the existing and available information. The PAM process provides for cases where existing DOE systems might not be providing sufficient information, or the information might not be assimilated well enough to allow a fully accurate performance conclusion; and no conclusion would be made.

This process is used to focus and supplement the DOE management systems and to systematically ensure that DOE accurately identifies the strengths and vulnerabilities of Pantex and Mason and Hanger Corporation (MHC) performance. The information in this document is normally used to select organizational and ES&H functional areas (FAs) for inclusion in a DOE Annual ES&H Appraisal.

The format of the report is intended to be consistent, straightforward, and complete. It communicates information obtained from documented performance evaluations and field activities, but it does not repeat review evaluations or require new field information to be gathered. The general PAM report organization is as follows:

*Volume 1, Summary and Results*, describes the purpose and content of the report, provides a risk, trend and conclusions for each Functional Area. This provides the summary basis for why certain integrated safety management system (ISMS) or functional areas presently only partially meet DOE's expectations.

*Volume 2, Performance Sheets and Appendices*, provides the detailed information to support the risk, trend and conclusion information in Volume 1.

The PAM report will be issued periodically, normally on an annual basis and is intended to meet management and regulatory commitments for assessment; to identify areas requiring improvement. AL is committed to improving the effectiveness of DOE oversight activities and the usefulness of oversight reporting, and will continue to work toward achieving this goal. Suggestions for improving the PAM report format and content are solicited.

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4.0 RESULTS AND CONCLUSIONS ..... 7

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## 1.0 INTRODUCTION

This volume is the 2000 issue of the Performance Analysis Matrix (PAM) Report for Pantex. This report reflects the DOE determination of the Pantex performance based on existing and available information. In some cases, the DOE information system may be insufficient, or the information is not assimilated well enough to portray a fully accurate conclusion. The PAM process will be used to improve and supplement the other DOE information systems to ensure that DOE can identify the strengths and vulnerabilities of the performance of Pantex.

The report compiles information from DOE oversight activities. These include day-to-day oversight activities, AAO SME and FR reviews and observations, AL assessments, external assessments, and other formal and informal assessments. The process for AAO's ongoing gathering and documentation of the information from these sources is provided in AAO Procedure 114.1.0, *Pantex Plant Self-Assessment Program*. The PAM report will be issued periodically, normally on an annual basis and is intended to meet management and regulatory commitments for assessment; fundamentally intended to identify priority areas requiring improvement.

The information in this document is normally used to select organizational and ES&H functional areas (FAs) for inclusion into the DOE AL's Annual ES&H Appraisal, DOE Headquarters and other reviews of Pantex.

## 2.0 DESCRIPTION OF THE DATA

DOE management systems and oversight activities collect data relative to and indicative of Pantex performance. The PAM process functions as an administrative funnel of information gathered throughout the year. Disparate activities and packets of data are consolidated into a complete and straightforward evaluation of Pantex performance (see Figure 1, AL/AAO Performance Analysis Matrix Process.)

Following are the key features of the PAM process:

- The process communicates information obtained from documented performance evaluations. It does not duplicate evaluations or normally create new field information.
- AAO and AL agree on the information in the report.
- The report presents the performance and risk results in a consistent, complete, and straightforward manner.
- The factual information is validated with the Pantex contractor to ensure consistent understanding between DOE and Pantex and to ensure that all important performance information has been captured accurately.
- The final report establishes a baseline that can be used to provide baseline status and measure improvements in Pantex performance.

The report results are presented in two parts:

- Pantex PAM, which is a high-level graphical summary depicting performance and risk information organized by ISMS guiding principles, and functional areas. The PAM format is discussed in Section 2.1 below, and shown in Section 3.

- Performance sheets providing detailed FA performance summary, evaluation of information, risk analysis information, trend determinations and overall conclusions. The performance sheet format is discussed in Section 2.2 and the FA performance sheets are located in PAM Volume 2.

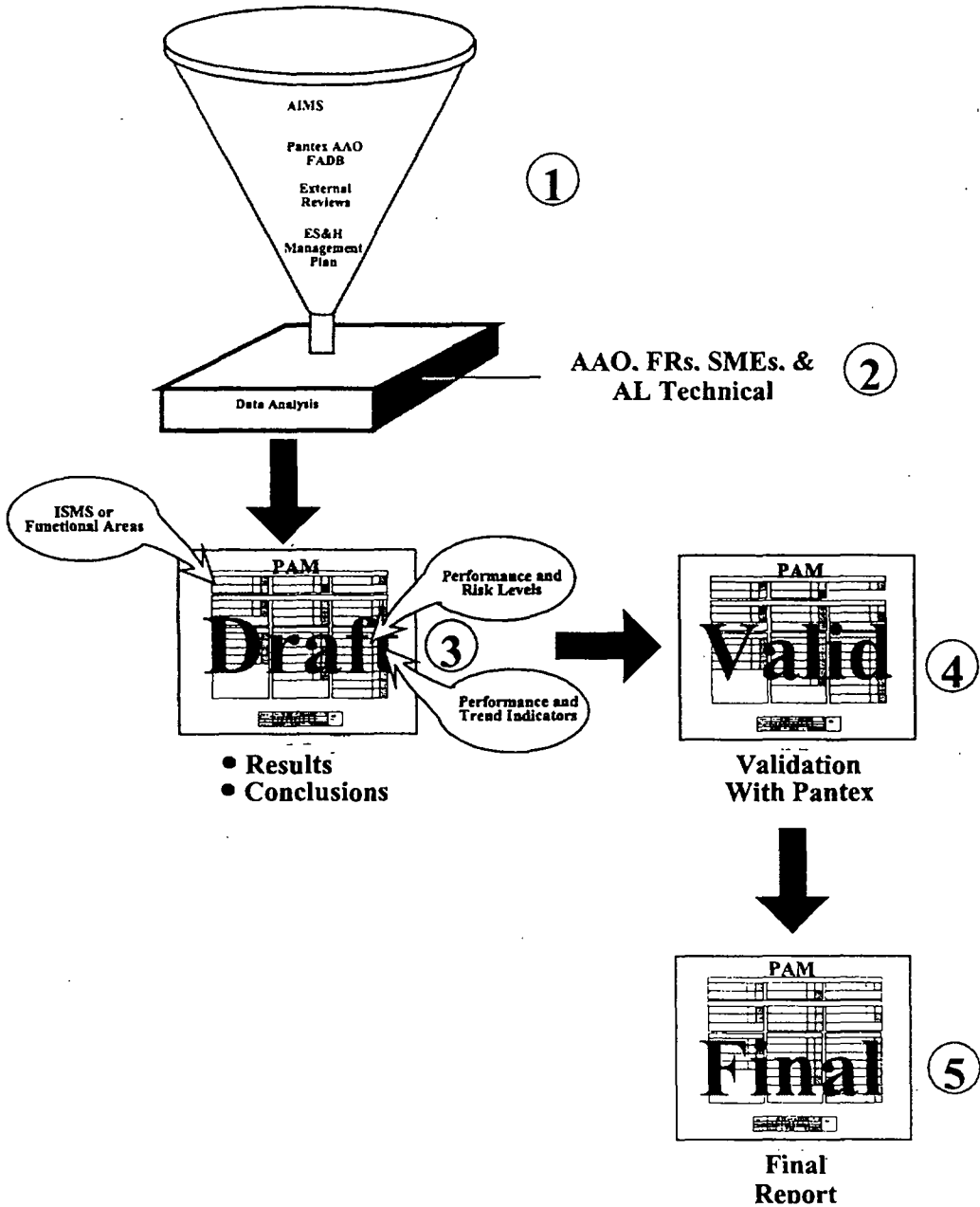


Figure 1. AL/AAO Performance Analysis Matrix Process

## 2.1 PANTEX PAM FORMAT

The PAM is organized by ISMS based AAO Pantex organizational and ES&H functional areas as shown in Section 3.0. No significance is assigned to FA order scheme outside AAO organizational and functional areas of management.

The ISMS guiding principles applied to Pantex organizational and FAs provide a framework and format for evaluating and reporting Pantex ES&H performance. Definitions of each acronym and abbreviation used in functional area reports are provided in Volume 2.

A sample cell from the PAM is shown in Figure 2 below. Cells are subdivided into three sections: (1) the AAO organizational or ES&H functional area title; (2) the performance and risk level ratings (high, medium, or low); (3) and a corresponding color-coded indicator cell that depicts DOE's evaluation of level of performance and the risk level associated with the area under evaluation. A directional arrow in the colored cell indicates if the trend in performance represents improvement or decline in meeting DOE expectations.

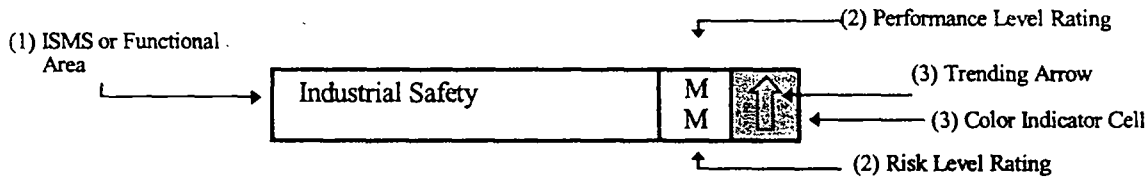


Figure 2. Sample PAM Level 1 Cell.


The color codes used to rate the ISMS guiding principles and functional areas are defined below.

 Blue

*Exceeds Expectations.* This rating indicates exceptional overall level of performance in the ISMS, organizational or functional area program. Activities are conducted with a high regard for ES&H requirements, and are accomplished in a highly cost-effective manner.

 Green

*Meets Expectations.* This rating indicates effective overall level of performance in the ISMS, organizational or functional area program. There might be specific issues or deficiencies that require attention and resolution, but these do significantly not degrade the overall effectiveness of the FA system or program.

 Yellow

*Partially Meets Expectations.* This rating indicates a need for improvement in the ISMS, organizational or functional area program, and signifies an opportunity for line management to correct and improve performance before it results in a more significant weakness.

 Red

*Does Not Meet Expectations.* This rating indicates a need for upper management to focus the attention and resources necessary to resolve management system or programmatic weaknesses. A significant weakness would normally represent an aggregate of a number of issues identified in an ISMS guiding principle or functional area program.



 Gray

*To be determined.* This rating indicates there is insufficient data to draw a supportable conclusion regarding Pantex performance.

The color code is determined by the risk and performance levels, which are discussed in more detail in Section 2.2.

## 2.2 PERFORMANCE SHEET FORMAT

Performance sheets (Volume 2) provide detailed information to support the summary depicted in the PAM. AAO and AL technical personnel have documented ISMS review based functional area strengths and weaknesses based on

- performance,
- risk, and
- other factors.

The relationship between risk and performance and how the information is used to assess overall ES&H performance is illustrated in the following diagram.

In the diagram, the first level, "No Risk," represents a baseline situation where no activities are being conducted. The highest level, "Unmitigated Risk," represents the inherent risk in conducting an activity (such as high explosive machining or operating a forklift) with no program established to reduce the risk of that activity. Once a risk-reduction program is established, such as an explosives safety or an OSHA program, the risk is reduced by some margin. The amount of risk reduction is a function of the program effectiveness. AL's intent is to identify and highlight the ISMS organizational and functional areas in which the risks are high and the risk-reduction program is performing poorly.

The **Performance** section of the performance sheet consists of four subsections: FR review history, assessment history, occurrence history, noncompliance tracking system and document reviews and interviews. These are described below.

**FR Review History:** This section summarizes information from AAO FR observations and walkthroughs, and addresses the following questions.

- How many observations and walkthroughs occurred in each functional area at the facility?
- What were the major issues or findings identified?
- Have those issues/findings been resolved, and what is the current status?
- Were there any particularly noteworthy practices observed?
- How have issues, findings, or particularly noteworthy practices been communicated to the M&O?

The results of the Pantex reviews, observations and walkthroughs are normally documented in the AAO Field Activity Data Base (FADB) and/or the AIMS database. Any similarities and common trends with other sections of the performance sheet are discussed.

**Assessment History:** This subsection normally summarizes relevant information from previous assessments, and should address the following questions.

- When were the assessments performed for the FAs?
- What agency performed the assessments?
- What were the major issues or problems identified?
- Have those issues been resolved, and what is the current status?
- Were there any particularly noteworthy practices observed?

The AIMS database collects AL assessment history for this type of information. Any similarities and common trends with other sections of the performance sheet are discussed.

The AAO FADB provides a similar assessment history and is another starting point for obtaining this type of information. Similarities and common trends with other sections of the performance sheet are periodically noted and discussed.

**Occurrence History:** This subsection normally summarizes occurrences and incidents that provide insight into underlying ES&H issues and concerns related to activities in the ISMS guiding principle or functional area. Any similarities and common trends with other sections of the performance sheet are discussed. Information from ORPS, Noncompliance Tracking System (NTS) or other DOE reporting systems was used to complete this section.

**Document Review and Personnel Interviews:** This section normally summarizes information from document reviews not addressed in the preceding sections (1.1, 1.2, and 1.3), from interviews of AAO and/or AL personnel, and from observations, as required, of Pantex facilities and activities related to the ISMS organizational or functional area. Examples of the types of information included in this section are:

- results from reviewing Pantex safety basis documentation, ISMS descriptions, and other Pantex documents for the area;
- interviews with AL, AAO and Pantex personnel in response to questions developed from research and data analysis in developing the performance sheet; and
- interviews to collect data not otherwise available.

Any similarities and common trends with other sections of the performance sheet are discussed.






The **Other Factors** section normally includes information such as the following.

- **Program Cost:** The cost of the program and a conclusion regarding its cost effectiveness.
- **Program Maturity:** Factors such as the length of time the program has been in place, the extent of management involvement, the qualifications of the personnel in the program, and employee involvement in the program procedures and practices.
- **Program Stability:** Factors such as major changes in personnel, changes in the program administrative organization, changes in the program scope, new or changing requirements, and changes in program funding.

- DOE Priorities: New initiatives in the functional area that are a high priority for DOE.

The AAO Subject Matter Experts (SMEs) completed the first drafts of the performance sheets. The AL technical divisions reviewed the AAO DRAFT inputs and addressed any comments or questions with the responsible AAO SME. The AAO Senior Management validated the correctness of FA results and normalized the relative importance of the FAs performance against mission, ISMS and ES&H fundamental tenets. This ensured that an appropriate “graded approach” was used to draw the performance conclusion and that the responsible AAO Line-managers exercised the final conclusion authority. For example, these senior manager’s were required to evaluate the FA results as a whole to ensure that a yellow rated “administrative FA” would not be inappropriately recommended for DOE AL review action when a rapidly downward trending green “ES&H FA” was overlooked for further review by the SMEs.

Once each performance sheet was complete, AAO assigned a high, medium, or low risk and performance rating based on the information on the performance sheet. The performance and risk ratings determined the final color rating for the ISMS guiding principle or functional area, as shown in Figure 3. For example, a medium performance and a low risk rating would correspond to a green rating for the ISMS organizational or functional area. However, a medium performance and risk rating can correspond to either a green or a yellow rating based on a technical interpretation of the information. This flexibility allows for greater sensitivity in communicating the assigned ratings.

Ranking	Exceeds Expectations 			Partially Meets Expectations 			To be Determined 		
Performance	H	H	H	M	M	M	L	L	L
Risk	L	M	H	L	M	H	L	M	H
Ranking	Meets Expectations 			Does not Meet Expectations 					


  
 Arrows indicate upward or downward trends

Figure 3. Pattern Ratings.

Every attempt was made to achieve uniformity and consistency in performance sheet structure, but certain Pantex ISMS organizational and functional areas employed a partially modified format to better accommodate the available information.

### 3.0 PERFORMANCE ANALYSIS MATRIX

Table 1. Pantex 2000 Performance Analysis Matrix

FUNCTIONAL AREA (FA) PERFORMANCE, RISK, AND TRENDING MATRIX					
Pantex FA	PERF & RISK	Color & Trend	Pantex FA	PERF & RISK	Color & Trend
Employee Concerns	H M		Safety Analysis & Authorization Basis	M H	
Safeguards and Security (includes – Firearms Safety)	H M		Production Operations	M M	
Occupational Radiation Protection	H H		Construction Safety	M M	
Price-Anderson Amendment Act	H M		Nuclear Material Operations	M M	
Explosive Operations & Safety	M H		Maintenance	M M	
Nuclear Explosives Safety	M H		Configuration Management & Systems Engineering	M M	
Emergency Management	M M		OSH Occupational Med., Industrial Hygiene & Safety	M M	
Packaging and Transportation	M M		Conduct of Operations	M M	
Waste Management & Environmental Restoration	M M		Management Self-Assessments	M M	
Quality Program	M L		Integrated Safety Management	M L	
Issues Management	M L		Fire Protection	L H	
Environmental Protection	M H		Training & Qualification	M M	

Table Notes: Performance Color: B – blue, G – green, Y – yellow, R – red, Gr- Gray  
 Risk: H - high, M – medium, L – low

### 4.0 FUNCTIONAL AREA - RESULTS AND CONCLUSIONS SUMMARY

#### 4.1 EMPLOYEE CONCERNS

##### 4.1.1 RISK

The Program enhances MHC’s ability to identify and correct problems, thereby reducing risk to a moderate level. Employees of the company are provided a formal avenue to report concerns associated with misconduct; operating procedures; quality; environment, safety, health; and other

areas of concern without fear of retaliation or reprisal. Employees may also file concerns anonymously and confidentially.

In the Regulatory Compliance area, a moderate risk exists. MHC must maintain compliance in order to avoid a slippage in meeting pertinent regulations. In the External Perception area, a moderate risk exists. The ability of the ECP to address employee concerns in an effective and timely manner is critical to developing and maintaining a positive perception by employees, outside agencies, and the public.

The visibility of MHC's ECP has improved; however, there is still some evidence of employee distrust and fear of retaliation from management. The whistleblower cases created negative attention and publicity by various media and special interest groups.

#### **4.1.2 TREND**

MHC's Employee Concerns Program has matured since its inception and the program is continuing to improve. Efforts and accomplishments have been positive and progressive.

The effectiveness of MHC's Program, and their efforts to continuously improve it, have been recognized by DOE-HQ, DOE-AL, Facility Rep activities, EH Resident oversight activities, outside consultants, AAO oversight activities, and self-assessments.

#### **4.1.3 CONCLUSION**

MHC's ECP exceeds DOE expectations and constantly strives to improve the program. Evidence of this is reflected in the establishment and development of the ECP Review Panel; the ECP Review Committee; investment in and use of consultants; incorporation of suggested enhancements; and provision of pertinent training to workers, supervisors, and managers. The Program continuously provides updated information to employees through posters, pamphlets, and published articles.

Since its inception, the contractor's program has progressed toward effectively addressing and resolving internal concerns, thereby reducing negative perceptions by Plant employees and the public.

Because performance in this area is exceeding DOE expectations, it is not recommended for review during the DOE AL 2000 ES&H Appraisal at Pantex.

### **4.2 SAFEGUARDS AND SECURITY**

#### **4.2.1 RISK**

Although the Safeguards and Security Program performance is very high the inherent risk of the activities requires a moderate level of risk be assigned.

#### 4.2.2 TREND

The Safeguards and Security Program is effectively maintaining a state of continuous improvement.

#### 4.2.3 CONCLUSION

The overall safeguards and security program at Pantex is highly effective and exceeds DOE expectations. It is a mature program that is well implemented and documented.

Both the Area Office and AL may experience significant changes to the program resulting from HQ direction that may significantly affect program costs.

This program is exceeding expectations and will be reviewed during the AL survey scheduled for November 2000 and the I&E evaluation scheduled for mid 2001. Therefore this FA is not recommended for review.

### 4.3 OCCUPATIONAL RADIATION PROTECTION

#### 4.3.1 RISK

The risks associated with the Occupational Radiation Protection Functional Area for safety, environmental, regulatory and mission areas are considered high based on consequence and low to moderate based on an evaluation of the current effectiveness of the RP activities.

In the external perception risk area a high to moderate risk is considered to exist since any adverse event involving radiation or radioactive materials has a high probability of drawing negative attention or publicity from the local media and/or special interest groups.

#### 4.3.2 TREND

The RP area continues to show a slow but deliberate trend of improvement.

#### 4.3.3 CONCLUSION

Overall, the performance of the Pantex Plant Radiation Protection Program is meeting expectations. The radiation protection S/RID was the first of the Hazard Control S/RIDs (within the Pantex Plant MIC S/RID structure), to receive approval and provides the basis for maintaining a strong radiation protection program. The RP S/RID has been revised twice to capture changes to 10 CFR 835.

The RP program performance has increased emphasis on radioactive material control, training of radiation worker (RW) and general employees as needed to improve sensitivity to control of radioactive materials, and in senior management support of the RP program. Radiation

Protection was not a functional area selected for specific review in the Pantex 1998 ISM Program Validation, although team activities covered many aspects of the RP program including ALARA.

The basis for this FA conclusion includes the Pantex 1998 ISMV, recent EH and AL assessments (e.g., Safety Management Evaluation, 10 CFR 835 and RPP implementation plan assessments) and strong AAO oversight of this program to validate continued compliance with 10 CFR 835 and the Site Specific RADCON manual. DOE AL is also involved in ongoing monitoring of plant performance, for example, their direct participation in MHC's recent internal dosimetry program self-assessment and the AAO lead RPP review. In addition, MHC IAA&Q performed a Radiation Protection Program Assessment that included all subparts of 10 CFR 835 in August 1999. Even though the Radiation Protection Program has received numerous reviews in the last few years, it has been several years since a review was performed by an outside organization. With this in mind it may be prudent to recommend a DOE comprehensive review of the Radiation Protection Program within the next fiscal year.

#### **4.4 PRICE ANDERSON AMMENDMENTS ACT (PAAA) PROGRAM**

##### **4.4.1 RISK**

The risk associated with the PAAA functional area is considered moderate based upon the significance of the non-compliance concerns, corrective actions that are being implemented regarding the program, and the layered safety implemented as part of ISM. The moderate risk factor is predominantly due to the increased number of nuclear safety non-compliance issues and the safety enhancements that will be realized by the Defense Board recommendation 98-2, "Accelerating Safety Management Improvements at the Pantex Plant," are in the process of being implemented now.

##### **4.4.2 TREND**

The PAAA program management has reversed the degradation (follow-up on closing CAPs) noted in 1998 and has been continually improving the program. The full implementation of processes to employ the Microsoft access Tracking and Trending tool should create a step enhancement in performance of PAAA duties within the ESH&Q and line organizations.

##### **4.4.3 CONCLUSION**

The PAAA program meets DOE expectations and has shown significant signs of improvement as a result of corrective actions implemented to address findings. Other program enhancements have been observed such as: revision of MHC PAAA process procedure (STD-0127); the new tracking and trending capabilities; increased PAAA visibility by senior managers; and strengthened PAAA coordinator reporting relationship to the Director.

However, there are many operational changes that are currently being undertaken to enhance nuclear safety that also provide the opportunity for non-compliance. For example, the documentation for the Basis for Interim Operations are being upgraded (bays, cells transportation, seismic, lightning, fire protection, special purpose bays, etc.) to enhance plant

safety. These types and the volume of changes have provided indicators that some of the contractor's management systems are not fully mature.

In addition; the plant population has not fully adjusted to a standards based culture. The Plant has seen several procedural non-compliance concerns even though there has been extensive technician training. Future long-term enhancements such as electronic procedures will help mitigate or eliminate this concern. There have been some indications of improvement regarding the plant personnel's knowledge regarding nuclear safety violations and the cultural awareness required to effectively implementing site change, consistent with the Integrated Safety Management System. Overall, the DOE considers there is a cautious indication (trend) of improved effectiveness and management attention to the program.

The enhancement that will be obtained from implementing DNFSB 98-2 and the BIO upgrade project efforts should also enhance the PAAA operations non-compliance concerns. These enhancements include accelerating Seamless Safety 21 for conventional high explosive enduring stockpile programs.

This FA is not recommended for a specific review.

#### **4.5 EXPLOSIVE OPERATIONS AND SAFETY**

##### **4.5.1 RISK**

There is a moderately high risk associated with this program due primarily to the potential for significant consequence of explosive events.

##### **4.5.2 TREND**

The program is performing moderately well with a slight upward performance trend.

##### **4.5.3 CONCLUSION**

While occurrences involving the movement and storage of high explosives have not been eliminated, they have been greatly reduced for this PAM reporting period.

The explosives safety program is meeting DOE expectations.

The contractor is in the process of performing six comprehensive Explosives Safety Assessments for this fiscal year as part of their CPAF agreement. Overall, there has been an improvement in Explosives Safety Assessments this year.

DOE/AL has conducted at least two formal comprehensive assessment of the Explosives Safety Functional Area in conjunction with the contractor and the Area Office. Therefore this FA is not recommended for review.



#### **4.6 NUCLEAR EXPLOSIVE SAFETY**

##### **4.6.1 RISK**

The risks associated with this area are considered very high due to the level of consequence associated with an accident. Therefore, the DOE must accept a higher level of residual risk with this performance area than for other performance areas.

##### **4.6.2 TREND**

The NES program's performance has been improving.

##### **4.6.3 CONCLUSION**

Overall, the contractor is meeting DOE expectations and has been effective in providing a safety umbrella for employees, the public and the environment at Pantex Plant.

Internal and external assessments reveal the contractor is making progress to be one of the strongest nuclear explosive safety programs within the nuclear weapons complex. Although there have been deficiencies, the contractor has addressed these findings in a reasonable and thorough manner, striving to meet its programmatic mission while correcting any weaknesses under personnel constraints.

This FA is reviewed for compliance to the DOE Nuclear Explosive and Weapon Surety Orders on an annual basis by the DOE AL/Weapons Surety Division.

#### **4.7 EMERGENCY MANAGEMENT**

##### **4.7.1 RISK**

The risks associated with the Emergency Management Assessment Functional Area for safety, environmental, regulatory and mission areas are considered low to moderate. Effective implementation of Integrated Safety Management (ISM) principles will continue to enhance plant operations. Risks currently are in a downward trend based on the current effectiveness of the program.

In the external perception area a low risk is considered to exist. There is potential for criticism or negative publicity as a result of any event which occurs. There is also a strong reliance on ISM principles that enhance operations safety coupled with rigorous drills to keep employees proficient.

##### **4.7.2 TREND**

The Emergency Management Program performance is at a high level but could be improved.

### 4.7.3 CONCLUSION

The Emergency Management area is meeting DOE expectations. The Pantex program is effective in providing a safety umbrella for employees, the public and the environment at Pantex Plant.

MHC currently has a fully formalized and structured Emergency Management Program with efficient interaction with state, local and municipal agencies. The program is relatively stable and is continually assessed by both internal and external organizations.

In summary, the Pantex Emergency Management program is currently providing the necessary policy, training, and resident assessment functions. The ERO is currently a well-trained and technically competent organization. Since 1995, it has a proven-track record in responding to realistically simulated /replicated natural hazards (e.g., tornado), safety & health (e.g., radiological release), and security events. While a perishable commodity, the present program (coupled with necessary equipment maintenance and essential upgrades) is expected to maintain and potentially improve the level of preparedness that is practical among a largely volunteer organization.

This area is not recommended for a FA specific review.

## 4.8 PACKAGING and TRANSPORTATION

### 4.8.1 RISK

The risks associated with the P&T Functional Area (FA) for safety, environmental impacts, regulatory compliance, external perception, and mission areas are considered high based on consequence, however, the overall rating is “moderate” based on an evaluation of the current effectiveness of the P&T activities.

The external perception risk area is considered to be moderate to high since any adverse event involving HAZMAT has a high probability of drawing negative attention or publicity from the local media and/or special interest groups.

### 4.8.2 TREND

The P&T area is currently exhibiting a slow but deliberate improvement.

### 4.8.3 CONCLUSION

Overall, the performance of the Pantex Plant P&T program is meeting DOE expectations.

The basis for this conclusion includes the ISMV, recent EH and AL assessments, strong Area Office oversight of this program, and the institution of a MHC self-assessment program to ensure continued compliance with applicable regulations.

The Onsite P&T S/RID (a part of the Hazard Control S/RIDs of the Pantex Plant MIC S/RID) was approved in March 2000, and along with the previously approved Offsite P&T S/RID, will provide the future basis for maintaining a strong packaging & transportation program.

The P&T FA has been covered during the 1999-2000 Pantex ISMV. In addition, P&T is already covered by multiple DOE Order driven Annual Reviews. Therefore, this FA is not recommended for review.

The need for Area Office full time oversight of P&T was identified in the Dec 98-Jan 99, AAO Management Self-Assessment of the AAO Oversight of P&T. It should be pointed out that AAO has yet to assign a full time person to perform P&T oversight.

#### **4.9 WASTE MANAGEMENT and ENVIRONMENTAL RESTORATION**

##### **4.9.1 RISK**

The consequence and likelihood of the risks associated with the Waste Management and Environmental Restoration (WM&ER) Functional Area (FA) for safety, environmental, regulatory, and mission risk areas are considered low to moderate, based on evaluation of the current rate and effectiveness of the WM&ER activities.

In both WM and ER programs, regulatory compliance has a moderate risk, primarily if funding is insufficient to maintain regulatory compliance; and External Perception has high risk, primarily because of predictable stakeholders' perception in the event Pantex does not maintain regulatory compliance or adequate oversight of its activities.

##### **4.9.2 TREND**

ER is currently improving as shown by the RCRA audits and reviews by the Texas Natural Resource Conservation Commission in FY 96, 97, 98, and 99. TNRCC comments indicate continued progress in resolving clean up at Pantex Plant under RCRA requirements.

The WM area is maintaining the status quo at present.

##### **4.9.3 CONCLUSION**

The WM portion is currently meeting DOE expectations while ER is not meeting all DOE expectations. Discrete areas of needed improvement persist.

The WM&ER area is included in the Environmental Protection S/RID. The ER Program has had annual baseline validations and Texas Natural Resource Conservation Commission (TNRCC) reviews periodically on program activities. However, the ER Baseline for FY2000 was not validated. The TNRCC reviews consist of RCRA Field Investigation Reports, Document reviews, and program oversight. DOE reviews have pointed out areas where additional effort is needed or follow-up to ensure more characterization of groundwater, EH/EM follow-up on

recommendations, concerns with staffing for AAO and the contractor, scope changes due to characterization and investigation activities, and offsite plume definition are areas of immediate concern. Also, two occurrence reports over the past year identified an inadequate equipment check process that resulted in a mechanical failure on a drilling rig and the presence of volatile organic compounds in the Ogallala Aquifer. Corrective actions are being implemented. The current program has some uncertainty while improvements and implementation of corrective action plans are needed. Meanwhile the WM program remains stable.

Pantex Plant is an authorized generator for shipments of low-level radioactive waste to the Nevada Test Site (NTS) under their waste acceptance criteria. There are no open findings from NTS or internal audits of the WM program. Corrective Action requests and observations from the April 2000 NTS audit will be resolved in a timely manner, on or before receipt of the audit report.

The extent of AAO oversight and the internal and external reviews have provided comprehensive environmental protection program status information. Therefore, this FA is not recommended for review.

#### **4.10 QUALITY PROGRAM**

##### **4.10.1 RISK**

The risks associated with the Quality Assurance (QA) Functional Area (FA), are considered low to moderate based on an evaluation the current effectiveness of QA program activities.

A reduction in or lack of formality in the QA Program during operations could lead to an increase in safety-related events or accidents during operations and thereby result in a lower confidence level of the general public.

##### **4.10.2 TREND**

The QA program is a very mature program and is at a steady level of performance.

##### **4.10.3 CONCLUSION**

The QA functional area continues to meet expectations. The weapons Quality Criteria (QC-1) was implemented in the early 1950's and the 10 CFR 830.120 requirements since the early 1990s; both programs are effectively implemented at Pantex.

Personnel turnovers and reorganizations have decreased the experience in the MHC QA staff but the QA training and a mentor program is adequately improving expertise. The AAO has a rigorous and effective process to monitor quality performance at Pantex, including ensuring appropriate QA issue closure. Serious quality issues of significance are managed immediately.

The QA program was not included as a specific functional area in the scope of the 1998 Pantex ISMV. However, because of the cross cutting nature of this program it was appropriately evaluated during the review and was again captured during the Pantex Plant's second ISMV in June 2000. Therefore, this FA is not recommended for review.

#### **4.11 ISSUES MANAGEMENT**

##### **4.11.1 RISK**

The Issues Management Functional Area overall risk is considered to be low. An effective issues management and tracking system is needed to ensure proper follow up in other functional areas of the appraisal.

##### **4.11.2 TREND**

The MHC Issues Management FA performance has shown continuous improvement. However, program enhancements that will result in more significant improvement have not yet been implemented.

##### **4.11.3 CONCLUSION**

A marked improvement has been seen in MHC's timeliness in developing, completing, and closing out corrective action plans for issues raised by the AAO.

However, MHC management has not met AAO's expectations in systematically managing significant issues at Pantex. There continues to be significant incidents that occur, such as the W78 cell fire or repeat management self-assessment findings for the start-up of a facility or operation that indicate a lack of improvement.

A more effective issues management program would aid the contractor in planning and preparing to mitigate future similar incidents and pre-start/post-start findings. It is anticipated that the new database discussed above will provide the contractor the ability to track, trend and interface the more significant deficiency databases. Line manager's gaining understanding of and use of this new database will be essential in order to have an effective program. In addition, line managers need to input findings in the other existing databases. There have been several cases where this is not being done, for example, Readiness Review/Assessment findings.

The AAO does not recommend a special assessment for Issues Management.

## **4.12 ENVIRONMENTAL PROTECTION**

### **4.12.1 RISK**

The risks associated with the Environmental Protection Program functional area is considered high to moderate based on an evaluation of the current effectiveness of this program.

In the Mission and Regulatory Compliance risk areas a moderate risk is considered to exist due to the potential for affecting the schedule for mission-related work due to exceedances of the Pantex Wastewater Discharge and NPDES permits. These risks are generally rated moderate since the Plant is currently in compliance with the Environmental Protection Agency Federal Facility Compliance Agreement for the NPDES permit. However, there is high risk associated with potential cost of any exceedance related enforcement actions and the public perception of such issues. In addition, due to the importance of the protection of the Ogallala aquifer and the public concerns with the recent TCE detection, a commitment has been made to notify landowners of any validated data results which indicate the presence of a contaminant above historic levels.

### **4.12.2 TREND**

The Environmental Protection Program performance trend since FY 1993 has been generally improving as a result of increased oversight by the AAO and increased attention from senior level Mason and Hanger management with the exception of the environmental monitoring effort. Due to a violation of an internal groundwater monitoring procedure, MHC failed to report to the AAO a groundwater sample analysis result which indicated elevated TCE, above drinking water standards, in a groundwater monitoring well. This resulted in a high level of public scrutiny and criticism. In December 1999, MHC combined the Environmental Restoration and the Environmental Protection Program to ensure consistency in monitoring requirements and to enhance the coordination between the two departments.

### **4.12.3 CONCLUSION**

As a result of the internal monitoring procedure violation and the high level of attention generated by this occurrence, the Environmental Protection Program is only partially meeting DOE expectations.

All outstanding environmental issues are being worked with the appropriate regulatory agency and with close independent DOE AL validation. External regulatory audits of the water and air programs over the last year have resulted in no violations or non-compliances identified. However, MHC's Readiness Review and Assessment Group identified weaknesses during an April 2000 internal evaluation in the following areas:

- The CY2000 Environmental Monitoring Plan failed to include a quality assurance requirements table.
- Documentation of completed training for personnel is in need of improvement

- Inadequate staffing of Data Validator(s)

Based on the following condition indicators the Pantex 1998 ISMV did not include a specific review of this FA:

- Annual State inspections in the air and water quality areas have resulted in no violations or non-compliances identified.
- A Compliance Order and Federal Facility Compliance Agreement (FFCA) have been negotiated with the EPA for the NPDES permit and is being complied with.
- Any non-compliance within the Environmental Protection Program is reported to the appropriate regulatory agency.
- MHC's performance in some aspects of the Environmental Protection Program is noteworthy. Performance of MHC is adequately validated through documentation submitted and continued attention to known areas of concern.

AAO considers the current level of knowledge concerning operations in the environmental compliance programs area is adequate, however the environmental monitoring program has not met DOE expectations and MHC senior management attention in this area is necessary. Corrective Measures which have been identified and implemented should mitigate a reoccurrence of the TCE event, however it is incumbent upon MHC to stabilize the combined environmental restoration/protection department and to provide assurance to the AAO that management attention is focused in this area.

The extent of AAO oversight and the internal and external reviews have provided comprehensive environmental protection program status information. Since DOE,AL and HQ have conducted recent reviews and audits of the environmental monitoring program and have made recommendations for corrective measures, it is recommended that this FA not be reviewed.

#### **4.13 SAFETY ANALYSIS and AUTHORIZATION BASIS**

##### **4.13.1 RISK**

The risks associated with the Safety Analysis and Authorization Basis (SA & AB) Functional Areas (FA) are high overall.

The Personnel Health and Safety and Environmental Impact FAs pose the highest consequences however they have a very low frequency of likelihood.

The Public Health and Safety and Mission FAs pose moderate consequences. The likelihood of an event as a result of the SB and AB effecting Public Health and Safety has an overall low likelihood of an event due to current program status. The overall likelihood of an event effecting the site mission is much higher.

The Regulatory Compliance FA rating indicates the increased likeliness of risk with a much less serious consequential significance.

The External Perception FA is graded as large with a potential higher frequency of occurrence based on documented problems implemented DNFSB Recommendation 98-2 and concerns raised in the local and national media.

#### **4.13.2 TREND**

The SA & AB program has shown improvement this year. Although improvements have occurred, the program is inadequate and requires continued attention.

DOE-AAO management is actively engaged with MHC to improve the authorization basis for the Pantex Plant and implement the resulting controls.

#### **4.13.3 CONCLUSION**

The SA & AB FA does not meet DOE expectations but is improving. The most measurable milestone to meeting DOE expectations is satisfactory completion of FY00 deliverables.

This FA has undergone significant change and enhancements. While performance has improved, there are still many opportunities for improvement. This FA continues to have direct DOE senior management attention and involvement.

The AAO does not recommend an AB program review. The AB function at AAO is the subject of an extensive external review by EH-2.

### **4.14 PRODUCTION OPERATIONS**

#### **4.14.1 RISK**

The risk associated with this mission work is considered high.

#### **4.14.2 TREND**

The performance trend in this area has been steady. The changes in requirements continue to be significant.

Additionally the safety enhancement trend continues to expand as the Integrated Weapons Activity Plan (IWAP) is methodically being implemented which enhances the safety of manufacturing processes. Conventional HE programs have been given first priority for



implementation. The W62 program implemented SS21 Step I this FY, the W88 program is undergoing a similar process, and the W76 is nearing the implementation of full SS21 for its Disassembly and Inspection process. Also site wide safety enhancements are being implemented and integrated into production processes to address the major concerns of fire, lightning, and transportation threats.

#### **4.14.3 CONCLUSION**

MHC is held accountable to produce mission deliverables on time while concurrently being driven to implement process, facility, and safety enhancements with finite resources. They are consistently meeting planned delivery schedules associated with ongoing evaluation and dismantlement program activities.

MHC has struggled with the start up and restart processes to implement new production processes however. Contractor Readiness Assessments have not delivered processes to the DOE that are truly ready for operations. MHC is aware of the DOE's concerns in this area and is working to improve their readiness program.

Despite the above, with the methodical implementation of the IWAP and site wide safety enhancements, with their extensive built in reviews, this area is not recommended for FA specific review.

#### **4.15 CONSTRUCTION SAFETY**

##### **4.15.1 RISK**

The risks associated with the Construction Safety (CS) Functional Area (FA) for all areas is considered of moderate consequence and low frequency due to the increase in emphasis by M&H and the AAO at construction sites recently.

##### **4.15.2 TREND**

The CS program performance trend of reportable incidents has improved since calendar year (CY) 1996. In CY1996 there were 98 reportable construction incidents, in CY1997 there were 29 reportable construction incidents, in CY1998 there were 26 reportable construction incidents and in CY1999 there were 12 reportable construction incidents. In CY2000 there has been 1 reportable construction incident. The decrease in the number of reportable construction incidents is a result of increased involvement by AL and AAO line management, with a corresponding increase in emphasis by MHC. The number of reportable construction incidents has been reduced, but the consequence of these incidents has remained steady at moderate for the last several years. This FA only partially meets the AAO expectations of reducing the frequency and consequence of construction incidents.

### **4.15.3 CONCLUSION**

The CS program is stable for the present. This program includes all phases of CS and includes Mason & Hanger Corporation and the Amarillo Area Office. The interface between CS and the contracting administrators at the Pantex Plant has changed. This interface has resulted in the inclusion of CS and Integrated Safety Management (ISM) requirements into legally enforceable construction contracts. This inclusion of ISM has improved the quality of contractors that bid on, and are subsequently awarded construction contracts at the Pantex Plant.

This FA is not recommended for DOE review based on the current decreasing trend in the number of reportable construction incidents.

## **4.16 NUCLEAR MATERIAL OPERATIONS**

### **4.16.1 RISK**

The risk associated with the Nuclear Materials Operations functional area is considered medium due to production performance problems and deficiencies in program management. While contractor senior management has made adjustment in this functional area to address deficiencies, there has not been sufficient time to assess the long-term affects.

### **4.16.2 TREND**

Preliminary indications of recent changes in the Nuclear Materials Operations functional areas suggest that the program is headed in the direction that will ultimately meet DOE expectations. However, it should be noted that to achieve ultimate success would probably require a level of funding greater than that which DOE has presently budgeted. Changes in funding levels will require a re-negotiation of program requirements.

### **4.16.3 CONCLUSION**

Although the AL-R8 SI program has had several setbacks and is looking at reduced funding, the program is nearing steady-state operation.

Data collected in the future will be useful in analyzing the success of the Nuclear Materials Operations program. Initiatives are in place or nearly completed to aid the formality of defining acceptance criteria and other requirements, particularly national laboratory direction.

However, due to problems identified previously in this section, this program cannot be rated as meeting expectation. Therefore, at this time, the program only partially meets expectation. Contractor management has taken the necessary action to correct and improve on past performance.

This FA is not recommended for a specific review based on recent improvements in the contractor's performance.

#### 4.17 MAINTENANCE

##### 4.17.1 RISK

The overall risks associated with the Maintenance functional area are considered moderate based on the maturity of the program and the rigor in which preventative maintenance and surveillances are performed.

##### 4.17.2 TREND

The overall maintenance program performance has continued to improve and evolve after coming out of the maintenance mode shutdown in 1994. Some efficiency gains in the execution of work are still expected to occur as processes are refined and streamlined. However, these gains are not expected to offset the 3.6% reduction in budget that is anticipated over each of the next two years coupled with increasing requirements that are expected to occur. New facility start-ups are also expected to strain resources needed for start-up support.

##### 4.17.3 CONCLUSION

The maintenance program can be characterized as partially meeting DOE expectations.

Assessments of the Cranes and Hoists have identified weaknesses in the area of "continuous feedback and improvement". Inaccuracies were also identified with the pass/fail criteria on the data sheets, which did not agree with the configuration in the field. These items are also linked to IMB 98-4, *Inadequacies in Systems Engineering and Configuration Management*.

The ISM Phase 1 verification that was completed in April 2000 identified weaknesses in Work Control (Issue C3.1) and in the area of feedback and improvement (Issue C5.3). The issues are similar to issues identified in other reviews performed.

Past weaknesses have been identified in the area of a structured inspection program rather than expert based. MHC has taken some initial steps to strengthen this area. Improvement in this area would shift the focus of the program away from a preventative program to a more predictive program, which should anticipate problems and budget for them as opposed to reacting to problems. This concern has been previously identified by AAO and is being tracked as part of IMB 98-4 and Maintenance and Work Control Overhaul.

Overall, the program has experienced a budget reduction equivalent to 33% over the last 5 years. These cutbacks have forced Maintenance to adjust by cutting services in the balance of plant area and streamlining work processes in an effort to maintain efficiency with minimal impact in

critical facilities and safety system services performed. However, the ability of the program to support new facility start-ups and address emerging issues is expected to strain the existing resources to the point of potentially impacting other work priorities.

This program is undergoing active changes and restructuring that is being closely followed by AAO. Many of the recent changes have not been in place long enough to assess their overall effectiveness. However, recent reviews have noted some signs of improvement in several areas reviewed. Therefore, this FA is not recommended for review.

#### **4.18 CONFIGURATION MANAGEMENT and SYSTEMS ENGINEERING (CM)**

##### **4.18.1 RISK**

The risks associated with the current Configuration Management program are considered to be moderate.

The CM performance concerns have been submitted to MHC as an IMB issue to assure that the solution is integrated properly with the other Systems Engineering/Facility Engineering and other programmatic issues that are being raised by AAO. A new concern has surfaced in regard to weaknesses found to exist in the “continuous feedback and improvement process”.

##### **4.18.2 TREND**

The configuration management program has continued to grow and evolve since the maintenance mode shut down in 1994. However, the overall performance trend is considered negative.

Audits and assessments have validated the adequacy of the current Facility CM program processes and conditions for change control and document control. However, this is only one piece of the CM/System Engineering picture. The “definition of boundaries”, initial “walkdown and validation” process, and the “continuous feedback and improvement” process, which are all inputs to the program, are still not at the level necessary to maintain a credible program.

Recently, the “definition of boundaries” and the “walkdown and validation” process have been strengthened within the System Engineering Area. Implementation has been limited mostly to new construction projects and modifications. Very little has been done to address legacy issues due to the availability of resources, funding and a lack of priority.

The “continuous feedback and improvement” process has recently been identified as a programmatic weakness. It should be understood that this process is critical for maintaining and fine tuning CM after the initial “walk-down and validation” phase has been completed. The importance of this process cannot be overstressed as it is the cornerstone for having a self-correcting CM program. This weakness was identified as finding as a result of the TSR

implementation review. This issue is being addressed by MHC as a post-start finding regarding the TSR review.

#### 4.18.3 CONCLUSION

CM/System Engineering program is characterized as only partially meeting DOE expectations.

Overall, there is a lack of a global CM program, which has restricted the application of configuration management control procedures as required for all safety class/safety significant equipment and facilities. Also, the program needs to be integrated at all levels and across all divisions to be an effective credible program.

It should be understood that the CM program controls for the drawings and documentation that are submitted for inclusion into the CM program is generally sound. However, configuration management/System Engineering quality problems have originated from weaknesses in 3 distinct process areas. One being the “definition of boundaries” as it applies to safety systems. The second being the “walkdown, validation and control” process that assures design and drawing accuracy prior to their submittal for inclusion in the CM program. The third being the area of “continuous feedback and improvement” which maintains configuration control as part of an on-going program. These weaknesses have plant wide implications.

As documents, drawings and as-built conditions are reviewed, legacy CM mistakes are expected to be uncovered in the future. Because of the massive effort and cost that would be required to perform a wholesale review of everything, a more structured “fix-it-as-you-go” approach is a more practical long term solution for addressing the lower risk issues. This approach assumes having an effective “continuous feedback and improvement” program in place, which is not currently the case. The current feedback process has been identified as a weakness as it has not been integrated at all levels and across all divisions. The “stop everything/wholesale review of everything” approach would be reserved for emerging issues that pose a high safety risk. Due to current funding levels and resource limitations, management may have to re-prioritize resources and funding to address the higher safety risk issues as they are identified.

In order for the program to be credible and self-correcting in the long term, committed CM ownership and a strong “continuous feedback and improvement” process are required. They must be fully integrated into the normal business processes at all levels and across all divisions.

Although the results from the 2000 ISMV phase 1 did not identify any CM issues, the 1998 Pantex ISMV review did. The 1998 Pantex ISMV review concluded that the Configuration Management Program is marginally integrated into the core ISM functions for MHC’s mission work. In addition, the recent TSR readiness review identified the “continuous feedback and improvement” process as a weakness. IMB 98-4 previously identified “definition of boundaries” and the “walkdown and validation” process as a weakness. In regard to external oversight reviews, the DNFSB has raised CM as a department level concern in a letter to the department dated April 2000.

MHC is currently addressing these issues through action plans. The overall program is undergoing active changes and restructuring that is being closely followed by AAO. Because of current state of flux in the program and several issues yet to be addressed, a review at this time probably would not be beneficial. In addition, many of the changes have not been in place any length of time and any assessment conducted at this time may be somewhat pre-mature. Therefore this FA is not recommended at this time for a specific review.

#### **4.19 OSH-OCCUPATIONAL MEDICINE, INDUSTRIAL HYGIENE & SAFETY**

##### **4.19.1 RISK**

Generally moderate based on performance and quality of existing programs.

##### **4.19.2 TREND**

Performance levels are marginally steady in these Occupational Safety and Health areas. If the current trend in safety related incidents continues, there is a potential for a negative trend and an increased risk to plant operations and personnel.

##### **4.19.3 CONCLUSION**

The Occupational Safety and Health Program has been implemented at the Pantex Plant and only partially meets DOE expectations. The overall program is effective.

Occupational Medicine practices are compliant with the applicable requirements and performance reviews have indicated that it should not have a FA review. It is considered a viable and effective program.

Many Industrial Safety issues have been raised by FRs, surveillance reports and ORPS, which have indicated a negative trend, particularly, in Electrical Safety issues. Another safety concern is the Construction Safety Program. The Industrial Safety Section should receive an ES&H Appraisal.

Several significant Industrial Hygiene issues have been raised and identified by FRs, surveillance and have been reported in ORPS. The Industrial Hygiene Section should receive an ES&H Appraisal.

#### **4.20 CONDUCT OF OPERATIONS**

##### **4.20.1 RISK**

The likelihood and consequences of the risks associated with the CoO Functional Area are considered to be moderate.

#### 4.20.2 TREND

The CoO program performance trend since FY 1995 has generally shown little to no improvement as evidenced by the large number of similar occurrences and the increasing percentage of occurrences which are conduct of operations related.

#### 4.20.3 CONCLUSION

MHC is partially meeting DOE expectations in this FA.

Recent events such as; (1) Mispositioned fire protection system valves, (2) Flammable solvent JCO violations, and (3) TSR/AB violations indicate that significant Conduct of Operations “culture” issues exist. These issues have contributed to an increase in MHC senior management support and interest in this functional area.

The below recommendation is based on the following program insights: - Conduct of Operations is involved in approximately 70% of occurrences (ORPS) - Significant weaknesses continue to be identified in several of the 18 chapters - This program is essential to public and worker safety as well as to the protection of the environment.

The last site-wide assessment of Pantex Conduct of Operations was performed by MHC in September 1995.

The AAO Facility Representative organization recommends this functional area be considered for review.

### 4.21 MANAGEMENT SELF-ASSESSMENTS

#### 4.21.1 RISK

The risks associated with the Management Self-assessment Functional Area’s safety, environmental, regulatory and mission risk areas are considered moderate. Significant “Readiness Process” (MSA) issues have involved safety concerns and other potential risks not detected by management. However, the MHC and DOE “approval” review process has regularly detected these initial MSA breakdowns and stopped activities to correct inadequacies prior to proceeding. This “Inspection based” detection of issues also is considered to contribute to the moderate risk rating.

In the external perception risk area a moderate risk is considered to exist due to the potential for criticism or negative publicity as a result of any event which occurs without prior identification by the MSA program.

#### 4.21.2 TREND

The MSA program performance trend since FY 1997 has been generally degrading. This trend is considered to be a result of, numerous readiness process changes driven by DOE expectation changes, line resource reductions (driven by funding losses), procedures being outdated due to

the frequent process revisions, and aggressive mission production schedules (based on past practice versus development of new processes), and a shift to line senior management ownership of some MSAs. The readiness process MSAs have been most impacted and independent assessment program is most stable and adequate.

#### 4.21.3 CONCLUSION

MHC's Self-assessment Program is partially meeting DOE expectations. The program is implemented to assure that assessments are conducted by line management as necessary to confirm that processes, practices, and conditions adhere to design, operating and administrative requirements and controls.

The General Manager's Independent MSA program has been well established. DOE AAO has confidence in the results of this level of MSA. The quality of the associated Line manager MSA work has also improved in the past three years. The increased emphasis on performance based activities and the movement towards an integrated process to use a graded approach when planning and scheduling MSAs and FAs is noteworthy. However, the reduction in resources as a result of the Pantex work force reductions and internal reorganizations has negatively impacted the rate of routine MSAs conducted by line-management.

The MSA process has also shown some marginal improvement in MHC management's efforts to more effectively share the results of MSAs and employ the MSA results to support plant management decisions. The newly developed "Issues Management" process should improve issue trending, tracking of corrective actions and overall management of the MSA program, when fully implemented and institutionalized in late FY 2000.

The MSA readiness review area has been undergoing significant change based on the results of the reviews discussed above. The weakest areas are addressed within the DOE's Implementation Plan for DNFSB Recommendation 98-2. In addition, the ISMV Phase one and Phase two reviews should adequately review this weak area during reviews of other management systems.

Therefore, this area is not recommended for additional DOE review.

#### 4.22 INTEGRATED SAFETY MANAGEMENT

##### 4.22.1 RISK

Due to both the degree and number of assessment and review requirements currently in place for the nuclear and nuclear explosive facilities/operations, the risk is considered to be low for these areas.

Implementation of ISM in non-nuclear and balance of plant facilities/activities has not been thoroughly evaluated since the 1998 ISM Verification. The Phase II ISM Verification, scheduled for June 2000, will assess the implementation of ISM on a plant-wide basis, including non-nuclear activities.



#### **4.22.2 TREND**

The overall implementation of ISM at the Pantex Plant has been showing improvement. Understanding of ISM by both AAO and MHC personnel has increased significantly. The number of occurrences attributable to Explosive Moves and Two-Person Concept/Dual lock violations is substantially lower than last year.

#### **4.22.3 CONCLUSION**

The Pantex ISM performance level is considered to be moderate, with some improvement noted in most of the areas discussed herein. The ISM System Description was recently approved. However, ISM implementation at the Plant has not been approved. Consequently, this Functional Area only partially meets DOE expectations.

An evaluation of ISM in these areas will be completed as part of the Phase II ISMS Verification scheduled for June 2000. Therefore, this area is not recommended for a specific Functional Area review.

### **4.23 FIRE PROTECTION**

#### **4.23.1 RISK**

The Fire Protection Program presents relatively high risk to facility safety. Conduct of Operation and Fire Protection infrastructure degradation issues have increased the risk and consequence of fire at the Pantex Plant.

#### **4.23.2 TREND**

The overall trend in this functional area has been down. Major issues discussed in this evaluation are being addressed, which places the Pantex Fire Protection Program overall in a rebuilding phase.

#### **4.23.3 CONCLUSION**

Though, corrective actions focused on occurrence remediation (improvement of the Fire department Conduct of Operations) are currently being implemented, and steps are being taken to stabilize the pending Fire Protection infrastructure issues, the Fire Protection Program performance is not meeting DOE expectations at this time.

The AAO recommends the inclusion of the Fire Protection functional area in the scope of further independent review by DOE.

#### 4.24 TRAINING and QUALIFICATIONS

##### 4.24.1 RISK

The risk associated with the training area is moderate based on current conditions.

##### 4.24.2 TREND

Although there are more issues identified in this reporting period than previous reporting periods, it is unclear that a trend can be established. This is due to several factors. Raw data alone cannot indicate a trend. It is possible that more assessment activities occurred during the reporting period resulting in a larger number of observations. Secondly, the raw data does not indicate the relative severity of the observations as compared to previous events in earlier reporting periods. Finally, the limited DOE training program oversight to identify and seek corrective action on training issues prior to being observed in other assessments may be the cause of more observed weaknesses. Therefore, a trend cannot be established with any certainty.

##### 4.24.3 CONCLUSION

Internal and external assessments indicate that the contractor has reached a pinnacle of performance in training. Although the number of issues for this reporting period are increased from earlier periods, the issues are relatively mild. Additionally, the contractor has, throughout this reporting period, immediately addressed all of these issues in a positive and responsible manner. Most of the issues have been appropriately corrected, with those remaining being on schedule according to their approved corrective action plans. It is anticipated that all issues will be corrected prior to the end of this fiscal year. While the assessments identified some weaknesses in peripheral training activities at the Pantex Plant, overall, the contractor is effective in providing a safety umbrella for employees, the public and the environment at Pantex Plant.

Due to the limited amount of AAO oversight in the overall training program area, FRs and functional area subject matter experts are relied upon to identify issues in their respective areas. This lack of programmatic oversight may be a contributing factor in the noticeable increase in the number of training issues observed in this reporting period versus the last reporting period. Due to a limited amount of data, the effect (if any) on the Pantex Plant training program of this lack of programmatic oversight cannot be determined with any certainty.

This functional area should be further evaluated by DOE.

SEPARATION

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**TABLE 1 ESH ASSESSMENTS - LAAO, CY2000**

Location/Type	Progra	VSS(I)	Impact
TA-48, RC-1. ConOps	Chemical Management	JCO	Improvement in chemical safety in labs
TA-48, RC-1	Perchlorates Evaluation	HVAC	Improved procedure for checking system
TA-48	Gas Cylinders		Ensured proper storage.
TA-15	Gas cylinders		Ensured proper storage.
LANL	Emergency Action Plan	Water retention structure	Improvement and compliance with federal requirements
LANL	Chronic Beryllium Disease Prevention Progra (CBDPP)	All	Improved plan that included a risk management portion.
LANL Fire Protection	Fire Hazard Analysis	Fire Systems	Driving Laboratory to complete on time.
LANL Biological Surety	Bio Surety Progra	HVAC, Containment Systems	Reviews of laboratories to ensure compliance. Pre-design review to ensure compliance.
LANL Thick Film Technolog Bldg	Pre-site reviews	Bldg safety systems	Rejected plan until safety system information added.
LANL CMR	HVAC Confinement Systems	HVAC Confinement Systems	Requested review of CMR Systems to ensure that proper differential pressure is maintained in laboratories.
LANL CMR	Configuration Management	Gauge Calibration	Review of procedures and improvement of configuration management.
LANL CMR	HVAC HEPA Systems	HVAC HEPA	Request for more extensive analysis of HEPA filters.
LANL HRL	Personal Protective Equip.		Review of all PPE at HRL to ensure that they are in compliance with LIR.
LANL DX	Beryllium safety plan		Improved plan to include the proper safety equipment by workers.
LANL CMR	Radio-frequency Radiation		Proper marking was identified and placard installed.
LANL TA-50	Respiratory Protection		LANL conducted review of all airline systems to ensure compliance.
LANL CMR	Contamination Control	Radiation Protection	2 findings, 2 concerns, 4 observations
LANL TA48	Con Ops	Radiation Protection	6 findings. Close and improved systems.
LANL wide	Posting & Labeling	Radiation Protection	9 findings, 2 concerns
LANL wide	Radioactive sealed sources Accountability/control	Radiation Protection	3 findings, 2 observations.
LANL Wide	Storage & Labeling	Radiation Protection	2 improvement areas, 11 findings, 5 concerns/1 observation
LANL WetF	Crane Inspection	Crane Program	Identified cranes not routinely inspected.
LANL wide	Nitro-methane destruction.	Chemical management.	
LANL TA-59	Chemical lab walkdowns	Chemical management	Improved chemical safety at Labs.
LANL CMR	Chemical safet	Lead acid batteries and PPE	Ensured that proper PPE was available when handling.
LANL wide	Emergency Management	Gas lines at LANL.	Review and ensure in emergency plans.
LANL EOC	Emergency Management	Emergency Management	Pre-design review of building. Inclusion of fire system requirements
TA-16	Construction Safety		Improvement of construction safety at site.

**TABLE 2 ESH ASSESSMENTS - AL Assistance, CY2000**

Location/Type	Progra	VSS <sup>(1)</sup>	Impact
LANL wide	Pressure Safety	Pressure Systems	LANL conducting lab-wide pressure system inventory
LANL wide	Fire Protection Program	Fire Systems Building Hazard Analysis (BHA)	LANL increased emphasis on completing program.
LANL wide	Fall protection		3 recommendations
LANL wide	Lockout/tagout	Control systems.	4 observations
LANL Wide	Lightning, Fire, FIFRA, Maintenance, Nuclear explosive safety Packaging/Transp & Q/A	Lightning, Fire, FIFRA, Maintenance, Nuclear explosive safety Packaging/Transp & Q/A	
LANL wide	Excavation		6 observations.

**TABLE 3 ESH Assessments, - M&O Contractor, CY2000**

Location/Type	Progra	VSS(1)	Impact
LANL Wide AA-2	Formality of Operations	AB, USQ, TSR's	2 findings
LANL wide AA-2	Line Management assess		
LANL Wide AA-2	ISM Review		
LANL Wide AA-2	Facility Management	Facility Safety Plans	
LANL wide ESH-5	Crane Self-Assessment	Cranes	
LANL Wide ESH-5	Beryllium Program	Ventilation systems	
LANL Wide ESH-5	Lockout/Tagout	Control Systems.	
LANL Wide ESH-5	Ergonomic		Change in workstations
LANL Wide ESH-5	Electrical safet	Control systems	
LANL Wide ESH-5	HEPA/Hood Testing	Ventilation systems.	
LANSCE ESH-1	LIR 402-710-01	Radiation systems	Report pending.
TA-55 ESH-1	LIR 402-710-01	Radiation systems	Report pending
LANL Wide X-ray ESH-1	402-721-01, 830.120	Radiation systems	Report pending

Note 1. Table of Vital Safety Systems VSS

#	Type
1	Fire Suppression System/Detection System
2	Radiation Protection
3	Cranes
4	Diesel Generators
5	UPS
6	Ventilation

SEPARATION

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Assess	Title	DateAssessme	DateSchedule	Assessor
20	Monitoring Well	1/6/2000	1/6/2000	DUNCAN
21	CEMP Transition	1/5/2000	1/5/2000	FURLOW
26	FEP-NTS-FL-99-06	1/10/2000	1/31/2000	WHEELER
27	EM-00-01 Well Development	1/3/2000	1/31/2000	HURLEY
29	Firearms Training	1/13/2000	1/13/2000	HAMPTON
30	Explosives Operations	1/12/2000	1/12/2000	HAMPTON
31	Explosive Storage, FEP-99-12	1/12/2000	1/12/2000	HAMPTON
33	U-1a Sanitary Services	12/2/1999	12/2/1999	COHNL
34	NEPA Visit	12/14/1999	12/14/1999	COHNL
35	Grab Sample	1/20/2000	1/20/2000	COHNL
36	Well J-12 Sampling	1/20/2000	1/20/2000	COHNL
37	Well 4a Sampling	1/20/2000	1/20/2000	COHNL
38	Sewage Lagoon	1/5/2000	1/5/2000	SAYLOR
39	Rad Operations - SEP 2140-99-01	1/26/2000	1/31/2000	WHEELER
40	U1A Electrical Safety	1/27/2000	1/31/2000	OWENSR
41	U1a Complex	1/4/2000	1/4/2000	BLODGETT
45	Los Alamos Operations Facility Survey		11/30/2000	SCHLEGEL
46	Livermore Operations Facility Survey	7/25/2000	7/14/2000	SCHLEGEL
47	Las Vegas Operations Facility	5/24/2000	5/24/2000	SCHLEGEL
48	Nevada Test Site Facility Survey	5/23/2000	5/24/2000	SCHLEGEL
49	Remote Sensing Lab Facility Survey	4/18/2000	5/24/2000	SCHLEGEL
53	Device Assembly Facility Survey	6/20/2000	6/30/2000	SCHLEGEL
54	DOE/NV Facility Survey	6/30/2000	6/30/2000	SCHLEGEL
57	Ruchman & Associates Facility Survey	7/15/2000	8/18/2000	MAKI
58	SNL Facility Survey	10/14/1999	1/15/2000	SCHLEGEL
59	SCI Facility Survey	8/11/2000	7/21/2000	BUFIS
60	WSI Facility Survey		9/14/2000	
61	WSI CPAF Review	3/30/2000	3/31/2000	BUFIS
62	WSI CPAF Review		9/30/2000	
63	Examination of Key Inventory	3/2/2000	1/31/2000	SCHLEGEL
64	Evaluation of Security Lighting & Pro	4/27/2000	4/30/2000	SCHLEGEL
65	Examination of Pro Force Search	7/31/2000	7/31/2000	SCOTT
66	U1h Shaft Project	1/4/2000	1/4/2000	BLODGETT
67	Sewage Lagoon	1/5/2000	1/5/2000	SAYLOR
68	Sewage Lagoon	1/5/2000	1/5/2000	SAYLOR
69	DAF Walk-through	1/11/2000	1/11/2000	LEPPERT
70	Review of Classified Mailing Procedures	8/31/2000	8/31/2000	LANDHOLM
71	Vehicle Search Procedures at Gate 100		9/30/2000	MAKI
74	Desert Research Institute Facility Survey	3/22/2000	4/1/2000	SCHLEGEL

75	U 10 C Landfill	4/3/2000	4/30/2000	FURLOW
76	Area 5 Radioactive Waste Management		4/30/2000	SUITER
77	BN Underground Safety		4/30/2000	ROBSON
78	Clean Air Act/Clean Water Act Sites	4/4/2000	4/30/2000	SAYLOR
79	Chemical Inventory	4/10/2000	4/30/2000	ROBERTSJ
80	Desert Research Institute Deliverable	5/24/2000	4/30/2000	monroe
81	Defense Threat Reduction Agency	4/26/2000	4/30/2000	ROBSON
82	Env. Monitoring/Surface Water	4/27/2000	5/31/2000	DUNCAN
83	NEPA Onsite Follow-up	4/26/2000	4/30/2000	COHNL
84	PEP-NSR-99-2163		4/30/2000	BUNN
85	Regional Groundwater Model	5/2/2000	5/31/2000	DUNCAN
86	Water Sampling	4/13/2000	4/30/2000	COHNL
87	Wackenhut Services Inc. Industrial	6/7/2000	4/30/2000	BOYCE
88	Biological Opinion, Desert Tortoise	8/14/2000	8/31/2000	FURLOW
89	Env. Monitoring & Compliance Program	8/2/2000	8/31/2000	FURLOW
90	Clean Air Act/Clean Water Act Sites	8/23/2000	8/31/2000	SAYLOR
91	Chemical Inventory		8/31/2000	ROBERTSJ
93	FEP-NTS-FL-99-06-605	8/17/2000	8/31/2000	WHEELER
94	FEP-NTS-FL-99-6-644	8/28/2000	8/31/2000	REMINGTO
95	FEP-RSL-FL-99-2229	8/18/2000	8/31/2000	WHITEC
96	NEPA Onsite Follow-up		8/31/2000	COHNL
97	PEP-DCP-99-8300	9/27/2000	8/31/2000	BOYCE
98	SEP-2600-99-10		8/31/2000	CARTERC
99	U1a Complex Walkthrough	8/29/2000	8/31/2000	ROBSON
101	Water Hauler Inspections	8/31/2000	8/31/2000	COHNL
102	Area 6 Water Tanks		12/31/2000	COHNL
103	Area 27 Water System	12/18/1999	2/29/2000	COHNL
104	Solar Powered Air Sampler Walkthrough	2/14/2000	2/29/2000	FURLOW
107	Clean Air Act/Clean Water Act Sites	2/15/2000	2/29/2000	SAYLOR
109	Chemical Inventory	1/24/2000	2/29/2000	ROBERTSJ
110	Confined Space	2/17/2000	2/29/2000	BOYCE
112	Environmental Monitoring/Surface Water	2/9/2000	2/29/2000	DUNCAN
113	EPA Deliverable Performance	2/20/2000	2/29/2000	monroe
114	ESHD Training	4/28/2000	2/29/2000	SUITER
115	SEP-2110-99-05	1/13/2000	1/31/2000	REMINGTO
116	STL Annual Walkthrough	11/9/1999	1/31/2000	ROBSON
117	Hot Work	1/27/2000	1/31/2000	REMINGTO
118	Food Facility Inspection	1/6/2000	1/6/2000	VELOSO
119	Chemical Inventory (SARA Title III)	1/24/2000	1/31/2000	ROBERTSJ
120	Chemical Safety	1/25/2000	1/31/2000	WHITEC



121	Electrical Safety - U1a	1/27/2000	1/31/2000	DELONG
123	ER-EC 2a		1/31/2000	SUITER
124	FEP 99-05-32	1/31/2000	1/31/2000	CARTERC
125	FEP-99-23-650	3/1/2000	1/31/2000	BUNN
126	FEP-99-23-700 - Maintenance Shop	2/9/2000	1/31/2000	HAMPTON
127	JASPER Walkthrough		1/31/2000	ROBSON
128	PAI Deliverable Performance	1/6/2000	1/31/2000	monroe
129	PEP-99-2100	9/21/2000	1/31/2000	BUNN
130	FEP-NTS-99-23-1010 - Mercury Switch	2/17/2000	2/29/2000	DELONG
131	FEP-NTS-FL-99-23-530s	2/15/2000	2/29/2000	HAMPTON
132	IT HASP/SSHASP		2/29/2000	SUITER
133	NEPA Onsite Follow-up	2/16/2000	2/29/2000	COHNL
134	NESHAPS, Building A-1	3/1/2000	3/31/2000	DUNCAN
135	PEP-NSR 99-2155 - ERD Remediation	2/16/2000	2/29/2000	WHEELER
136	RSL Walkthrough	2/15/2000	2/29/2000	SAYLOR
137	SEP-2100-99-01	9/13/2000	2/29/2000	BUNN
138	SEP-2110-99-08 - Explosive Storage	3/13/2000	2/29/2000	HAMPTON
139	SEP-2130-99-00 - Scandiflash X-Ray	2/29/2000	2/29/2000	WHEELER
140	SEP-2150-99-03 - Rad Lab	6/14/2000	2/29/2000	CARTERC
141	U1h Walkthrough	2/17/2000	2/29/2000	ROBSON
142	Well Development/Testing		2/29/2000	SUITER
143	WSI- Air Quality Permit	2/24/2000	2/29/2000	SAYLOR
144	WSI Programmatic Evaluation	2/24/2000	2/29/2000	OWENSR
145	A/12 Water Storage Tanks	3/27/2000	3/31/2000	COHNL
146	NEPA Program		4/30/2000	SKOUGARD
147	Clean Air Act/Clean Water Act Sites	3/2/2000	3/31/2000	SAYLOR
148	CEMP Stations	3/22/2000	3/31/2000	FURLOW
149	Chemical Inventory	3/29/2000	3/31/2000	ROBERTSJ
150	Construction-Temporary Power	3/17/2000	3/31/2000	REMINGTO
151	DAF Programmatic Walkthrough	3/21/2000	3/31/2000	ROBSON
152	Environmental Monitoring/Surface Water	4/26/2000	3/31/2000	DUNCAN
153	FEP-NTS-FL-99-CP-70/70a - A-6 Fire	3/16/2000	3/31/2000	BUNN
154	Industrial Hazards		3/31/2000	SUITER
155	NEPA Onsite Follow-up	3/14/2000	3/31/2000	SKOUGARD
156	PAI-FA-001-74 - Deliverable Performance	3/16/2000	3/31/2000	OWENSR
157	PEP SS-99-1112 - Hardon Radiography		3/31/2000	CARTERC
158	SEP-2130-99-01 Fiber/Electro Optics	3/8/2000	3/31/2000	REMINGTO
159	SEP-0441-99-02	9/20/2000	3/31/2000	BUNN
160	SEP-2300-99-01 - Maintenance Shop	3/30/2000	3/31/2000	OWENSR
163	WSI Programmatic Assessment	3/20/2000	3/31/2000	WHITEC

164	WSI Building 1101	4/27/2000	3/31/2000	HAMPTON
165	Able Leachfield Assessment	2/3/2000	2/3/2000	COHNL
166	Aerial Operations Facility EA	1/21/2000	1/21/2000	SKOUGAR
167	Integrated Planning System/Cost	3/27/2000	3/31/2000	BABERO
168	Remediation Planning (EM-00-13)	2/7/2000	2/29/2000	STOLTE
169	Facilities Maint/Mgmt - Building 01-21	2/7/2000	2/28/2000	DELONG
170	Facilities Maint/Mgmt - RSL Bldgs 22-11	2/10/2000	2/28/2000	HERRERA
171	Facilities Maint/Mgmt - Area 6-06-CP-1	3/6/2000	3/31/2000	DELONG
172	Facilities Maint/Mgmt - Area 6-06-900	3/8/2000	3/31/2000	HERRERA
173	Power System 23-1010	2/17/2000	2/29/2000	HERRERA
175	Power System - Mercury Substation	3/16/2000	3/31/2000	DELONG
177	General Plant Equipment - Crane	2/23/2000	2/29/2000	VELOSO
178	General Plant & Equipment-Electric	3/15/2000	3/31/2000	VELOSO
181	Road System - Mercury 95-200	2/22/2000	2/29/2000	MCCLUREJ
182	EM-00-32 BN OR Directive	3/29/2000	3/31/2000	THOMPSON
184	EM-00-66 ER-EC 5 Well Development	5/25/2000	5/31/2000	THOMPSON
186	Road System 5-01	2/22/2000	2/29/2000	Mallin
187	EM-00-85 OTS Revie	6/27/2000	6/30/2000	THOMPSON
189	EM-00-98 ER-EC-2A Site Walkthrough	7/21/2000	7/31/2000	THOMPSON
190	Road System - Paiute	3/22/2000	3/31/2000	MCCLUREJ
193	NSF Maintenance (ISM) Program	3/21/2000	3/31/2000	HERRERA
195	NSF Construction (ISM) UPS	2/18/2000	2/29/2000	THEDE
196	health & safety, occurrence reporting, or		9/30/2000	THOMPSON
197	NSF Construction (ISM) UPS	3/14/2000	3/31/2000	MCCLUREJ
198	NSF Construction (ISM) Pressure	3/17/2000	3/31/2000	THEDE
199	Well Drilling (EM-00-06)	1/20/2000	1/31/2000	WYCOFF
201	EM-00-61 CAU 428 SSHASP Revie	5/23/2000	5/31/2000	WYCOFF
202	138kv Substation Modernization NTS	2/22/2000	2/29/2000	Mallin
203	EM-00-102 CNTA Safety Walk-Through	7/28/2000	7/31/2000	WYCOFF
204	Renovate Roadways, NTS 99D108	3/20/2000	3/31/2000	MCCLUREJ
205	EM-00-124 Salmon Site, MS	9/19/2000	9/30/2000	WYCOFF
206	Fire Sprinkler System-NTS GPP 00301	3/9/2000	3/30/2000	LUNA
207	Site Drainage Improvements GPP 97-280	2/24/2000	2/29/2000	MCCLUREJ
209	Well Drilling (EM-00-23)	2/4/2000	2/29/2000	HURLEY
210	BN Site Services Bus Ops ISM	3/13/2000	3/31/2000	DELONG
212	Well Drilling (EM-00-15)	2/2/2000	3/31/2000	BANGERTE
217	UGTA field work		9/30/2000	HURLEY
227	Atlas Warehouse A-02	2/10/2000	2/29/2000	MONTANA
228	Event Support Facility A-04	2/22/2000	2/29/2000	MONTANA
229	NLV Badge Office A-07	2/10/2000	2/29/2000	MONTANA

230	Old Atlas Guard Station A-08	2/10/2000	3/31/2000	MONTANA
231	Main Guard Station A-10	2/10/2000	3/31/2000	MONTANA
232	Covered Storage A-11	3/27/2000	3/31/2000	MONTANA
233	Van A-1 Subdock	2/16/2000	3/31/2000	BARNER
234	Special Projects Office 01-121	2/7/2000	2/29/2000	CAPSHAW
235	Ice House Shaker Plant	2/23/2000	2/29/2000	BARNER
236	Portable Security Station	2/23/2000	2/29/2000	BARNER
237	Elect Switch Gear Bldg.	2/10/2000	2/29/2000	DELONG
238	Guard Sation - Armored	2/23/2000	2/29/2000	BARNER
239	Drill Yard/Steam Clean System	2/22/2000	2/29/2000	GREEN
240	Underground Inst. House	2/23/2000	2/29/2000	BARNER
242	21 Cross Connect	2/23/2000	2/29/2000	DELONG
243	Area 1 Microwave Shelter	2/23/2000	2/29/2000	DELONG
244	Vertical Pull Test Facility	2/23/2000	2/29/2000	BARNER
245	Bunker 02-300	2/22/2000	2/29/2000	CAPSHAW
246	23 Cross Connect	2/23/2000	2/29/2000	DELONG
247	Telephone Microwave	2/23/2000	2/29/2000	DELONG
248	22 X Connect	2/23/2000	2/29/2000	DELONG
249	Office Trailer	2/29/2000	3/31/2000	BARNER
250	Badging Trailer - Trucks	2/29/2000	3/31/2000	BARNER
251	HAZMAT Spill Ctr Ice Box	3/27/2000	3/31/2000	BARNER
252	Check Point Pass Microwave 05-13	2/24/2000	3/31/2000	DELONG
253	Check Point Pass Repeater	2/24/2000	3/31/2000	DELONG
254	Check Point Pass Microwave 05-15	2/24/2000	3/31/2000	DELONG
255	PW-3 Well House	3/7/2000	3/31/2000	GREEN
256	PW 2 Well House	3/7/2000	3/31/2000	GREEN
257	PW 1 Well House	3/7/2000	3/31/2000	GREEN
258	Well UE5C	3/14/2000	3/31/2000	GREEN
259	Booster 5-A	3/14/2000	3/31/2000	GREEN
260	Well 5B	3/14/2000	3/31/2000	GREEN
261	CENTEL Building	3/13/2000	3/31/2000	DELONG
262	Electronic Termination 05-AL6	3/13/2000	3/31/2000	DELONG
263	Microwave Shelter 05-VAN21	3/13/2000	3/31/2000	DELONG
264	Power & Comm Line Shop	3/6/2000	3/31/2000	DELONG
265	Field Office 06-175810	3/8/2000	3/31/2000	MONTANA
266	Control House 06-202256	3/8/2000	3/31/2000	LUNA
267	Tool Storage Bighole	3/14/2000	3/31/2000	GREEN
268	Steel Shed Well C	3/15/2000	3/31/2000	DELONG
269	Pumphouse 4/4A	3/14/2000	3/31/2000	GREEN
270	Ops Equipment Material Control	2/23/2000	3/31/2000	VELOSO

273	EM-00-77 CAU 110 closure plan	6/26/2000	6/30/2000	CURTIS
274	CAU 407 remediation	7/11/2000	7/31/2000	WING
277	EM-00-112 CAU 240 remediation	8/28/2000	8/31/2000	WING
278	CAU 490 field work		8/31/2000	CABBLE
281	EM-00-118 CAU 441 field work	9/8/2000	9/30/2000	CABBLE
284	Site Sampling (EM-00-16)	2/15/2000	2/29/2000	SANDERS
292	CNTA field work		9/30/2000	SANCHEZM
295	EM-00-103 Amchitka data collection	5/30/2000	8/31/2000	GIBLIN
296	EM-00-126 CNTA field work	10/17/2000	8/31/2000	SANDERS
297	EM-00-99 Rio Blanco	7/12/2000	7/31/2000	WILBORN
300	EM-00-115 Rio Blanco field work	9/18/2000	9/30/2000	WILBORN
301	TRU Waste Management (EM-00-25)	1/20/2000	3/31/2000	DISANZA
302	EM-00-87 Forklift Daily Check & Brake	6/29/2000	6/30/2000	DISANZA
303	EM-00-125 WE Emerg & Fire Plan	9/18/2000	9/30/2000	DISANZA
304	EM-00-123 Traffic Operation Assessment	8/21/2000	9/30/2000	GRASSMEI
311	EM-00-89 TRU/MLLW	7/11/2000	7/31/2000	TILMAN
313	MLLW cost estimate(s)		9/30/2000	COLARUSS
314	TRU cost estimate(s)		9/30/2000	COLARUSS
318	EM-00-24 Collection of Filters	2/8/2000	3/31/2000	LEARY
319	generator program		3/31/2000	SMALLK
322	EM-00-83 Flood Runoff Studies	6/21/2000	6/30/2000	LEARY
323	generator program		6/30/2000	SMALLK
327	generator program		9/30/2000	SMALLK
328	LLNL SCE Walk-through	1/27/2000	1/27/2000	MUELLERL
329	Thoroughbred Walk-through	1/10/2000	1/10/2000	SLICHKO
330	Thoroughbred Walk-through	1/18/2000	1/18/2000	SLICHKO
331	Thoroughbred Walk-through	1/27/2000	1/27/2000	SLICHKO
332	Thoroughbred Walk-through	2/8/2000	2/8/2000	SLICHKO
333	LAO Walk-through	1/25/2000	1/25/2000	SLICHKO
334	PAI Deliverable Performance	2/11/2000	2/11/2000	monroe
335	Area 5 Septic Tank Closure	5/23/2000	5/31/2000	COHNL
336	Clean Air Act/Clean Water Act Sites	5/18/2000	5/31/2000	SAYLOR
337	CEMP Stations	5/24/2000	5/31/2000	FURLOW
338	CEMP Transition	1/5/2000	5/31/2000	FURLOW
339	Chemical Inventory	5/1/2000	5/31/2000	ROBERTSJ
340	Clean Water Act, Area 12 E-Tunnel	5/11/2000	5/31/2000	SAYLOR
341	Environmental Monitoring/Surface Water	5/23/2000	5/31/2000	DUNCAN
342	WEF	1/31/2000		SUITER
343	FEP-NTS-FL-99-12-k	5/25/2000	5/31/2000	HAMPTON
344	FEP-NTS-FL-99-6-900	5/18/2000	5/31/2000	REMINGTO

345	HAZMAT Spill Center	5/25/2000	5/31/2000	ROBSON
347	NEPA Onsite Follow-up	5/23/2000	5/31/2000	COHNL
348	PEP-EM-99-4007	5/17/2000	5/31/2000	WHEELER
349	SEP-0444-99-01 Safety/Industrial	5/1/2000	5/31/2000	ROBSON
350	SEP-2600-99-05, LAO Laser		5/31/2000	BUNN
351	U1h Shaft Project	5/30/2000	5/31/2000	ROBSON
353	Clean Air Act/Clean Water Act Sites	6/21/2000	6/30/2000	SAYLOR
354	Chemical Inventory		6/30/2000	ROBERTSJ
355	On-site air sampler	6/22/2000	6/30/2000	FURLOW
357	ERD Corrective Action Unit Closure Plan		6/30/2000	SUITER
358	ERD Drill Site (UGTA)		6/30/2000	REMINGTO
359	IT NEPA Program		6/30/2000	SKOUGARD
360	FEP-NTS-FL-99-06-605 (DECON Facility)	6/22/2000	6/30/2000	CARTERC
361	NEPA Onsite Follow-Up	6/14/2000	6/30/2000	SKOUGARD
363	RSL Walkthrough	6/28/2000	7/31/2000	ROBSON
364	Sanitary Systems - BEEF	3/14/2000	6/30/2000	COHNL
365	SEP-2500-99-03 - LLNL Electro/Optics	6/23/2000	6/30/2000	BOYCE
366	Area 23 23-111 Assessment	3/28/2000	4/30/2000	DELONG
367	Area 23 23-600/600a Assessment	4/16/2000	4/30/2000	DELONG
368	NLV A-1 Assessment	5/16/2000	5/31/2000	DELONG
369	NLV C-3 Assessment	5/16/2000	5/31/2000	DELONG
370	Area 23 650 Assessment	5/18/2000	6/30/2000	DELONG
371	Area 27 - 5110 Assessment	3/15/2000	6/30/2000	VELOSO
372	Power System - Jack Ass Flats	3/20/2000	4/30/2000	KILLEN
373	Power System - Stockade Wash	5/8/2000	5/31/2000	KILLEN
374	Power System - Rainier	5/8/2000	6/30/2000	KILLEN
375	General Plant Equipment - Backhoe	3/15/2000	4/30/2000	VELOSO
376	General Plant Equipment - Diesel General	4/7/2000	5/31/2000	VELOSO
377	General Plant Equip - Potable	4/7/2000	6/30/2000	VELOSO
378	Road System-Buckboard	4/13/2000	4/30/2000	Mallin
379	Road System -Cane Springs	5/8/2000	5/31/2000	MCCLUREJ
380	Road System - Jackass Flats	6/20/2000	6/30/2000	Mallin
381	NSF Maintenance (ISM) Program	4/26/2000	4/30/2000	HERRERA
382	NSF Maintenance (ISM) Program	5/19/2000	5/31/2000	DELONG
383	NSF Maintenance (ISM) Program	6/8/2000	6/30/2000	DELONG
384	NSF Construction (ISM) Pressure	4/19/2000	4/30/2000	MCCLUREJ
385	WFO Project-EPA Field Research Facility	4/18/2000	4/30/2000	Mallin
386	Paiute Mesa Area Road Repair	4/6/2000	4/30/2000	MCCLUREJ
388	Security Enhancements, NLVF	3/9/2000	4/30/2000	LUNA
389	ISM Integration in BN Engineering	6/8/2000	6/30/2000	Mallin

391	ISM Implementation-NTS Housing Ops	4/24/2000	4/30/2000	BARNER
392	ISM Implementation in Feeding/Housing	5/24/2000	5/31/2000	BARNER
393	LLNL Safety Interlock	1/27/2000	1/27/2000	TOMLINSO
394	Water Operators	2/16/2000	2/16/2000	COHNL
395	U1h Shaft Construction	2/8/2000	2/8/2000	BLODGETT
396	Rad Opns	2/16/2000	2/16/2000	SLICHKO
397	Shop Craft Change House	2/23/2000	4/30/2000	VELOSO
398	Generator Shop Walkthrough	3/15/2000	4/30/2000	VELOSO
399	Machine/Welding Shop Walkthrough	2/23/2000	4/30/2000	VELOSO
400	Ops Equipment Dept Drilling Walkthrough	4/6/2000	4/30/2000	VELOSO
401	Physical Fitness Facility	4/24/2000	4/30/2000	BARNER
402	Admin Office Walkthrough	3/15/2000	4/30/2000	VELOSO
403	Heavy Duty Repair Shop Walkthrough	4/6/2000	4/30/2000	VELOSO
404	Construction Admin Walkthrough	3/8/2000	4/30/2000	HERRERA
405	Operators Teamsters Walkthrough	3/8/2000	4/30/2000	LUNA
406	Cable Service Center Walkthrough	3/23/2000	4/30/2000	DELONG
407	Ice House (Area 6) Walkthrough (06-905)	4/27/2000	4/30/2000	BARNER
408	Carp/Painters/Laborers Walkthrough	3/8/2000	4/30/2000	HERRERA
409	Magnetite Storage Walkthrough	4/27/2000	4/30/2000	BARNER
410	Metalworkers Craft Shop Walkthrough	3/8/2000	4/30/2000	HERRERA
411	Crane Mechanics Shop Walkthrough	4/6/2000	4/30/2000	VELOSO
412	Battery Maintenance	3/15/2000	4/30/2000	VELOSO
413	Wireman/Lineman Shop	3/23/2000	4/30/2000	DELONG
414	Trailer Change House Walkthrough	4/27/2000	4/30/2000	BARNER
415	Ice House Walkthrough (06-998652)	4/24/2000	4/30/2000	BARNER
416	Pump House Well C & C-1 Walkthrough	8/15/2000	8/31/2000	LUNA
417	Pad Shack Walkthrough (06-999488)	5/11/2000	5/31/2000	BARNER
418	Bulk Storage Tanks (06-999819)	4/7/2000	5/31/2000	VELOSO
419	DOE Explosive Bunker (06-CP-11)	5/23/2000	5/31/2000	CAPSHAW
420	CP-160 Craft Shop (06-CP-160)	5/11/2000	5/31/2000	BARNER
421	Sheet Metal Shop Walkthrough	5/11/2000	5/31/2000	BARNER
422	CP-162 Craft Shop	5/11/2000	5/31/2000	BARNER
424	CP-18 Microwave Site	3/13/2000	5/31/2000	DELONG
425	BATT AN Generator Room Walkthrough	3/13/2000	5/31/2000	DELONG
426	Power Facility Building (06-Cp-3)	5/22/2000	5/31/2000	DELONG
427	Monetary Walkthrough (06-CP-311)	3/23/2000	5/31/2000	DELONG
428	Communications & Electronics (06-CP-	3/13/2000	5/31/2000	DELONG
430	Fire Station and Medical Aid	5/4/2000	5/31/2000	LUNA
431	Ambulance Garage Walkthrough	5/4/2000	5/31/2000	LUNA
432	Rad Control Section Walkthrough (06-CP-	5/15/2000	5/31/2000	BARNER

433	Microwave Shelter Walkthrough (06-VAN-	3/13/2000	5/31/2000	DELONG
434	Land Fill Office Facility (09-202604)	5/23/2000	5/31/2000	BARNER
435	Shop and Multi Building Walkthrough (11-	5/30/2000	5/31/2000	CAPSHAW
436	Area 11 Storage Magazine (11-104)	5/30/2000	5/31/2000	CAPSHAW
437	Area 11 Storage Magazine (11-105)	5/30/2000	7/31/2000	CAPSHAW
439	DOE Station Comm Site (12-038194)	5/1/2000	6/30/2000	DELONG
440	Telephone Van - N Tunnel	4/6/2000	6/30/2000	DELONG
441	Telephone Van (12-093693)	4/6/2000	6/30/2000	DELONG
442	Splice House #201885	4/3/2000	6/30/2000	DELONG
443	Microwave Shelter #201894	4/6/2000	6/30/2000	DELONG
444	Area 12 RLM (12-202167)	7/27/2000	7/31/2000	BARNER
445	Area 12 Cross Connect #998641	4/6/2000	6/30/2000	DELONG
446	Microwave Station #202202	4/6/2000	6/30/2000	DELONG
447	Microwave Shelter #201895	4/6/2000	6/30/2000	DELONG
449	Well 16D (16-Well16D)	8/30/2000	9/30/2000	KILLEN
450	Pump House - Well 8 (18-998699)	8/30/2000	9/30/2000	KILLEN
451	Booster Station 17 (18-999927)	8/30/2000	9/30/2000	DELONG
453	Echo Peak RLM #202169	4/3/2000	6/30/2000	DELONG
454	Echo Peak Microwave #202090	4/6/2000	6/30/2000	DELONG
455	Echo Peak Repeater #202096	4/6/2000	6/30/2000	DELONG
457	X Ray Calibration Lab (A-12)	4/18/2000	4/30/2000	MONTANA
458	Advanced Technology Building	4/19/2000	4/30/2000	MONTANA
459	Electro Optics (A-14)	2/22/2000	4/30/2000	MONTANA
460	Bldg. A-15, NLV DAF Walkthrough	5/25/2000	5/31/2000	MONTANA
461	Protective Coating Facility (A-16)	3/27/2000	5/31/2000	MONTANA
462	Administration (B-01)	5/15/2000	5/31/2000	MONTANA
463	Executive Building Walkthrough (B-02)	5/15/2000	6/30/2000	MONTANA
464	Administration (B-03)	5/15/2000	6/30/2000	MONTANA
465	Mail Room (B-05)	6/26/2000	6/30/2000	MONTANA
466	G-Tunnel Septic System	2/16/2000	2/29/2000	COHNL
467	JASPER Visit	2/22/2000	2/22/2000	ROBSON
468	Divine Kingfisher Briefing	1/6/2000		ROBSON
469	RSL Walkthrough	2/29/2000	2/29/2000	SKOUGARD
470	Clean Air Act Equipment Assessment	2/15/2000	2/29/2000	SAYLOR
471	A-6 Sump Backflow	2/4/2000	2/4/2000	COHNL
472	RSL NEPA Program Review	2/15/2000	2/15/2000	COHNL
473	Building A-01 ISM Questionnaire	2/22/2000	2/22/2000	MONTANA
474	Building A-01 Expansion - ISM	2/22/2000	2/22/2000	MONTANA
475	Building A-01 Highbay - ISM	2/22/2000	2/22/2000	MONTANA
476	Installation LANL Interlock System	1/27/2000	1/27/2000	TOMLINSON

477	BEEF Assessment	10/13/1999	10/13/1999	YOERG
478	BEEF Walkthrough	10/26/1999	10/26/1999	YOERG
479	BEEF Assessment	11/2/1999	11/2/1999	YOERG
480	BEEF Assessment	12/9/1999	12/9/1999	YOERG
481	BEEF Walkthrough	1/11/2000	1/11/2000	YOERG
483	Surveillance Report # 00-01-08	1/26/2000		BRONSON
485	Surveillance 00-04-08, WSI Shooting	4/27/2000	4/30/2000	ALDERSON
486	Conduct of Operations and ISM		5/31/2000	ALDERSON
487	Conduct of Operations and ISM		6/30/2000	ALDERSON
488	Assessment of Accident at 2-2C-20	7/19/2000	7/31/2000	ALDERSON
489	Conduct of Operations and ISM		8/31/2000	ALDERSON
490	Conduct of Operations and ISM		9/30/2000	ALDERSON
491	Surveillance Number 00-03-01, FAA Form	3/8/2000	2/29/2000	BRONSON
492	Surveillance Number 00-02-01,	3/15/2000	3/31/2000	BRONSON
493	Surveillance Number 00-03-01, FAA Form		4/30/2000	BRONSON
494	Conduct of Operations and ISM		5/31/2000	BRONSON
495	Radiological Control Posting	7/10/2000	7/31/2000	BRONSON
496	Conduct of Operations and ISM		7/31/2000	BRONSON
497	Conduct of Operations and ISM		8/31/2000	BRONSON
498	Conduct of Operations and ISM		9/30/2000	BRONSON
499	Assessment of facilities in U1a Complex.		2/29/2000	ELEOGRAM
500	Surveillance Number 00-02-02, Laser	3/8/2000	3/31/2000	ELEOGRAM
501	Surveillance Number 00-04-01, U1A Shaft	5/4/2000	4/30/2000	ELEOGRAM
502	Assessment of facilities in U1a Complex.		5/31/2000	ELEOGRAM
503	Surveillance number 00-05-02, U1a	6/27/2000	6/30/2000	ELEOGRAM
504	Assessment of facilities in U1a Complex.		7/31/2000	ELEOGRAM
505	Assessment of facilities in U1a Complex.		8/31/2000	ELEOGRAM
506	Assessment of facilities in U1a Complex.		9/30/2000	ELEOGRAM
507	Surveillance 00-03-04, Jasper General	3/9/2000		LANGENDO
508	Surveillance 00-02-04, BEEF Hazard	3/16/2000	3/31/2000	LANGENDO
509	Surveillance Number 00-01-04, Area 27	4/25/2000	4/30/2000	LANGENDO
510	Assessment of facilities at BEEF/JASPER		5/31/2000	LANGENDO
511	Assessment of facilities at BEEF/JASPER		6/30/2000	LANGENDO
512	Assessment of facilities at BEEF/JASPER		7/31/2000	LANGENDO
513	Assessment of facilities at BEEF/JASPER		8/31/2000	LANGENDO
514	Assessment of facilities at BEEF/JASPER		9/30/2000	LANGENDO
515	Surveillance Number 00-02-08	2/29/2000	2/29/2000	MUNDING
516			3/31/2000	MUNDING
517	Surveillance Number 00-04-02 DOE/NV	4/19/2000	4/30/2000	MUNDING
518	Surveillance Number 00-02-10, Inspection	5/10/2000	5/31/2000	MUNDING



519	Assessment of facilities at HAZMAT Spill		6/30/2000	MUNDING
520	Emergency Notification Process	7/21/2000	7/31/2000	MUNDING
521	HSC Trailers	8/1/2000	8/1/2000	MUNDING
522	Assessment of facilities at HAZMAT Spill		9/30/2000	MUNDING
523	Assessment of facilities in Waste		2/29/2000	PENROD
524	Assessment of facilities in Waste		3/31/2000	PENROD
525	Assessment of facilities in Waste		4/30/2000	PENROD
526	Surveillance Number 00-04-04, Activity	5/4/2000	5/31/2000	PENROD
527	Surveillance Number 00-04-05, Activity	6/6/2000	6/30/2000	PENROD
528	Facility Maintenance	7/26/2000	7/31/2000	PENROD
529	Assessment of facilities in Waste		8/31/2000	PENROD
530	Assessment of facilities in Waste		9/30/2000	PENROD
531	Assessment of facilities in the Tunnel		2/29/2000	THOMASSA
532	Surveillance Number 00-02-07	3/8/2000	3/31/2000	THOMASSA
533	Surveillance Number 00-02-06 Tunnel	4/27/2000	4/30/2000	THOMASSA
534	Surveillance Number 00-03-08,	2/29/2000	5/31/2000	THOMASSA
535	Emergency Response Requirements and	7/12/2000	6/30/2000	THOMASSA
536	BN Supervision Emergency Response	7/12/2000	7/31/2000	THOMASSA
537	Assessment of facilities in the Tunnel		8/31/2000	THOMASSA
538	Assessment of facilities in the Tunnel		9/30/2000	THOMASSA
539	Assessment of DAF		5/31/2000	TRAEGER
540	Assessment of DAF		6/30/2000	TRAEGER
541	Assessment of DAF		7/31/2000	TRAEGER
542	Assessment of DAF		8/31/2000	TRAEGER
543	Assessment of DAF		9/30/2000	TRAEGER
544	Walkthrough of Dipole Hail		4/30/2000	DRAPER
545	Community Resource Monitoring Program	4/18/2000	4/30/2000	FURLOW
546	Joint-assessment of Procurement	12/18/2000	9/1/2000	BELLM
547	Joint-assessment of Information Services		9/1/2000	LEWIS
548	Joint-assessment of Accounting		9/1/2000	Busboom
549	Walkthrough of Dipole Hail		7/31/2000	DRAPER
550	Assessment of Accounting		9/1/2000	Busboom
551	FMFIA		9/30/2000	OWENS
552	FMFIA		9/30/2000	OWENS
553	OCRWM Financial Statement Audit	2/28/2000	2/28/2000	SCOFIELDV
554	Department wide Financial Statement	3/30/2000	3/30/2000	SCOFIELDV
555	Joint-assessment of Human Resources		9/1/2000	CLARK
556	Joint-assessment of Budget		9/1/2000	ROBERTS
557	Budget Validation of DP-10; SS; & Env.		9/30/2000	WHITEW
558	Walkthrough of Dipole Hail	10/31/2000	10/31/2000	DRAPER

559	Walkthrough of Dipole Sampson		4/30/2000	DRAPER
560	Walkthrough of Dipole Sampson		7/31/2000	DRAPER
561	Walkthrough of Dipole Sampson	11/1/2000	10/31/2000	DRAPER
562	Walkthrough of Divine Kingfisher		4/30/2000	DRAPER
563	Walkthrough of Divine Kingfisher		7/31/2000	DRAPER
564	Walkthrough of Divine Kingfisher		10/31/2000	DRAPER
565	Joint-assessment of Project Controls		9/1/2000	ROBERTS
566	Joint-assessment of Work For Others		9/1/2000	COX
567	Joint-assessment of Labor Relations		9/1/2000	CLARK
568	Grenade Range	2/10/2000	2/10/2000	HAMPTON
570	Walkthrough of X-Tunnel Demil		5/31/2000	DAIGLER
571	Walkthrough of X-Tunnel Demil		8/31/2000	DAIGLER
572	Walkthrough of X-Tunnel Demil		11/30/2000	DAIGLER
574	Walkthrough of TaDD		5/30/2000	DAIGLER
575	Walkthrough of TaDD	8/10/2000	8/31/2000	DRAPER
576	Walkthrough of TaDD		11/30/2000	DAIGLER
578	Walkthrough of Project 300		6/30/2000	DRAPER
579	Walkthrough of Project 300	9/26/2000	9/30/2000	DRAPER
580	Walkthrough of Project 300		12/31/2000	DRAPER
581	Assessment of nature of work of Project		6/30/2000	DRAPER
582	Assessment of nature of work of Project		12/31/2000	DRAPER
583	Assessment of the nature of work of		6/30/2000	DRAPER
584	Assessment of the nature of work of		12/31/2000	DRAPER
585	Walkthrough of NIMA 98-HIGH		4/30/2000	DAIGLER
586	Walkthrough of NIMA 98-HIGH		7/31/2000	DAIGLER
587	Walkthrough of NIMA 98-HIGH	11/13/2000	10/31/2000	DRAPER
589	Walkthrough of JSEAD Demo II		5/30/2000	DAIGLER
590	Walkthrough of JSEAD Demo II		8/31/2000	DAIGLER
591	Walkthrough of JSEAD Demo II		11/30/2000	DAIGLER
593	Walkthrough of TERM-KE		5/30/2000	DAIGLER
594	Walkthrough of TERM-KE		8/31/2000	DAIGLER
595	Walkthrough of TERM-KE		11/30/2000	DAIGLER
596	OBOE 3 ISM Review	1/18/2000	1/18/2000	CARTERC
597	Thoroughbred ISM Review	1/18/2000	1/18/2000	CARTERC
599	Walkthrough of NASA SAFE		6/30/2000	DRAPER
600	Walkthrough of NASA SAFE		9/30/2000	DRAPER
601	Walkthrough of NASA SAFE		12/31/2000	DRAPER
602	DAF CATS (PRC-AD-06) Assessment	3/21/2000	3/31/2000	LEPPERT
603	Assessment of DAF - USQ (PRC-AD-04)	4/19/2000	4/30/2000	LEPPERT
604	Technical Operations Plan	5/17/2000	5/31/2000	LEPPERT

605	Damaged Weapons Drill	6/21/2000	6/21/2000	LEPPERT
606	Compression Fittings	7/25/2000	7/25/2000	LEPPERT
607	DAF Plans and Procedures	8/30/2000	8/30/2000	LEPPERT
608	Portable Radiography	9/12/2000	9/12/2000	LEPPERT
609	Monthly Walkthrough of DAF		10/31/2000	LEPPERT
610	Monthly Walkthrough of DAF		11/30/2000	LEPPERT
611	Monthly Walkthrough of DAF		12/31/2000	LEPPERT
612	Monthly Walkthrough of U1a Complex	3/31/2000	3/31/2000	BLODGETT
613	Monthly Walkthrough of U1a	4/19/2000	4/28/2000	BLODGETT
614	Monthly Walkthrough of U1a/U1h	4/20/2000	4/30/2000	BLODGETT
615	U1h Shaft Construction Project	5/10/2000	5/31/2000	BLODGETT
616	Monthly Walkthrough of U1a/U1h	6/1/2000	6/30/2000	BLODGETT
617	Monthly Walkthrough of U1a/U1h	7/27/2000	7/31/2000	BLODGETT
618	Monthly Walkthrough of U1a/U1h	8/8/2000	8/31/2000	BLODGETT
619	Monthly Walkthrough of U1a/U1h	9/14/2000	9/30/2000	BLODGETT
620	Monthly Walkthrough of U1a/U1h	10/18/2000	10/31/2000	BLODGETT
621	Monthly Walkthrough of U1a/U1h	11/6/2000	11/30/2000	BLODGETT
622	Monthly Walkthrough of U1a/U1h		12/31/2000	BLODGETT
623	Monthly Walkthrough of BEEF	3/14/2000	3/31/2000	YOERG
624	Assessment of BEEF	4/4/2000	4/30/2000	YOERG
625	Assessment of BEEF	5/3/2000	5/31/2000	YOERG
626	Monthly Walkthrough of BEEF	6/14/2000	6/30/2000	YOERG
627	Monthly Walkthrough of BEEF	7/26/2000	7/31/2000	YOERG
628	Monthly Walkthrough of BEEF	8/24/2000	8/31/2000	YOERG
629	Monthly Walkthrough of BEEF	9/14/2000	9/30/2000	YOERG
630	Monthly Walkthrough of BEEF	10/18/2000	10/31/2000	YOERG
631	Monthly Walkthrough of BEEF		11/30/2000	YOERG
632	Assessment of BEEF	1/1/2001	12/31/2000	YOERG
633	QA/QC Assessment of JASPER	3/21/2000	3/31/2000	GOLDEN
634	Monthly Walkthrough of JASPER	4/18/2000	4/30/2000	GOLDEN
635	Monthly Walkthrough of JASPER	5/11/2000	5/31/2000	GOLDEN
636	Monthly Walkthrough of JASPER	6/7/2000	6/30/2000	GOLDEN
637	Monthly Walkthrough of JASPER	7/25/2000	7/31/2000	GOLDEN
638	Monthly Walkthrough of JASPER	8/8/2000	8/31/2000	GOLDEN
639	Monthly Walkthrough of JASPER	9/26/2000	9/19/2000	GOLDEN
640	Monthly Walkthrough of JASPER		10/31/2000	GOLDEN
641	Monthly Walkthrough of JASPER		11/30/2000	GOLDEN
642	Monthly Walkthrough of JASPER		12/31/2000	GOLDEN
644	Quarterly Assessment of JASPER	6/21/2000	5/31/2000	GOLDEN
645	Quarterly Assessment of JASPER	8/31/2000	9/30/2000	GOLDEN

646	Quarterly Assessment of JASPER		12/31/2000	GOLDEN
647	Monthly Assessment of TRI-MEV/NLV	4/7/2000	3/31/2000	LEEDOM
648	Monthly Walkthrough of TRI-MEV/NLV	5/8/2000	5/31/2000	LEEDOM
650	Monthly Walkthrough of TRI-MEV/NLV	9/12/2000	9/30/2000	LEEDOM
651	Monthly Walkthrough of TRI-MEV/NLV		11/30/2000	LEEDOM
652	Quarterly Assessment of TRI-MEV/NLV	3/23/2000	4/30/2000	LEEDOM
653	Quarterly Assessment of TRI-MEV/NLV	7/11/2000	7/31/2000	LEEDOM
654	Quarterly Assessment of TRI-MEV/NLV	10/24/2000	10/31/2000	LEEDOM
655	Semi-Annual Walkthrough of SNL	4/17/2000	6/30/2000	LEEDOM
657	Semi-Annual Walkthrough of SNL		12/31/2000	LEEDOM
658	Semi-Annual Assessment of SNL Activities		12/31/2000	LEEDOM
659	Monthly Walkthrough of LANL SCEs	3/20/2000	3/31/2000	SLICHKO
660	Monthly Walkthrough of LANL SCEs	4/11/2000	4/30/2000	SLICHKO
661	Monthly Walkthrough of LANL SCEs	5/3/2000	5/31/2000	SLICHKO
662	Monthly Walkthrough of LANL SCEs	6/19/2000	6/30/2000	SLICHKO
663	Monthly Walkthrough of LANL SCEs	7/12/2000	7/31/2000	SLICHKO
666	Monthly Walkthrough of LANL SCEs	10/5/2000	10/31/2000	SLICHKO
668	Monthly Walkthrough of LANL SCEs	12/11/2000	12/31/2000	SLICHKO
669	ISM Assessment of LANL SCEs	4/11/2000	4/30/2000	SLICHKO
670	Quarterly Assessment of LANL SCEs	7/12/2000	7/31/2000	SLICHKO
671	Quarterly Assessment of LANL SCEs	10/5/2000	10/31/2000	SLICHKO
672	Monthly Walkthrough of LLNL SCEs	3/6/2000	3/31/2000	MUELLERL
673	Monthly Walkthrough of LLNL SCEs	4/4/2000	4/30/2000	MUELLERL
675	Monthly Walkthrough of LLNL SCEs	6/6/2000	6/30/2000	MUELLERL
676	Monthly Walkthrough of LLNL SCEs	7/13/2000	7/31/2000	MUELLERL
677	Monthly Walkthrough of LLNL SCEs	8/1/2000	8/31/2000	MUELLERL
678	Monthly Walkthrough of LLNL SCEs	9/26/2000	9/22/2000	MUELLERL
679	Monthly Walkthrough of LLNL SCEs	10/5/2000	10/31/2000	MUELLERL
680	Monthly Walkthrough of LLNL SCEs	11/28/2000	11/1/2000	MUELLERL
681	Monthly Walkthrough of LLNL SCEs	12/7/2000	12/1/2000	MUELLERL
683	Quarterly Assessment of LLNL SCEs	3/28/2000	6/30/2000	MUELLERL
684	Quarterly Assessment of LLNL SCEs	6/21/2000	9/30/2000	MUELLERL
685	Quarterly Assessment of LLNL SCEs	10/2/2000	12/31/2000	MUELLERL
688	Semi-Annual Assessment of BN/LAO	4/11/2000	4/11/2000	SLICHKO
690	Semi-Annual Walkthrough of LLNL SCEs	5/22/2000	5/31/2000	MUELLERL
692	Semi-Annual Assessment of LLNL SCEs	5/22/2000	6/30/2000	MUELLERL
693	Semi-Annual Assessment of LLNL SCEs	12/12/2000	12/1/2000	MUELLERL
694	Walkthrough of JASPER	1/20/2000	1/17/2000	GOLDEN
696	Walkthrough of JASPER	2/23/2000	1/27/2000	GOLDEN
697				

698				
699	LLNL SCE Walkthrough	2/28/2000	2/28/2000	MUELLERL
700	Quanterra Lab Walk-Through	3/3/2000		FURLOW
701	Confined Space	2/22/2000		WHITEC
702	Confined Space	2/23/2000		REMINGTO
703	RSL Quality Control Revie	2/22/2000	2/22/2000	CONLEY
704	FBI SWAT Assessment	3/7/2000	3/7/2000	SHIPLEY
705	WMD/RN/DOJ Walkthrough	3/21/2000	3/21/2000	SHIPLEY
706	WMD/IC/DOJ Walkthrough	4/6/2000	4/7/2000	SHIPLEY
707	WMD/IC/DOJ Assessment	5/8/2000	5/8/2000	SHIPLEY
708	WMD/OPS/DOJ Walkthrough		7/25/2000	SHIPLEY
709	Assessment of Aviation Assets	4/14/2000	4/14/2000	CONLEY
710	Assessment of Aviation Assets		4/17/2000	SNODGRAS
711	Walkthrough of AMS Program		6/30/2000	COOPERT
712	Assessment of AMS Program		8/31/2000	COOPERT
713	Assessment of FRMAC Program (ERDS	6/20/2000	5/31/2000	OLAUGHLI
714	Walkthrough of FRMAC Program		8/31/2000	THOMPSON
715	Assessment of RAP Program	4/30/2000	4/30/2000	HALLD
716	Assessment of RAP Program		8/31/2000	HALLD
717	Walkthrough of NN-20 Program		3/31/2000	MUELLER
718	Assessment of NN-20 Program		6/30/2000	MUELLER
719	Walkthrough of ARG Program		3/31/2000	MUELLER
720	Assessment of ARG Program		6/30/2000	MUELLER
721	Walkthrough of NEST Program	4/13/2000	4/15/2000	HALLD
722	Assessment of NEST Program		8/30/2000	LACHMANK
723	Assessment of NRAT Program		4/30/2000	WIARD
724	Walkthrough of NRAT Program		9/30/2000	WIARD
725	Walkthrough of ERS&L Program	4/13/2000	4/15/2000	HALLD
726	Assessment of ERS&L Program		8/30/2000	LACHMANK
727	Assessment of Special Programs		4/30/2000	COOPERT
728	Assessment of Special Programs		8/31/2000	COOPERT
729	Walkthrough of HAZMAT Operations	3/2/2000	3/2/2000	SPAHN
730	Walkthrough of HAZMAT Operations	4/6/2000	4/6/2000	SPAHN
731	Walkthrough of HAZMAT Operations	6/20/2000	6/8/2000	SPAHN
732				
733	Walkthrough of HAZMAT Operations	8/15/2000	8/17/2000	SPAHN
734	Walkthrough of HAZMAT Operations	9/11/2000	9/14/2000	SPAHN
735	Walkthrough of HAZMAT Operations	10/4/2000	10/12/2000	SPAHN
736	Walkthrough of HAZMAT Operations	11/8/2000	11/14/2000	SPAHN
737	Walkthrough of HAZMAT Operations	12/6/2000	12/7/2000	SPAHN

738	Cafeteria Oversight	10/12/1999		VELOSO
739	Cafeteria Oversight	1/12/2000		VELOSO
740	Cafeteria Oversight	1/18/2000		VELOSO
741	Cafeteria Oversight	1/26/2000		VELOSO
742	Cafeteria Oversight	2/3/2000		VELOSO
743	Cafeteria Oversight	2/17/2000		VELOSO
744	Cafeteria Oversight	3/2/2000		VELOSO
745	Assessment of HAZMAT Work Activities	6/20/2000	6/15/2000	SPAHN
746	Assessment of HAZMAT Operations	7/13/2000	9/12/2000	SPAHN
747	Assessment of HAZMAT Work Activities	5/9/2000	5/10/2000	SPAHN
749	Assessment of HAZMAT Operations	11/8/2000	11/16/2000	SPAHN
750	Walkthrough DOE/NV Emergency Mgmt.		3/27/2000	NIEMANNV
751	Walkthrough DOE/NV Emergency Mgmt.		4/17/2000	NIEMANNV
752	Walkthrough DOE/NV Emergency Mgmt.		9/11/2000	BINDER
753	Assessment of the DOE/NV Emergency		5/31/2000	NIEMANNV
754	Assessment of EOC Operations		7/31/2000	MCSHERRY
755	Assessment of EOC Operations	1/10/2001	1/31/2001	MCSHERRY
756	Assessment of Occurrence Reporting		7/31/2000	WRATHALL
757	Assessment of Occurrence Reporting		1/31/2001	WRATHALL
758	Walkthrough of HAZMAT Operations	3/6/2000	3/6/2000	SPAHN
759				
760				
762	Improper Hazard Posting	2/22/2000		ALDERSON
763				
764	DAF Walkthrough - Glove Box	2/17/2000	2/17/2000	LEPPERT
765	DAF Walkthrough - ISM	2/17/2000	2/17/2000	LEPPERT
766	Walkthrough of RSL Hanger	3/8/2000	3/8/2000	CONLEY
767	Classification/Declassification	7/27/2000	9/30/2000	BODIN
768	Technical Information		9/30/2000	FORD
769	Privacy Act	9/2/2000	9/30/2000	DEY
770	Technical Information Resource Center		9/30/2000	BODIN
771	Coordination & Information Center		9/30/2000	BODIN
772	Deactivation Field Work (EM-99-56)	11/10/1999		BARROW
773	Remediation Field Work (EM-99-57)	11/15/1999	11/30/1999	BARROW
774	Deactivation Field Work (EM-99-58)	11/15/1999		BARROW
775	Characterization Activites (EM-99-59)	11/9/1999	11/30/1999	WING
777	Characterization Activities (EM-99-61)	11/9/1999	11/30/1999	CURTIS
778	Site-Specific HASP (EM-99-62)	11/1/1999		WYCOFF
779	WEF Operations (EM-99-63)	11/22/1999		ARMSTRON
780	Remediation Activities (EM-99-64)	11/30/1999	11/30/1999	CABBLE

781	TRU Waste Storage (EM-99-65)	12/6/1999		ARMSTRON
782	Well Development (EM-99-66)	12/9/1999	12/31/1999	HURLEY
783	TRU & Mixed Waste Storage (EM-99-67)	12/6/1999		TILMAN
784	Characterization Activities (EM-99-68)	12/1/1999	12/31/1999	CURTIS
785	Satellite Accumulation Areas (EM-99-69)	12/7/1999	12/31/1999	CABBLE
786	Remediation Field Work (EM-99-70)	12/14/1999	12/31/1999	BARROW
787	Well Drilling (EM-99-71)	12/15/1999	12/31/1999	HURLEY
788	Characterization Field Work (EM-99-72)	12/20/1999	12/31/1999	SANDERS
789	EM-00-02 Well Drilling	1/6/2000	1/31/2000	HURLEY
790	Well Development EM-00-03	1/11/2000	1/31/2000	HURLEY
791	EM-00-04 Well Development	1/11/2000	1/31/2000	HURLEY
792	A-5 Assessment EM-00-05	1/11/2000	1/30/2000	TILMAN
795	Deactivation Field Work (EM-00-09)	1/24/2000		BARROW
796	Remediation Field Work (EM-00-10)	1/13/2000		BARROW
797	EM-00-11 Well Drilling	1/27/2000	1/31/2000	HURLEY
798	Site Characterization (EM-00-12)	1/25/2000	1/31/2000	WING
799	Ordnance Treatment (EM-00-14)	2/4/2000	1/31/2000	CARILLI
801	Well Site Condition (EM-00-17)	2/1/2000	2/29/2000	WINFIELD
803	Well Drilling (EM-00-19)	2/9/2000	2/29/2000	WINFIELD
804	Well Development (EM-00-20)	2/1/2000	3/31/2000	WINFIELD
805	Well Development (EM-00-21)	2/9/2000	2/29/2000	WINFIELD
806	Well Development (EM-00-22)	2/9/2000	2/29/2000	WINFIELD
808	Well Drilling (EM-00-26)	2/23/2000	2/29/2000	HURLEY
809	NEPA Onsite Followup	3/14/2000	1/31/2000	SKOUGARD
810	Test Panel Operations	3/3/2000		WHITEC
811	OBOE 3	1/18/2000		SUITER
812	THOROUGHbred	1/18/2000		SUITER
813	Airworthiness Documentation Surveillance	1/5/2000	1/5/2000	SNODGRAS
814	Bell 412 Generator Walkthrough	1/5/2000	1/5/2000	CONLEY
816	Ergonomic - Miyashiro	2/8/2000		SUITER
817	Ergonomic - Tommasino	2/8/2000		SUITER
818	Cafeteria Oversight	3/22/2000		VELOSO
819	Ergonomic - Mary Richards	2/23/2000		SUITER
820	Ergonomics - K. Hatch	3/6/2000		SUITER
821	Ergonomics - C. Carter	3/6/2000		SUITER
822	Ergonomics - E. Jimenez	1/5/2000		SUITER
823	Ergonomics - A. Avery	1/5/2000		SUITER
824	Ergonomic - S. Wowianko	2/23/2000		SUITER
825	Ergonomic - D. Wickliffe	1/5/2000		SUITER
826	Ergonomic - B. Thomas	1/5/2000		SUITER

827	Ergonomics - S. Lawrence	1/6/2000		SUITER
828	Ergonomics - J. Barrett	2/8/2000		SUITER
829	EM-00-30 Well ER-18-2	3/17/2000	3/31/2000	HURLEY
830	THOROUGHbred ISM Review	3/22/2000		WHITEC
831	Area 6, CP-1 Assessment	3/6/2000	3/31/2000	DELONG
832	Area 6, CP-1 Assessment	3/6/2000	3/31/2000	DELONG
834	FEP/SEP NTS FL 99-03-05	3/14/2000		LUNA
835	FEP/SEP NTS-FL-99-03-05	3/14/2000		LUNA
836	EM-00-27 TRU Pad Cover Building	1/20/2000	3/31/2000	TILMAN
837	EM-00-28 TRU Pad Cover Bldg	2/1/2000	2/29/2000	ARMSTRON
839	FBI/SWAT Project Walkthrough	3/7/2000	3/7/2000	SHIPLEY
840	NEPA Follow-up	3/28/2000		COHNL
842	EM-00-33 Area 3 RWMS	3/29/2000	3/29/2000	CLAYTON
843	DOE Maintenance Planning-ISM	5/16/2000	5/31/2000	DELONG
844	NTS Review	3/29/2000		HOAR
845	NTS Review	3/29/2000		HOAR
846	NTS Review	3/29/2000		HOAR
847	Cafeteria Oversight	4/17/2000		VELOSO
850	EM-00-29 Work Authorization & Safety	3/22/2000	3/22/2000	CLAYTON
851	EM-00-34 Walkthrough of ER-EC-1 and	4/6/2000	4/6/2000	HURLEY
853	EM-00-36 UGTA Well 5-3 #2	4/11/2000	4/30/2000	WYCOFF
854	EM-00-37 VERB Operations	4/17/2000	4/30/2000	ARMSTRON
855	Cafeteria Oversight	4/25/2000		VELOSO
856	EM-00-38 Well ER-EC-5	4/20/2000	4/30/2000	HURLEY
857				
858	BEEF Assessment	2/10/2000	2/10/2000	YOERG
859				
860				
861	HAZMAT Project Review	3/9/2000	3/9/2000	SPAHN
862	Assessment of U1a	3/28/2000	3/31/2000	BLODGETT
863	HAZMAT Site Visit	3/16/2000	3/16/2000	SPAHN
864	EM-00-39 RCRA Assessment	4/10/2000	4/30/2000	CARILLI
865	HAZMAT Site Visit	3/21/2000	3/21/2000	SPAHN
866	EM-00-40 IT RCRA Program	4/10/2000	4/10/2000	CARILLI
867	DOJ/WMD/RN Assessment	3/22/2000	3/22/2000	SHIPLEY
868	Building B-7 ISM Questionnaire	4/6/2000	7/31/2000	MONTANA
869	Building A-5 ISM Questionnaire	4/6/2000	9/30/2000	MONTANA
870	Walkthrough of Aviation Assets	3/29/2000	3/29/2000	CONLEY
871	Building A-06 ISM Questionnaire	4/6/2000	9/30/2000	MONTANA
872	DOJ/WMD/IC Assessment	4/5/2000	4/5/2000	SHIPLEY



873	DOJ/FBI/SWAT Walkthrough	4/11/2000	4/11/2000	SHIPLEY
874	DOJ/FBI/SWAT Assessment	4/11/2000	4/11/2000	SHIPLEY
875	23-600/600a	4/16/2000	4/30/2000	DELONG
876	Aviation Assets Walkthrough	4/26/2000	7/15/2000	CONLEY
877	HAZMAT Site Visit	4/26/2000	4/26/2000	SPAHN
879	EM-00-41 A-6 Decon Facility	4/26/2000	4/26/2000	CARILLI
880	Ergonomic - Runore Wycoff	3/28/2000		SUITER
881	Reentry Sampling Procedures-U1a	3/23/2000		SUITER
882	OBOE 4 Change Control	3/30/2000		SUITER
883	Ergonomics - Binder	4/14/2000		SUITER
884	Ergonomics - Curry	4/27/2000		SUITER
885	Ergonomics - Plese	4/27/2000		SUITER
886	Ergonomics - Wade	4/27/2000		SUITER
887	Rad Worker I Training Controls	4/18/2000		SUITER
888	Assessment of WEF Controls	3/13/2000	9/30/2000	SUITER
889	WEF FEP NTS 99-5-32	4/19/2000	5/31/2000	SUITER
890	WEF ISMS Assessment	3/14/2000		CAPSHAW
891	Energy Mgmt Assessment	3/20/2000	4/30/2000	SENTENEY
892	On-Site Review of Nuclear and National	4/4/2000		
893	WEF ISMS Assessment	3/14/2000		CAPSHAW
894	Property Operations	2/2/2000		TOMMASIN
895	SEP 0441-99-01	3/9/2000		WHEELER
896	MIRV Storage Facility	4/25/2000		OWENSR
897	MIRV Storage Facility	4/25/2000		OWENSR
898	Cane Springs Walkthrough	4/19/2000		FURLOW
899	NTS Area 20 Walkthrough	4/6/2000		SENTENEY
900	EM-00-43 ISM Assessment	3/17/2000	3/31/2000	ARMSTRON
901	Cafeteria Oversight	5/9/2000		VELOSO
902	Guard Station 270	4/25/2000		OWENSR
903	EM-00-45 Desert Rock Air Strip Fuel Spill	5/9/2000	5/31/2000	WING
904	Carpenter's Shop	5/2/2000		WHITEC
905	Carpenter's Shop	5/2/2000		WHITEC
906	Paint Shop	5/2/2000		WHITEC
907	REOP/B1/RM3017	4/26/2000		OWENSR
908	Physical Fitness Facility	4/25/2000		OWENSR
909	EM-00-44 ER-12-1 Sampling	4/17/2000	4/30/2000	WINFIELD
910	Ergonomics	5/15/2000		BOYCE
911	Jasper Facility	5/11/2000		WHITEC
912	Jasper Facility	5/11/2000		WHITEC
913	Fire Alarm Test	5/11/2000		WHITEC

914	Cafeteria Oversight	5/19/2000		VELOSO
915	Night Flight Monitoring	5/2/2000	5/2/2000	CONLEY
916	Day Instrument Flight monitoring	5/8/2000	5/8/2000	CONLEY
917	NSF Chillers	5/17/2000		WHITEC
918	4-04 Road	3/14/2000		SKOUGARD
919	Training	2/28/2000		OWENSR
920	Bldg. 27-5100	5/11/2000	6/30/2000	DELONG
921	NTS-NVOO-ITNV-1999-0005	5/4/2000		WHEELER
922	EM-00-47 TRU PAD	5/17/2000	5/31/2000	TILMAN
923	RSL (SCIF) Facility Surve	4/18/2000	5/24/2000	SCHLEGEL
924	EM-00-48 Well ER-5-3 #2	5/11/2000	5/1/2000	WINFIELD
925	EM-00-49 Well ER-5-3 #2 Walk-Through	5/2/2000	5/1/2000	WINFIELD
926	EM-00-50 ER 5-3 #2 Walk-Through	4/26/2000	4/1/2000	WINFIELD
927	EM-00-52 Well ER-5-3 #2 Walk-Through	4/16/2000	4/16/2000	WINFIELD
928	EM-00-51 ER-5-3 #2 Walk-Through	3/29/2000	3/1/2000	WINFIELD
929	EM-00-53 Waste Storage Area	3/16/2000	3/1/2000	WINFIELD
931	EM-00-54 Bldg 6-901 Assessment	3/14/2000	3/14/2000	WINFIELD
932	EM-00-55 Well ER-5-3 Walk-Through	2/25/2000	2/25/2000	WINFIELD
933	EM-00-56 Well ER-EC-5	2/15/2000	2/1/2000	WINFIELD
934	EM-00-57 ER-EC-2A Walk-Through	2/15/2000	2/1/2000	WINFIELD
935	Power System - Valley	5/8/2000	8/31/2000	KILLEN
936	Power System - Castle Rock	5/8/2000	7/28/2000	KILLEN
937	EM-00-58 ER-EC-1 Well Development &	2/1/2000	2/1/2000	WINFIELD
940	EM-00-62 CAU 428 Safety Assessment	5/22/2000	5/31/2000	WYCOFF
941	EM-00-65 CAU 428 Technical	5/22/2000	6/30/2000	CABBLE
942	EM-00-61 CAU 428 Technical	5/22/2000	5/31/2000	CABBLE
943	EM-00-60 Area 6 Decon Pad	4/20/2000	4/30/2000	SMALLK
944	EM-00-59 A-6 Decon Facility	5/22/2000	5/30/2000	CARILLI
945	EM-00-42 LLW Work Authorization	4/24/2000	6/30/2000	CLAYTON
946	EM-00-64 ER-EC-5 Well Development &	5/25/2000	6/30/2000	WINFIELD
947	EM-00-63 CAU 428 Technical	5/22/2000	5/31/2000	CABBLE
949	EM-00-65 TTR Area 3 Septic 1 & 5	5/22/2000	5/31/2000	CABBLE
950	EM-00-68 ER-EC-8 Well Development &	5/31/2000	5/31/2000	HURLEY
951	EM-00-69 ER-EC-8 Well Development &	6/13/2000	6/13/2000	HURLEY
958	EM Industrial Sites PEP-EM-99-4028		7/30/2000	BUNN
959	EM Program Management PEP-EM-99-	6/28/2000	7/30/2000	WHITEC
961	Accident Response Group	7/24/2000	7/30/2000	HAMPTON
962	Area 16 Water Tank	6/20/2000	7/31/2000	COHNL
963	CAA/CWA Sites	7/26/2000	7/31/2000	SAYLOR
964	Community Environmental Monitoring	7/25/2000	7/31/2000	FURLOW

967	NEPA Onsite Followup	7/23/2000	7/31/2000	COHNL
968	PEP EM-99-4025 - UGTA	7/27/2000	7/31/2000	REMINGTO
969	Radiological Health	7/19/2000	7/31/2000	WHEELER
970	SEP 2130-99-07 BEEF	9/14/2000	9/30/2000	WHITEC
971	SEP 2130-99-07 BEEF		9/30/2000	ROBSON
972	U1a Recordkeeping	7/27/2000	7/31/2000	ROBSON
973	Area 27 Septic Systems - Baker Site	7/27/2000	9/30/2000	COHNL
974	BN Procedures CA12.0.11	9/18/2000	9/30/2000	SAYLOR
975	CAA/CWA Sites	9/12/2000	9/30/2000	SAYLOR
976	Tribal Assessment o Kistler EA	9/13/2000	9/30/2000	FURLOW
977	Chemical Inventory		9/30/2000	ROBERTSJ
978	DAF SAR/SER		9/30/2000	ROBSON
980	FEP NTS FI 99 12 J		9/30/2000	HAMPTON
981	NEPA Onsite Followup		9/30/2000	COHNL
983	SEP 2100 99 01	9/27/2000	9/30/2000	ROBSON
984	Summary Management Revie		9/30/2000	WHEELER
985	U1H Shaft Project	9/26/2000	9/30/2000	ROBSON
986	UGTA Well Site - PEP EM 99-4025	9/15/2000	9/30/2000	REMINGTO
988	Heavy Duty Vehicles	7/26/2000	7/28/2000	VELOSO
989	High Explosive Vehicles	7/26/2000	8/31/2000	VELOSO
990	Vehicles-Ambulance	8/15/2000	9/29/2000	VELOSO
991	Road System-Mercury 200-06	7/17/2000	7/28/2000	MCCLUREJ
992	Road System-Mercury	8/17/2000	8/31/2000	Mallin
993	NSF Maintenance (ISM) Program	7/20/2000	7/31/2000	DELONG
994	NSF Maintenance (ISM) Program	8/9/2000	8/31/2000	DELONG
995	NSF Maintenance (ISM) Program	9/18/2000	9/29/2000	DELONG
996	NSF Construction Execution Program	7/28/2000	7/31/2000	MURPHY
997	NSF Construction and Maitenance	7/28/2000	10/31/2000	MCCLUREJ
998	GPP Construction Project LCNG Fueling	6/15/2000	6/30/2000	Mallin
999	GPP Constr Project BN Personell/Facility	7/10/2000	7/29/2000	LUNA
1000	Functional-BN Construction/ISM	7/17/2000	7/31/2000	MCCLUREJ
1001	Functional-BN Cost Estimating	7/27/2000	8/31/2000	MCCLUREJ
1002	Chemical Storage B-09	7/28/2000	7/31/2000	MONTANA
1003	Administration C-01	7/28/2000	7/31/2000	MONTANA
1004	Geophysical Building C-02	8/25/2000	8/31/2000	MONTANA
1005	High Intensity Source Bldg C-03	10/1/2000	12/31/2000	CAPSHAW
1006	Guard Station	2/10/2000	8/31/2000	MONTANA
1007	C-06 Radio Tower	10/3/2000	9/30/2000	DELONG
1008	Demonstrators Support	8/7/2000	8/31/2000	BARNER
1010	Desert Rock Airport	7/26/2000	7/31/2000	CAPSHAW

1011	Spotted Range Comm Bldg, 22-2210	7/12/2000	7/31/2000	DELONG
1012	Fabrication Lab Storage	6/13/2000	7/31/2000	DELONG
1013	Badge Office Security	6/13/2000	7/31/2000	CAPSHAW
1014	Security Operations	6/13/2000	7/31/2000	CAPSHAW
1016	Weigh Station	7/25/2000	7/31/2000	BARNER
1017	Offsite Storage 2	6/13/2000	7/31/2000	DELONG
1018	Offsite Storage 4	6/13/2000	7/31/2000	DELONG
1019	Offsite Storage 3	6/13/2000	7/31/2000	DELONG
1020	Offsite Storage 1	6/13/2000	7/31/2000	DELONG
1021	Housing/Revenue Bldg. 109	7/25/2000	7/31/2000	BARNER
1022	Brooks Range	6/13/2000	7/31/2000	CAPSHAW
1023	Ammunition Storage	6/13/2000	7/31/2000	CAPSHAW
1024	Administration/Engineering (23-111)	7/13/2000	9/30/2000	VELOSO
1025	Training Machinery Mail (23-113)	9/14/2000	9/30/2000	LUNA
1026	ES&H Training Facility (23-114)	9/12/2000	9/30/2000	LUNA
1027	Admin/Engineering	9/27/2000	9/30/2000	KILLEN
1028	Cable Facility	7/22/2000	8/31/2000	DELONG
1029	Mercury Auditorium	8/22/2000	8/31/2000	BARNER
1030	Fire Dept Warehouse	8/15/2000	8/31/2000	LUNA
1031	Waste Min and Control	8/24/2000	8/31/2000	BARNER
1032	Sign/Paint Shop	8/23/2000	8/31/2000	BARNER
1033	Linen Storage Warehouse	8/25/2000	8/31/2000	BARNER
1034	Office/Storage 23-158	8/24/2000	8/31/2000	BARNER
1035	Redistribution and Sales Building 23-159	7/13/2000	8/31/2000	VELOSO
1036	23-160 Main Warehouse	7/13/2000	8/31/2000	VELOSO
1037	Materials Testing Lab	10/26/2000	10/31/2000	LUNA
1038	Material Office	7/25/2000	8/31/2000	BARNER
1039	Boxcar No 8	8/15/2000	8/31/2000	VELOSO
1041	Electrical Skid	8/2/2000	8/31/2000	DELONG
1042	Storage 23-202736	10/16/2000	10/31/2000	LUNA
1044	Mercury Cafeteria	9/27/2000	9/30/2000	BARNER
1045	Walk in Cold Storage	9/27/2000	9/30/2000	BARNER
1046	Mercury Garbage Facility	9/27/2000	9/30/2000	BARNER
1047	Archives and Records Center	9/26/2000	9/30/2000	BARNER
1048	Fire Station	8/15/2000	9/30/2000	LUNA
1049	Dormitory 23-475	9/26/2000	9/30/2000	BARNER
1050	Dormitory 23-476	9/26/2000	9/30/2000	BARNER
1051	16A Tunnel Clean-up	5/25/2000		MONTANA
1052	Precious Metals	5/4/2000		TOMMASIN
1053	Walkthrough of DOJ/WMD/OPS	6/15/2000		SHIPLEY

1054	Assessment of DOJ/WMD/OPS	6/15/2000		SHIPLEY
1055	FBI/SWAT Walkthrough	5/12/2000	5/12/2000	SHIPLEY
1056	FBI/SWAT Assessment	5/12/2000	5/12/2000	SHIPLEY
1058	EM-00-73 RCRA Audit	6/12/2000	6/30/2000	CARILLI
1059	BEEF Validation	5/30/2000	5/31/2000	YOERG
1060	EM-00-78 NSF Compliance Audit	6/27/2000		CARILLI
1061	EM-00-72 RCRA Audit	6/12/2000	7/31/2000	CARILLI
1062	EM-00-75 Gnome Coach Sampling	6/14/2000	6/30/2000	AFONG
1063	EM-00-74 Gasbuggy Sampling	6/8/2000	6/30/2000	AFONG
1064	EM-00-76 TRU/MW Assessment	6/15/2000	6/30/2000	TILMAN
1073	Day Room 23-477	9/26/2000	9/30/2000	BARNER
1074	Dormitory 23-478	9/26/2000	9/30/2000	BARNER
1075	Dormitory 23-479	9/26/2000	9/30/2000	BARNER
1076	Dormitory 23-480	9/26/2000	9/30/2000	BARNER
1077	Dormitory 23-481	9/26/2000	9/30/2000	BARNER
1078	Day Room 23-482	9/26/2000	9/30/2000	BARNER
1079	Dormitory 23-483	9/26/2000	9/30/2000	BARNER
1080	Dormitory 23-484	9/26/2000	9/30/2000	BARNER
1081	Bowling Alley 23-517	9/28/2000	9/30/2000	BARNER
1082	Post Office 23-525	9/27/2000	9/30/2000	BARNER
1083	Dormitory 23-526	9/26/2000	9/30/2000	BARNER
1084	Building 536 Walkthrough	6/20/2000		HOAR
1085	WSI/FBI WMD Revie	6/20/2000		HOAR
1086	Spill Test Facility Review	6/1/2000		HOAR
1087	Spill Test Facility Review	6/1/2000		HOAR
1088	Spill Test Facility Review	6/1/2000		HOAR
1089	Spill Test Facility Review	6/1/2000		HOAR
1090	Property Management	6/8/2000		TOMMASIN
1091	Generator Inspection	6/20/2000		HOWARD
1092	Spill Test Facility	5/4/2000		HOWARD
1093	TaDD Facility	4/9/2000		HOWARD
1094	TaDD Facility	5/4/2000		HOWARD
1095	DNAPLE Site	5/24/2000		HOWARD
1096	A-25 Reactor Control	5/24/2000		HOWARD
1097	UXO Survey	6/26/2000		HAMPTON
1098	Building 1001	6/27/2000		OWENSR
1099	Area 23 Station 100	6/27/2000		OWENSR
1100	Area 22, Demonstration Trailer (Cattle	6/27/2000		OWENSR
1101	DRI Assessment Contract DE-AC08-	6/19/2000		monroe
1102	PAI Assessment	6/19/2000		monroe

1103	DRI Assessment Contract DE-AC08-	6/19/2000		monroe
1104	Jasper Facility Walkthrough	5/11/2000		WHITEC
1106	RCRA Assessment		2/29/2000	CARILLI
1107	EM-00-35 RCRA	3/31/2000	3/31/2000	CARILLI
1108	Mixed Waste		4/30/2000	TILMAN
1109	EM-00-108 TRU/MW Mixed Waste	7/14/2000	8/31/2000	TILMAN
1111	RCRA		8/31/2000	CARILLI
1112	RCRA		9/30/2000	CARILLI
1114	LLW Programmatic Assessment		6/30/2000	CLAYTON
1116	EM-00-81 Monitoring Site	4/26/2000	4/30/2000	LEARY
1117	EM-00-97 Generator Program	5/31/2000	5/31/2000	SMALLK
1119	EM-00-104 Generator Program	7/19/2000	7/31/2000	SMALLK
1122	EM-00-121 RWMS Security	9/28/2000	9/30/2000	SMALLK
1123	EM-00-120 RWMS Records Inspection	9/7/2000	9/30/2000	SMALLK
1124	EM-00-117 LLW Prog	8/21/2000	9/30/2000	CLAYTON
1125	EM-00-116 LLW Operations	8/16/2000	8/30/2000	CLAYTON
1126	EM-00-122 RWAP Work Area	9/25/2000	9/30/2000	PYLES
1129	EM-00-82 A-3 & 5 RWMS Data Download	5/30/2000	5/31/2000	LEARY
1130	Surveillance Number 00-04-09, Activity	5/4/2000	5/30/2000	PENROD
1131	Implementation of Procedures is	7/10/2000	7/10/2000	SNODGRAS
1132	Escort Procedures for Guard Station 270	7/5/2000	7/5/2000	CHILDERS
1133	EH-2 ISM Evaluation	4/1/1999		
1134	DOJ/WMD/IC	6/28/2000		SHIPLEY
1135	FBI/SWAT	6/22/2000		SHIPLEY
1136	FBI/SWAT	6/22/2000		SHIPLEY
1137	Perodic Airport Safety Inspection	5/10/2000		CONLEY
1138	Aviation Safety/Self-Inspection Program	6/22/2000		CONLEY
1139	EH-2 Evaluation	4/1/1999		
1140	U1a Complex	6/14/2000		BLODGETT
1141	U1h Shaft Construction Project	6/13/2000	6/30/2000	BLODGETT
1142	Technical Operations Plan	5/17/2000		LEPPERT
1143	Damaged Weapons Drill	6/21/2000		LEPPERT
1144	Assessment of Occurrence Report	6/7/2000		BINDER
1145	Borehole Plugging	9/20/2000	9/30/2000	Schmidho
1147	Videologging of TW-5	9/27/2000	8/31/2000	Schmidho
1148	Hot Well Sampling	9/26/2000	9/30/2000	Schmidho
1149	U15K Pump Emplacement	6/23/2000		Schmidho
1150	U15K Site Specific Health and Safety Plan	6/14/2000	6/30/2000	Schmidho
1151	Monitoring Well RNM 1 Sampling Event	6/28/2000	6/30/2000	Schmidho
1152	Dosimetry Issue	7/7/2000		WHEELER

1153	FEOSH Bldg 111	6/29/2000		REMINGTO
1154	Crane Lockout/Tagout	6/14/2000		SKOUGARD
1155	NESHAP Revie	6/14/2000		SKOUGARD
1156	Indoor NSF Pesticide Spraying	5/21/2000		BOYCE
1157	Unpermitted Disposal of Solid Waste	6/14/2000		SKOUGARD
1158	4-04 Road Walkthrough	3/14/2000		SKOUGARD
1159	NEPA Onsite Followup	6/22/2000		COHNL
1160	IT Warehouse Operations	6/8/2000		TOMMASIN
1161	23-W11 Warehouse (Auto)	7/13/2000	12/31/2000	VELOSO
1162	23-W4A Warehouse	7/13/2000	12/31/2000	VELOSO
1163	Tolster Range B Complex, 23-T00056	6/13/2000	12/31/2000	CAPSHAW
1164	NSF Maintenance (ISM) Program	6/8/2000	6/30/2000	DELONG
1165	RCRA-Subtitle D - Buggy Site Closed	7/18/2000	7/31/2000	ROBERTSJ
1166	RCRA-Subtitle D - R-MAD Closed Landfill	7/18/2000		ROBERTSJ
1167	RCRA-Subtitle D-Cane Spring Closed	7/18/2000		ROBERTSJ
1168	RCRA-Subtitle D - FOC West Closed	7/18/2000		ROBERTSJ
1169	RCRA-Subtitle D - FOC East Closed	7/18/2000		ROBERTSJ
1170	RCRA-Subtitle D - Camp Closed Landfill	7/18/2000		ROBERTSJ
1171	RCRA-Subtitle D - Area 19 Camp Closed	7/18/2000		ROBERTSJ
1172	RCRA-Subtitle D - Area 18 Closed Landfill	7/18/2000		ROBERTSJ
1173	RCRA-Subtitle D - Area 16 Camp Closed	7/18/2000		ROBERTSJ
1174	RCRA-Subtitle D - BJY Closed Landfill	7/18/2000		ROBERTSJ
1175	Food Establishment Inspection	7/11/2000		BOYCE
1176	EM-00-100 Area 3, TTR	7/18/2000	7/31/2000	CABLE
1177	EM-00-101	7/18/2000	7/31/2000	CABLE
1178	Employee Suggestion #2000-01LJ-Copy	7/21/2000		BOYCE
1179	FBI - WMD Training	7/12/2000		HAMPTON
1180	Shorthorn 1401-F73J	4/12/2000		HAMPTON
1181	FBI - HAZMAT	4/11/2000		HAMPTON
1182	WMD Incident Command Training	5/10/2000		HAMPTON
1183	FBI - SWAT	6/19/2000		HAMPTON
1184	FBI - SWAT Training	6/22/2000		HAMPTON
1185	FBI - SWAT Training	6/20/2000		HAMPTON
1186	FBI - SWAT Project	3/7/2000		HAMPTON
1187	FBI - SWAT Project	3/7/2000		HAMPTON
1188	FBI - WMD Training	3/8/2000		HAMPTON
1189	FBI - WMD Training	7/25/2000		HAMPTON
1190	FBI - WMD Training	7/26/2000		HAMPTON
1191	Shorthorn 1401 F77A-F79A & F44M-	6/14/2000		HAMPTON
1192	Reactor Control Point (RCP) Inspection	7/26/2000		SAYLOR

1193	NSF Electrical	7/28/2000		KILLEN
1194	Radiological Health	7/20/2000		WHEELER
1195	OBOE 3	1/18/2000		CARTERC
1196	Thoroughbred	1/18/2000		CARTERC
1197	SEP-0441-99-01 Rad Operations	4/6/2000		CARTERC
1198	Radiological Health	7/31/2000		CARTERC
1199	SEP-0441-99-01 Rad Operations	4/19/2000		CARTERC
1201	DTRA, Process for Hazard Assessments	7/24/2000		THOMASSA
1202	Road Conditions	7/22/2000	7/22/2000	MUNDING
1203	Assess Radiological Control Posting at	7/20/2000	7/31/2000	BRONSON
1204	UXO Survey	6/26/2000		HAMPTON
1205	UXO Survey	6/6/2000		HAMPTON
1206	Facility Maintenance	7/26/2000		PENROD
1207	Housekeeping	7/26/2000		PENROD
1208	Electrical Safety	7/26/2000		PENROD
1209	Facility Maintenance	7/26/2000		PENROD
1210	HSC RSTS OWL Topkick Safety	8/2/2000		MUNDING
1211	Security Force Patrols	7/29/2000		WHITEC
1212	Assessment o Ramatrol	7/11/2000		ALDERSON
1214	Compression Fittings in Haz. Systems	8/8/2000	8/8/2000	ALDERSON
1215	Electrical System-Baker Site A-27	7/18/2000	7/18/2000	LANGENDO
1216	Electrical System-Baker City A-27	7/18/2000	7/18/2000	LANGENDO
1217	Electrical System-Baker City, Area 27	7/18/2000	7/18/2000	LANGENDO
1218	Electrical System-Baker Site, Area 27	7/18/2000	7/18/2000	LANGENDO
1219	Electrical System-Baker Site, Area 27	7/18/2000	7/18/2000	LANGENDO
1220	Unscheduled site visit - U12u	7/31/2000	7/31/2000	THOMASSA
1221	Wal through	7/27/2000	7/27/2000	ROLLINS
1222	Hazard Assessment - HQ Request	8/9/2000	8/9/2000	THOMASSA
1223	EM-00-106	7/18/2000	7/31/2000	LEARY
1224	SUNRISE '99 Correction of Deficiencies	6/27/2000	6/27/2000	BINDER
1225	SUNRISE '99 CAP Correction of	6/27/2000	6/27/2000	BINDER
1226	THOROUGHbred Safety Interlock	2/28/2000	2/28/2000	TOMLINSO
1227	OBOE #4 As-Built Review	4/3/2000	4/3/2000	TOMLINSO
1228	CP-1 Procedures	7/6/2000	7/6/2000	SNODGRAS
1230	FEP/SEP/FUP/FIMS - CP 50	8/2/2000	8/31/2000	DELONG
1234	FEP/SEP/FUP/FIMS 22-01	12/19/2000	12/31/2000	CAPSHAW
1243	NTS Review	5/2/2000		IZELL
1244	NTS Review	5/2/2000		IZELL
1245	NTS Review	5/2/2000		IZELL
1246	NTS Review	5/2/2000		IZELL



1247	NTS Review	5/2/2000		IZELL
1248	NTS Review	5/2/2000		IZELL
1249	CEMP Revie	5/2/2000		IZELL
1250	Electronic System Section Building 701	8/1/2000		OWENSR
1251	Baker Compound	7/19/2000		WHITEC
1252	Warehouse No 3	8/1/2000		OWENSR
1253	BEEF Procedures	7/31/2000		HAMPTON
1254	BEEF Operations	8/2/2000		HAMPTON
1255	Site Specific Safety Training	7/31/2000		WHITEC
1256	Security Force Patrols	7/29/2000		WHITEC
1257	Disposal of Oak Ridge Monoliths	8/8/2000		WHEELER
1258	FA 001 74C	8/9/2000		OWENSR
1259	Conduct of Experiment	8/2/2000		WHITEC
1260	ITLV 0371, Receipt of Radioactive	8/9/2000		WHEELER
1261	ITLV Radiation Source Control and	8/9/2000		WHEELER
1262	ITLV Radioactive Contamination Control	8/7/2000		WHEELER
1263	ITLV 0368 Controlling Radiological Areas	8/7/2000		WHEELER
1264	ITLV 0367 Rad Surveys and Monitoring	8/7/2000		WHEELER
1265	ITLV Rad Respiratory Protection	8/7/2000		WHEELER
1266	ITLV 0365 Rad Work Permit	8/7/2000		WHEELER
1267	ITLV Rad Safety Training	8/7/2000		WHEELER
1268	ITLV 0363 Internal Rad Dosimetry	8/7/2000		WHEELER
1269	ITLV 0362 External Rad Dosimetry	8/4/2000		WHEELER
1270	ITLV 361 ITLV ALARA Program	8/4/2000		WHEELER
1271	ITLV 360 Worker Rad Protection	8/3/2000		WHEELER
1272	Compression Fittings in Hazard System	8/14/2000	8/14/2000	PENROD
1273	Assessment of Compression Fittings for	8/9/2000		ALDERSON
1274	DOE HAZMAT Spill Center Program	8/18/2000		WHITEC
1275	NSF Electrical, Basement A and B Wings	8/11/2000		KILLEN
1276	NSF Electrical, Basement A and B Wings	8/11/2000		KILLEN
1277	Building 754 Backflow Prevention	8/10/2000		SKOUGARD
1278	BN Loan Process	8/15/2000		TOMMASIN
1279	PEP EM 4028	8/29/2000		BOYCE
1280	PEP NSR-99-2100	8/22/2000		WHEELER
1281	PEP DCP 99-6114	8/29/2000		OWENSR
1282	PEP DCP 996112	8/29/2000		OWENSR
1283	SEP 2300-01	8/28/2000		OWENSR
1284	PEP DCP 99-6105	8/28/2000		OWENSR
1285	BN DCP 99-3203, Rev 3	8/28/2000		BOYCE
1286	EH 2 ISM Evaluation	4/1/1999		

1287	Joint Testing Organization	1/26/2000		SCHLEGEL
1288				
1290	HA3 3 PEP DCP 99-3203	8/16/2000		REMINGTO
1291	Compressed Gas Cylinder Valves	8/21/2000	8/21/2000	PENROD
1292	Compressed Gas Cylinder	8/21/2000	8/21/2000	PENROD
1293	RSL Nellis Walkthrough	8/28/2000		ROBSON
1294	RSL Nellis Walkthrough	8/28/2000		ROBERTSJ
1295	Petroleum Hydrcarbon Release, Bldg	8/22/2000		ROBSON
1296	HA #3PEP DCP 99-3203 (TaDD Project)	8/16/2000		BOYCE
1297	Compressed Gas Cylinder Valves	8/15/2000	8/15/2000	LANGENDO
1298	Compressed Gas Cylinder Valves	8/23/2000	8/23/2000	LANGENDO
1299	BEEF Compressed Gas System	7/26/2000	7/26/2000	LANGENDO
1300	Compressed Gas Cylinder Valves	8/21/2000	8/21/2000	PENROD
1301	Compressed Gas Cylinder Valves	8/21/2000	8/21/2000	PENROD
1302	Compressed Gas Cylinder Valves	8/21/2000	8/21/2000	PENROD
1303	Facility Maintenance	9/7/2000	9/7/2000	PENROD
1304	Facility Maintenance	9/7/2000	9/7/2000	PENROD
1305	Missing Signs	8/28/2000	8/28/2000	PENROD
1306	PEP DCP 99-6115	9/13/2000		OWENSR
1307	FEP RSL Andrews 99-1794	8/12/2000		REMINGTO
1308	HA #3 PEP DCP 99-3203	9/13/2000		HAMPTON
1309	FEP NTS FL 99-12-J/K	9/7/2000		HAMPTON
1310	PEP-NSR-99-2109-2110	8/22/2000		WHEELER
1311	FEP-NTS-FL-99-23-B/C	9/6/2000		HAMPTON
1312	PEP-NSR-2134/38/41/43	9/11/2000		WHITEC
1313	PEP-DCP-3109-01	9/6/2000		WHITEC
1314	PEP-DCP-3109-12	9/6/2000		WHITEC
1315	PEP-NSR-99-2120	9/11/2000		WHITEC
1316	Summary Management Revie	9/8/2000		WHEELER
1317	PEP-NSR-99-2103-2105	8/22/2000		WHEELER
1318	PEP-NSR-99-2106	8/22/2000		WHEELER
1319	SEP-4500-99-01	8/7/2000		REMINGTO
1320	BEEF OPERATIONS	8/10/2000		HAMPTON
1321	PEP-SS-99-1114	9/1/2000		WHEELER
1322	PEP-SS-99-1117	9/1/2000		WHEELER
1323	Maintenance Mgmt - Fire Trucks	7/26/2000	10/31/2000	VELOSO
1324	Building 6-908	8/17/2000		Mallin
1325	Building 6-908	8/23/2000		Mallin
1326	PEP PES 99-9914	9/5/2000		REMINGTO
1327	PEP NSR 2135/40/45	9/5/2000		REMINGTO

1328	SEP 4500-99-01	8/7/2000		REMINGTO
1329	PHA FEP 6-644	8/7/2000		REMINGTO
1330	Building 23-154 ISM Assessment	9/7/2000	12/31/2000	LUNA
1331	Building 23-156 ISM Assessment	9/7/2000	12/31/2000	LUNA
1332	FUP/SEP/FUP/FIMS-23-151	9/7/2000	12/31/2000	KILLEN
1334	Project 300 Helicopter Ramp	8/12/2000	8/12/2000	DRAPER
1335	RSK West Weekly Visit	9/13/2000	9/13/2000	CONLEY
1336	Campaigns (STALLION)	8/15/2000	8/15/2000	SLICHKO
1338	Glove Box	2/17/2000	2/17/2000	LEPPERT
1339				
1340	General Housekeeping and Mining	5/4/2000	5/4/2000	MUELLERL
1341	General Housekeeping and Mining	5/4/2000	5/4/2000	SLICHKO
1342	Inspection of Cement Storage Plant	9/19/2000		SAYLOR
1343	Inspection of Cement Batch Plant	9/19/2000		SAYLOR
1344	PEP NSR 99-2155	9/20/2000		OWENSR
1345	PEP NSR 2135/40/45	9/18/2000		OWENSR
1346	RSL Nellis Weekly visit	9/20/2000	9/20/2000	CONLEY
1347	Light Duty Maintenance Shop-Bldg 750	8/15/2000	11/30/2000	VELOSO
1348	Carwash Bldg 23-756	8/15/2000	11/30/2000	VELOSO
1349	Fleet & Equipment Buldge 23-752	8/15/2000	11/30/2000	VELOSO
1350	Borehole Plugging SSHASP Revie	9/18/2000		Schmidho
1351	Video Logging SSHASP Revie	9/20/2000		Schmidho
1352	PA/CA Maintenance Plan Revie	9/12/2000		Schmidho
1353	PEP SS 99-2010	9/18/2000		CARTERC
1354	SEP 2150-99-03 Rad Laboratory	9/14/2000		CARTERC
1355	SEP 0441-99-01	9/18/2000		CARTERC
1356	FEP NTS FL 99 5 32	9/18/2000		CARTERC
1357	PEP EM 99-4003	9/15/2000		WHITEC
1358	SEP 2110 99-01	9/13/2000		WHITEC
1359	SEP 2110-99-02 Rev 0	9/12/2000		WHITEC
1360	FEP NTS FL 99-BP-1-12, Rev 0	9/12/2000		WHITEC
1361	PEP SS 99-0039	9/13/2000		WHITEC
1362	SEP 2110 99-05	9/15/2000		REMINGTO
1363	SEP 2130-99-01	9/15/2000		REMINGTO
1364	FEP FL 99-06-900	9/15/2000		REMINGTO
1365	BEEF Explosives Handling	9/14/2000		WHITEC
1366	SEP 2110 99 08	9/15/2000		HAMPTON
1367	Unscheduled visit - U12V and &12g	9/18/2000		THOMASSA
1368	Unscheduled Underground Visit - U1A	9/14/2000		THOMASSA
1369	Assessment of Bldg 132	8/29/2000	7/29/2000	ALDERSON

1370	Unscheduled site visit U12V	9/7/2000		THOMASSA
1371	Unscheduled Site Visit = U1A	8/30/2000		THOMASSA
1372	Unscheduled site visit U1A	8/30/2000		THOMASSA
1373	Unscheduled site visit - Dipole Sampson	9/7/2000		THOMASSA
1374	Assessment of Bldg 132	8/29/2000	7/29/2000	ALDERSON
1375	Building 6-908	8/23/2000	8/23/2000	ALDERSON
1376	Building 23-650	8/29/2000	8/29/2000	ALDERSON
1377	Compressed Gas Cylinder Valves	8/21/2000	8/21/2000	PENROD
1378	Compressed Gas Cylinder Valves	8/21/2000	8/21/2000	PENROD
1379	Facility maintenance	8/30/2000		PENROD
1380	Facility Maintenance	9/7/2000		PENROD
1381	Facility Operations	9/7/2000	9/7/2000	PENROD
1382	Missing Signs	8/28/2000	8/28/2000	PENROD
1383	Facility Maintenance	9/7/2000		PENROD
1384	Facility Maintenance	9/7/2000		PENROD
1385	Centrifugal Pump Bearings Leak	8/28/2000	8/28/2000	PENROD
1386	Dosimetry Badge Ciolation	8/24/2000	8/24/2000	PENROD
1387	Dosimetry Badge Violation	8/23/2000	8/23/2000	PENROD
1388	Initial Facility Walkthrough	1/24/2000	1/24/2000	LEEDOM
1389	Automatic Interlock System Review	3/17/2000	3/17/2000	LEEDOM
1390	N Walkthrough	10/5/2000		BRONSON
1391	U-12"v" Tunnel	9/25/2000		THOMASSA
1392	Lead Exposure Control	9/12/2000	6/5/2000	PENROD
1393	Lead Exposure Control	9/12/2000	6/5/2000	PENROD
1394	Housekeeping and Fire Protection	9/14/2000	9/7/2000	PENROD
1395	Housekeeping and Fire Protection	9/14/2000	9/7/2000	PENROD
1396	OBOE #5 As-Built Review	8/10/2000	8/10/2000	TOMLINSON
1397	RSL West Weekly Visit	9/27/2000	9/27/2000	CONLEY
1398	Site Work Practices	10/17/2000	10/17/2000	SPAHN
1399	EM-01-16 ER-5-3 #3	1/17/2000	1/31/2001	WINFIELD
1405	UGTA Field Activities		6/30/2001	BANGERTE
1409	CAU 135 Area 25 USTs	11/29/2000	11/30/2000	CABLE
1411	CAU 409 Area 3 Septic Waste Systems	11/15/2000	11/30/2000	CABLE
1416	EM-01-07 CAU 262 Area 25 Septic	11/2/2000	11/30/2000	CURTIS
1423	EM-01-05 CAU 262 Area 25	11/7/2000	11/30/2000	WING
1427	CAU 254 R-MAD Decon Facility		9/30/2001	WING
1428	EM-01-01 CNTA Cover Seeding	10/17/2000	10/31/2000	SANDERS
1429	EM-01-02 Shoal Sump Closure	11/6/2000	11/30/2000	SANDERS
1439	Amchitk		9/30/2001	SANCHEZM
1449	TRU/MW/SW Program		9/30/2001	COLARUSS

1455	WMD LLW Program		9/30/2001	CLAYTON
1456	EM-01-10 CAU 262	11/20/2000	11/30/2000	WYCOFF
1460				Bedsun
1461	REOP Assessment		1/31/2001	MCCLUREB
1462	WMD Baseline Assessment		3/31/2001	MCCLUREB
1467	NTS Facility Survey	4/13/2000	10/14/2000	SCHLEGEL
1468	CAA/CWA Sites	10/17/2000	10/31/2000	SAYLOR
1469	CAA Permit-NTS	10/17/2000	10/31/2000	SAYLOR
1470	RSL Assessment	10/11/2000	10/30/2000	REMINGTO
1471	Uninterruptible Power Supply Room	10/19/2000		BOYCE
1472	USGS Assessment	10/19/2000	10/16/2000	REMINGTO
1473	SEP 0444-99-01 Reassessment	9/13/2000		ROBSON
1474	UXO Walkthrough	10/23/2000		HOWARD
1475	Hazardous Spill Test Facility	8/28/2000		HOWARD
1476	Transportation	10/12/2000		HOWARD
1477	Area 27 Walk-through	10/4/2000		OWENSR
1478	DOE/NV NVIC	9/13/2000		SCHLEGEL
1479				
1480	SEP 2130-07 BEEF	9/28/2000	9/30/2000	BOYCE
1481	Safety Basis for REOP	10/19/2000	10/19/2000	LEEDOM
1482	Chemical Safety	10/3/2000		BOYCE
1483	Army Research Laboratory	10/18/2000	10/18/2000	WOOD
1484	PEP NSR 99-2103-2105	8/25/2000		REMINGTO
1485	Suspected Unapproved Parts	10/18/2000	10/18/2000	CONLEY
1486	Area 6, Cable Fab/Test Shop (SEP 2110-	9/13/2000		ROBSON
1487	SARA Title III, Tier II	10/3/2000		ROBERTSJ
1488	PEP NSR 99-2109 & 2110 Consequence	9/21/2000		BUNN
1490	FEP NTS FL 99-23-425	9/20/2000		BUNN
1491	SEP 3600-99-01	8/8/2000		BUNN
1492	FEP NTS FL 99-23-425	9/20/2000		BUNN
1493	U3cn Sampling Effort	7/18/2000		Schmidho
1494	Utility Maintenance	10/10/2000	10/31/2000	DELONG
1497	NSF Maintenance Program	10/30/2000	10/31/2000	DELONG
1498	NSF Maintenance Program	11/22/2000	11/30/2000	DELONG
1499	NSF Maintenance Program	12/13/2000	12/31/2000	DELONG
1500	Building 23-527, Dormitory	10/25/2000	10/31/2000	BARNER
1501	Building 23-529, Dormitory	10/25/2000	10/31/2000	BARNER
1502	Building 23-521, Dormitory	10/25/2000	10/31/2000	BARNER
1503	Building 23-532, Dormitory	10/25/2000	10/31/2000	BARNER
1504	Building 23-535, Dormitory	10/25/2000	10/31/2000	BARNER

1505	Building 23-536, Dorm Utility Bldg	10/26/2000	10/31/2000	BARNER
1507	Administrative - 23-630	10/26/2000	10/31/2000	BARNER
1508	Dormitory, 23-675	10/25/2000	10/31/2000	BARNER
1509	Dormitory 23-676	10/25/2000	10/31/2000	BARNER
1510	Day Room 23-677	10/25/2000	10/31/2000	BARNER
1511	Dormitory 23-678	10/25/2000	10/31/2000	BARNER
1512	Dormitory 23-679	10/25/2000	10/31/2000	BARNER
1513	Dormitory 23-680	10/25/2000	10/31/2000	BARNER
1514	Dormitory, 23-681	10/25/2000	10/31/2000	BARNER
1515	Day Room, 23-682	10/25/2000	10/31/2000	BARNER
1516	Dormitory, 23-683	10/25/2000	10/31/2000	BARNER
1517	Dormitory 23-684	10/25/2000	10/31/2000	BARNER
1518	Maintenance Shop 23-700	10/26/2000	10/31/2000	BARNER
1521	WSI Incinerator, 23-708990	11/21/2000	11/30/2000	BARNER
1522	Craft Building, 23-710	11/22/2000	11/30/2000	KILLEN
1523	Telecommunications, 230725	10/31/2000	11/30/2000	DELONG
1524	Print Plant/Radio Comm, 23-726	10/31/2000	11/30/2000	DELONG
1525	Skid, 23-726A	10/31/2000	11/30/2000	DELONG
1526	Boiler House, 23-753	11/27/2000	11/30/2000	DELONG
1527	Cafeteria Boiler Bldg 23-754	11/30/2000	12/31/2000	DELONG
1528	Skid, 23-755	10/31/2000	11/30/2000	DELONG
1529	Utility Warehouse 23-775	11/20/2000	11/30/2000	DELONG
1531	Utility Warehouse, 23-777	11/21/2000	11/30/2000	VELOSO
1532	CETO/BECAMP lab 23-790	11/22/2000	11/30/2000	LUNA
1533	Shelter for Steam Jenny, 23-810A	11/21/2000	11/30/2000	BARNER
1536	Lab, 23-Q34	12/11/2000	12/31/2000	LUNA
1537	Christian Fellowship, 23-Q35	12/11/2000	12/31/2000	LUNA
1539	Microwave Shelter, 23-VAN-1	11/30/2000	12/31/2000	DELONG
1540	Warehouse Property, 23-W1	12/5/2000	12/31/2000	DELONG
1542	Linemen/Wiremen Shop, 23-W2	12/5/2000	12/31/2000	DELONG
1543	Warehouse, 23-W3	12/28/2000	12/31/2000	BARNER
1545	Warehouse, 23-W4	12/18/2000	12/31/2000	CAPSHAW
1546	Health Club, 23-W5	12/27/2000	12/31/2000	BARNER
1548	Warehouse, 23-W6	12/27/2000	12/31/2000	BARNER
1549	Site Maintenance, 23-W7	12/27/2000	12/31/2000	BARNER
1550	RAP Storage Building, 23-W7A	12/27/2000	12/31/2000	BARNER
1551	Backbone Microwave, 25-198249	12/4/2000	12/31/2000	DELONG
1552	BN Andrews Operations Facility Survey		2/28/2001	
1553	BN Special Technologies Lab Facility		12/31/2000	
1554	BN Special Technologies Lab SCI		12/31/2000	

1555	DOE/OSO Facility Survey		12/14/2000	
1556	LANL Facility Survey		1/31/2001	
1557	LLNL Facility Survey		12/31/2000	
1558				
1559	Evacuation Alarm Assessment U1A	10/10/2000	8/6/2000	THOMASSA
1560	Facility Maintenance	10/26/2000		PENROD
1561	Training Meeting	10/31/2000		PENROD
1562	DTRA Experiment Execution Dipole	11/1/2000		THOMASSA
1563	DTRA Experiment Execution Dipole	10/23/2000		THOMASSA
1564	DTRA Experiment Execution Dipole	10/30/2000		THOMASSA
1565	DTRA Explosives Loading Operations	10/19/2000		THOMASSA
1566	Facility Management	10/31/2000		PENROD
1567	Transfer of Tennelec between facilities	11/1/2000		PENROD
1568	Preventative Maintenance for Diesel	10/31/2000	10/31/2000	AFONG
1569	Facility Management	10/18/2000		PENROD
1570	Facility Maintenance	10/17/2000		PENROD
1571	Building 117	10/16/2000	10/16/2000	ALDERSON
1572	Fire Suppression System on Mining	9/25/2000	8/31/2000	THOMASSA
1573	Teamsters Office	10/25/2000		BARNER
1574	EM-00-127 CNTA Sampling	3/13/2000	3/31/2000	SANCHEZM
1575	Hazardous Spill Test Facility Walkthrough	10/30/2000		HOWARD
1576	NTS Balance of Plant	10/30/2000		HOWARD
1577	NTS Balance of Facility	10/30/2000		HOWARD
1578	TaDD	10/30/2000		HOWARD
1582	Helicopter Maintenance	11/8/2000	11/30/2000	VELOSO
1583	BEEF Assessment	10/18/2000	10/18/2000	YOERG
1584	Angel Peak Generator	11/2/2000	1/31/2001	DELONG
1585	Shoshone Rec #301623	10/17/2000	1/31/2001	DELONG
1586	Shonshone Trans 201624	10/17/2000	1/31/2001	DELONG
1587	Angel Peak #18 999811	11/2/2000	1/31/2001	DELONG
1588			12/31/2000	
1589	Skull Microwave	12/4/2000	1/31/2001	DELONG
1590	Reportable Petroleum Hydrocarbon	10/3/2000		ROBSON
1591	U3CN Sampling Effort			
1592				
1593	J-13 Hi-Line Booster	11/21/2000	1/31/2001	VELOSO
1594	Mercedes Project	11/28/2000	11/28/2000	DRAPER
1595	Site Visit (Contractor Self-Assessments)	12/11/2000	12/11/2000	SPAHN
1596	RSL Nellis Aviation Assessment	10/31/2000	10/31/2000	CONLEY
1597	Desert Rock Airport Inspection	11/8/2000	11/8/2000	CONLEY

1598	Beechcraft Service Bulletins	11/8/2000	11/8/2000	CONLEY
1599	CEMP Website & Database	11/13/2000		HURLEY
1600	NLV Building C-1 Physical Fitness Facility	11/7/2000		OWENSR
1601	NSF Building	11/7/2000		OWENSR
1602	UXO Location Concern	11/20/2000		WHITEC
1603	SHORTHORN 1401-F Series	10/18/2000		HAMPTON
1604				
1605	U1a Complex	11/14/2000		BLODGETT
1606	Safety Assessment of 1st & 2nd Floor	12/27/2000		REMINGTO
1607	Initial Program Visit and Familiarization	12/20/2000	12/31/2000	GINANNI
1608	96-TASS	1/4/2001	1/3/2001	SNODGRAS
1609	Contract Co-Pilot Program Assessment	11/30/2000	11/30/2000	GINANNI
1610	FRMAC Phase I and II Assessment	1/4/2001	1/4/2001	OLAUGHLI
1611	U1h Shaft Construction Project	1/4/2001	1/31/2001	BLODGETT
1612	Status of Ranch Monitoring Station	1/8/2001		HURLEY
1613	Status of Building A-1 Source Well	1/4/2001		HURLEY
1614	Weather Observatory, Building CP-170	12/19/2000		LUNA
1615	Conducted as NTS Duty Officer for SMD	12/25/2001	12/25/2001	WOOD
1616	EMD Budget	1/10/2001	1/10/2001	ROBERTSC
1617	Facility Display	1/8/2001	1/8/2001	SPAHN
1618	BEEF Suspended Operations Revie	1/18/2001	1/18/2001	HANSON
1619	LAO	1/4/2001	1/4/2001	SLICHKO
1620	Site Visit	1/18/2001	1/18/2001	SPAHN
1621	Building A-1 Walkthrough	1/22/2001		SKOUGARD
1622	Desert Inspection	12/20/2000	12/20/2000	CONLEY
1623	LAO	1/4/2001	1/4/2001	SLICHKO
1624	RSL Helicopter Operations	1/16/2001	1/16/2001	GINANNI
1625	Semi-Annual Assessment of Pulsed	1/17/2001	1/17/2001	LEEDOM
1626	NES Master Study of Security Opns at	12/4/2000	12/4/2000	HANSON
1627	Suspended Opns for Review of Hazmat	1/18/2001	1/18/2001	HANSON
1628	Suspended Opns for Reviw of U1a	1/16/2001	1/16/2001	HANSON
1629	Suspended Opns for Review of DTRA	1/16/2001	1/16/2001	HANSON
1630	Suspended Opns for Review of TUR PAD	1/16/2001	1/16/2001	HANSON
1631	Suspended Opns for Review of Waste	1/16/2001	1/16/2001	HANSON
1632	Suspended Opns for Review of Area 3 &	1/16/2001	1/16/2001	HANSON
1633	U1a Complex	1/18/2001	1/31/2001	BLODGETT
1634	Site Visit	1/25/2001	1/8/2001	SPAHN
1635	Calico Dune	1/19/2001	1/19/2001	DRAPER
1636	NN-20	1/24/2001	1/24/2001	ROBERTSC
1637	Fencing Cut Around Uncollapsed Crater	10/19/2000	10/19/2000	FRIEDRIC



## **BN ES&H ASSESSMENT OVERVIEW**

Bechtel Nevada (BN), in concert with Department of Energy Nevada Operations Office (DOE/NV), has established an Integrated Safety Management System that utilizes feedback and improvement as the prime means of assuring continuous improvement of performance and processes. BN personnel use a wide variety of mechanisms to assess and measure performance. These mechanisms provide BN management with the information necessary to evaluate performance and identify and implement improvements. Methods for feedback and opportunities for improvement are provided through worker involved assessments, management assessments, occurrence analysis, commitment tracking, causal analysis, training and external assessments. The principal feedback mechanisms that are used are self-assessments and independent assessments. Managers define the level of management self-assessments and include an assessment schedule in their management and execution plans. The BN Performance Assurance organization conducts independent assessments to verify compliance with applicable quality requirements, DOE policies and procedures. The corrective actions that are required as a result of these assessment activities are assigned to responsible management, prioritized, and tracked to closure. BN managers are then responsible for assuring that appropriate corrective actions are implemented. BN assessment activities are coordinated with and monitored by DOE/NV consistent with DOE/NV M 220.X, "Oversight Management."

Other specific processes that are utilized for oversight and evaluation of BN activities in environment, safety and health include performance of critiques of incidents/events, root cause analysis, and lessons learned evaluations. BN has also established ES&H Committees to actively involve employees in evaluating ES&H issues, a Fire Safety Review Board to perform fire safety reviews and an Electrical Safety Committee to oversee electrical safety activities. The BN General Manager has also established an Executive Safety Steering Committee that provides direction and approves, supports and monitors safety initiatives at the executive management level.

In the past 24 months, BN has performed in excess of 750 management self-assessments, 41 independent assessments and has been subjected to 27 assessments by external organizations, all of which partially or fully reviewed environment, safety and health performance. These assessments have been summarized into general category types in the attached matrix.

## **VITAL SAFETY SYSTEM ES&H ASSESSMENTS**

To date, the scope of BN assessments has not specifically focused on ensuring the status and operability of vital safety systems as is defined in the Department of Energy's Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2000-2, *Configuration Management, Vital Safety Systems*. The vital safety systems that have been identified for BN managed facilities have, however, been reviewed and evaluated as part of the authorization basis development process associated with the respective facilities. These processes include the facility initial testing program, the facility in-service surveillance program and the facility maintenance program. The facility initial testing program is utilized to ensure that new, modified, or refurbished systems and/or components perform satisfactorily in accordance with design parameters. The vital safety systems are subjected to in-service surveillance using the

guidance contained in DOE Order 5480.22, *Technical Safety Requirements*. These surveillances include testing, calibration and inspection and are utilized to ensure operability of these systems.

Bechtel Nevada maintenance programs have established a formal program of regular inspections and diagnostics that assure that vital safety systems will perform as designed and maintain required safety margins.

	<b>Management Self-Assessments</b>	<b>Independent Assessments</b>	<b>External Assessments</b>
<b>Safety &amp; Hazard Controls</b>	<b>98</b>	<b>14</b>	<b>10</b>
<b>Environmental Compliance</b>	<b>15</b>	<b>2</b>	<b>8</b>
<b>Industrial Hygiene</b>	<b>&gt;400</b>	<b>0</b>	
<b>Facility Review</b>	<b>11</b>	<b>18</b>	
<b>Engineering Reviews</b>	<b>4</b>	<b>1</b>	
<b>Procedure/Processes</b>	<b>23</b>	<b>5</b>	<b>4</b>
<b>Training Reviews</b>	<b>6</b>		
<b>Quality Assurance Reviews</b>	<b>40</b>		
<b>Integrated Safety Management</b>	<b>6</b>	<b>1</b>	<b>4</b>
<b>Ergonomic Reviews</b>	<b>193</b>		

SEPARATION

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## *DOE Nevada Operations Office*

### **DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB) RECOMMENDATION 2000-2**

### ***CONFIGURATION MANAGEMENT, VITAL SAFETY SYSTEMS COMMITMENT #20***

### **"SAFETY SYSTEM ENVIRONMENT, SAFETY & HEALTH (ES&H) ASSESSMENTS" February 23, 2001**

DOE/NV is responsible for the ES&H programs at the Nevada Test Site where the facilities containing vital safety systems are located. Organizations that hold a primary interest in these facilities are DOE/NV, Bechtel Nevada (BN), Lawrence Livermore National Laboratory (LLNL) and Los Alamos National Laboratory (LANL). The results of assessments conducted by each of these organizations are summarized in this letter and enclosed for your review.

#### **DOE Nevada Federal Staff**

DOE/NV developed NV M 220.XA, *DOE/NV Oversight Management System*, to address oversight and assessment issues for operations. NV M 220.XA defines the requirements and processes NV use to track and promote continuous improvement. DOE/NV performs oversight of National Laboratory operations conducted under its purview and provides the DOE Albuquerque and Oakland Operations Offices with input concerning the safety performance of the laboratories. DOE/NV's oversight system is comprised of management and internal and external independent assessments; operational awareness walkthroughs; validations of contractor assessments; formal technical assessments; and verification of contractor/user corrective actions. DOE/NV also established a Management System Steering Panel to review summarized information derived from assessments to review corrective action closure progress, important trends, and recommendations regarding future oversight priorities.

The primary focus for the DOE/NV field office during calendar year 2000 was to prepare for the Phase I and II Integrated Safety Management (ISM) assessments and to ensure that the ISM procedures, feedback mechanisms, and controls are in place and flow down to all levels. One aspect of that implementation was the establishment of an Oversight Tracking System (OTS) to be used by DOE/NV management for the tracking of assessments and findings and provide a means of judging relative risk of those findings. During 2000, the staff at DOE/NV performed almost 1600 assessments in all areas of ES&H (see enclosure 1); specifically, DOE/NV performed 10 assessments at DAF, 27 at the U1a Complex, and 7 at the Waste Examination Facility. To date, the scope of DOE/NV assessments has not specifically focused on ensuring the status and operability of vital safety systems as is defined in the DOE's Implementation Plan for DNFSB Recommendation 2000-2, *Configuration Management, Vital Safety Systems*. Nonetheless, the majority of assessments performed at NV high hazard facilities such as the

Device Assembly Facility (DAF), the U1a Complex, and the Area 5 Waste Examination Facility did look at these vital systems as a part of both management and facility assessments. For example, during a facility assessment at DAF, the condition of the ventilation system or radiation monitoring system was evaluated even though the focus of the assessment was general industrial safety within the facility.

### Bechtel Nevada

Bechtel Nevada (BN), in concert with Department of Energy Nevada Operations Office (DOE/NV), established an Integrated Safety Management System that utilizes feedback and improvement as the prime means of assuring continuous improvement of performance and processes. BN personnel use a wide variety of mechanisms to assess and measure performance, including: worker involved assessments, management assessments, occurrence analysis, commitment tracking, causal analysis, training and external assessments. The principal feedback mechanisms used are self- and independent assessments. Project managers define the level of management self-assessment required for the project and include an assessment schedule in their management and execution plans. The BN Performance Assurance organization conducts independent assessments to verify compliance with applicable quality requirements, DOE policies and procedures. The corrective actions that are required as a result of these assessment activities are assigned to responsible management, prioritized, and tracked to closure. BN managers are then responsible for assuring that appropriate corrective actions are implemented. BN assessment activities are coordinated with and monitored by DOE/NV consistent with DOE/NV M 220.X, "Oversight Management."

Other specific processes that are utilized for oversight and evaluation of BN activities in ES&H include performance of critiques of incidents/events, root cause analysis, and lessons learned evaluations. BN also established ES&H Committees to actively involve employees in evaluating ES&H issues, a Fire Safety Review Board to perform fire safety reviews and an Electrical Safety Committee to oversee electrical safety activities. The BN General Manager established an Executive Safety Steering Committee that provides direction and approves, supports and monitors safety initiatives at the executive management level.

In the past 24 months, BN has performed in excess of 750 management self-assessments, 41 independent assessments and has been subjected to 27 assessments by external organizations, all of which partially or fully reviewed ES&H performance. These assessments have been summarized into general category types in the attached matrix (see enclosure #2).

To date, the scope of BN assessments has not specifically focused on ensuring the status and operability of vital safety systems. The vital safety systems that have been identified for BN managed facilities have, however, been reviewed and evaluated as part of the authorization basis development process associated with the respective facilities. These processes include the facility initial testing program, the facility in-service surveillance program and the facility maintenance program. The facility initial testing program is utilized to ensure that new,

modified, or refurbished systems and/or components perform satisfactorily in accordance with design parameters. The vital safety systems are subjected to in-service surveillance using the guidance contained in DOE Order 5480.22, *Technical Safety Requirements*. These surveillances include testing, calibration and inspection and are utilized to ensure operability of these systems.

Bechtel Nevada maintenance programs have established a formal program of regular inspections and diagnostics that assure that vital safety systems will perform as designed and maintain required safety margins.

### **Lawrence Livermore National Laboratory**

LLNL is the NTS customer with lead responsibility for several facilities at the NTS, such as: the Device Assembly Facility (DAF), the Big Explosive Experimental Facility (BEEF), the Joint Actinide Shock Physics Experimental Research (JASPER), etc. As such, each facility may house several tenants from DOE/NV to BN to LANL to LLNL. This means that those facilities are assessed by LLNL as the lead as well as other tenants or customers. For LLNL, such documents as the ISM Plan, the LLNL N-Program ISM Requirements Matrix and DOE/NV Orders drive the assessment requirements. Specific lines of assessment are developed from the requirements identified in the above documents and performed by a team of qualified, independent ES&H subject matter experts. The assessments involve interviews of management, supervisor personnel, and workers, as well as, document reviews, and specific facility walkthroughs. Assessment reports are generated and contain several categories of findings, observations, recommendations, and deficiencies as determined by the team. The report, after undergoing factual accuracy review, is forwarded to the Facility Manager, Test Director, N-Program Nevada Resident Manager, N Program Leader, the DNT Associate Director, N Program Lessons-Learned Coordinator, BN, LANL, and DOE/NV. The findings requiring action are tracked to closure through existing management systems and verified during follow-up of the self-assessment teams at a latter date. Most recent self-assessments were performed at DAF in December 2000 and at U1a in August 2000. Enclosure #3 are copies of the assessment logs of programmatic and facility assessments performed for LLNL managed facilities, such as DAF, at the Nevada Test Site.

### **Los Alamos National Laboratory**

LANL is the NTS customer with lead responsibility for the U1a Complex. The U1a Complex houses many tenants from DOE/NV to BN to LANL to LLNL. As such, the U1a complex is assessed by nearly every entity with nearly every form of assessment previously identified (management, technical, self-assessments, etc.). For example, LANL LIR 307-01-01, Safety Self Assessment, requires self-assessments of organizational safety performance. It outlines the plan by which assessments will be performed to review work with the goals of improving safety through observation and feedback and improving ISM. The site specific U1a Complex Safety plan also directs assessment activities. U1a assessments are tracked via the DX-4-NTS-IP-00-077, *LANL Tracking Lessons Learned*, along with the tracking systems of the other assessing organizations. Enclosure #4 details examples of regular assessments, as well as maintenance requirements.

performed at the U1a Complex.

In summary, DOE/NV and its contractors/users utilize all forms of assessments to ensure the safety of the public, worker, and environment. DOE/NV will ensure that future assessments focus on our defined vital safety systems for our high hazard facilities.

SEPARATION

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**Bechtel Nevada**

**Unclassified Only**

**FAX Cover Sheet**

Date: 2/1/01	Time: 09:45	Number of Pages: 8	Control Number:
To: Clayton Barrow		From: Scott Doney	
Organization: DOE		Organization: BN	
FAX Number 5-2383	Phone Number 5-7960	FAX Number 702 295-6337	Phone Number 702 295-7567

Message:

Clayton,

Enclosed are LLNL assessment logs that contain the information on LLNL ES&H assessments performed in the last 12 months that you requested. For your convenience I have single asterisked those LLNL assessments related to ES&H. Double asterisks indicate specific DAF configuration management program assessments (DAF-CMA-XX-XX). LLNL assessments include programmatic assessments and facility assessments. Therefore, I have enclosed the following assessment logs:

- **LLNL-NTO Assessment Log (Facility and Programmatic)**
- **DAF Assessment Log (Facility)**
- **JASPER Assessment Log (Facility)**
- **Joint Labs MC&A Internal Review Assessment (IRA) Log (LLNL/LANL Material Control and Accountability Program)**

Note: Inspections (IR-XX-XXX) are ES&H walkthrough assessments performed at LLNL NTS facilities by the LLNL-NTO Safety Engineer.

Also enclosed is the LLNL Actions on 2000-2 Implementation Plan through FY-01 showing LLNL 2000-2 commitments and the applicable due dates. Please note that the Device Assembly Facility is the only LLNL facility at the NTS containing defined vital safety systems at this time. Commitments applicable to the DAF are asterisked for your convenience.

If I can be of further assistance, please contact me at 5-7567 or my pager 4-6854.

Scott Doney   
LLNL-NTO Quality Assurance Engineer

# LLNL-NTO Assessment Log

Revised:  
2/1/2001

Assessment #	Assessment Title	Date	Assessed Org./Facility	Assessment Scope	Assessor / Assessee	Status
IR-00-012 *	Inspection of Area 23 Building 604	6/14/2000	LLNL-NTO Area 23 Mercury Bldg 601	ES&H Inspection TCR:00-054	T. C. Roy / M. W. Owens	Open
AR-00-002 *	Independent Audit of BHEP implementation of ISM	6/21/2000	LLNL-NTO / BHEP	Implementation of LLNL & DOE/NV ISM requirements at BHEP	J. Page / Felske	Open
SR-00-003 *	Survey of LLNL-NTO Radiological Control Program	6/28/2000	LLNL-NTO ES&H / Building 600	Survey of the NTO Radiological Control Program	S. L. Doney / J. Haerberlin	Open
IR-00-013 *	Inspection of Area 12 Core Library	6/29/2000	LLNL-NTO Area 12 Core Library	ES&H Inspection TCR:00-062	T. C. Roy / J. Haerberlin	Open
IR-00-014 *	Inspection of Building 600 Machine Shop	7/27/2000	LLNL-NTO Area 23 Bldg 600 Machine Shop	ES&H Inspection FR:00-023	Doney / L. Land	Open
AR-00-003 *	Nuclear Explosive Safety Internal Assessment Report	8/8/2000	LLNL DNT / NTS	Independent Audit of NTS Nuclear Explosive Safety	Davito / Natrass	Open
IR-00-015 *	Inspection of Nuke Chemistry Environmental Trailer	9/12/2000	LLNL-NTO Area 23 Iso Science Div. Trailer 2592	ES&H Inspection TCR:00-066	T. C. Roy / Kernally	Closed
IR-00-016 *	Inspection of Area 23 Building 600	9/14/2000	LLNL-NTO Area 23 Building 600	ES&H Inspection TCR:00-067	T. C. Roy / Butler	Closed
IR-00-017 *	Inspection of Area 6 CP-9 CADAC	9/18/2000	LLNL-NTO Area 6 Building CP-9	ES&H Inspection TCR:00-068	T. C. Roy / Butler	Open
IR-00-018 *	Inspection of Area 27 Building 5305	9/27/2000	LLNL-NTO Area 27 Building 5305	ES&H Inspection TCR:00-070	T. C. Roy / Owens	Open
IR-00-019 *	Inspection of Area 27 Building 5310	9/27/2000	LLNL-NTO Area 27 Building 5310	ES&H Inspection TCR:00-071	T. C. Roy / Owens	Open
IR-00-020 *	Inspection of Area 27 Building 5306	9/27/2000	LLNL-NTO Area 27 Building 5306	ES&H Inspection TCR:00-073	T. C. Roy / Owens	Closed
SR-00-004 *	ISM Survey of BHEP Area 4	10/30/2000	LLNL-NTO / BHEP	ISM Implementation Survey	Felske Doney / Christensen	Open
SR-00-005 *	ISM Survey of Uls Area 1	11/30/2000	LLNL-NTO / Uls	ISM Implementation Survey	Walt Pro Doney / Conrad	Open

# LLNL-NTO Assessment Log

Revised:  
2/1/2001

Assessment #	Assessment Title	Date	Assessed Org./Facility	Assessment Scope	Assessor / Assessee	Status
AR-00-005 *	Independent Audit of DAF implementation of ISM	11/30/2000	LLNL-NTO / DAF	Independent Audit of ISM Implementation	Kmi Ldo Loo / Higgs	Open
AR-00-004	DNT Verification Assessment Report of Closure of NTO Deficiencies	11/30/2000	LLNL DNT / NTS	Independent Verification Audit of NTS Closed Deficiencies	O'Grady / Higgs	Closed
IR-00-021 *	Inspection of Area 23 Building 601	12/6/2000	LLNL-NTO / Building 601	ES&H Inspection TCR:00-083	T C Roy / Butler	Open
IR-00-022 *	Inspection of Area 23 Warehouse 128	12/6/2000	LLNL-NTO / Warehouse 128	ES&H Inspection TCR:00-084	T C Roy / Hyatt	Open
IR-00-023 *	Inspection of U1a Support Trailers Area 1	12/13/2000	LLNL-NTO / U1a	ES&H Inspection TCR:00-085	T C Roy / Reid	Closed
SR-01-001 *	ISM Survey of LLNL Core Library Area 12	1/30/2001	LLNL-NTO / LLNL Core Library	ISM Implementation Survey	Felske/Watts / Prokoach	Open
SR-01-001 *	ISM Survey of LLNL CP-60 Facility Area 6	1/30/2001	LLNL-NTO / CP-60	ISM Implementation Survey	Felske/Watts / Prokoach	Open

J.F.B. 5.2001 9:07AM LLNL-NTO TECH. GRPS.

NO. 114 P. 4/8

# DAF Assessment Log

New  
 Dup  
 Sort

Week Ending: 5/28/98

Asst Number	Deficiencies	Asst Date	Assessor	Description	Assigned	Status	Closed	Closing	Document
DAF-CMA-00-01	** Yes	1/4/2000	Millett	Three Change Package Assessment	Millett	Open			
DAF-MA-00-02	No	1/6/2000	Millett	Maintenance Program Assessment	Millett	Closed	1/6/2000		
DAF-MA-00-09	* No	1/11/2000	Ferdy	Con Ops Lockout/Tagout	Jarvey	Closed	1/11/2000		
DAF-MA-00-10	No	4/8/2000	Ferdy	WSI Maintenance Procedures Assessment	Jarvey	Closed	4/8/2000		
DAF-CMA-00-07	** Yes	4/24/2000	Wilhelm	Top Change Request Review	Millett	Open			
DAF-MA-00-24	* Yes	4/25/2000	Betts	Annual DAF Safety Inspection	Betts	Open			
DAF-MA-00-01	* No	4/30/2000	Henspire	Annual Training and Qualification Program Assessment	Blake	Closed	4/30/2000		
DAF-MA-00-06	Yes	5/15/2000	Doney	CATS Deficiency Trend Analysis	Fellows	Open			
DAF-MA-00-15	No	5/18/2000	Doney	BN Procurement Compliance with the BN PAMP	Doney	Closed	5/18/2000		
DAF-MA-00-03	* Yes	7/03/2000	Wherry	Emergency Management Readiness Assessment	Wherry	Open			
DAF-CMA-00-03	** Yes	8/09/2000	Capshaw	Safety Screen/Eval Package Review	Millett	Open			
DAF-IA-00-02	Yes	8/21/2000	Williams	Annual Security Audit	Williams	Open			
DAF-CMA-00-04	** Yes	9/11/2000	Capshaw	Work Order Package Review	Millett	Open			
DAF-MA-00-21	Yes	9/21/2000	Millett	Surveillance Program Assessment	Millett	Open			
DAF-MA-00-11	Yes	10/16/2000	Shariri	Authorization Basis Assessment	Shariri	Open			
DAF-MA-00-07	Yes	10/17/2000	Miles	Assessment of DAF Facility Operations Control Process	Shariri	Open			
DAF-IA-00-01	* Yes	11/09/2000	Miles	Audit of DAF Criticality Safety Program	Flann	Open			
DAF-MA-00-09	* No	1/11/2001	McMorris	Conduct of Operations Lockout/Tagout Assessment	Jarvey	Closed	1/11/2001		

FEB. 5. 2001

9:07AM

LNL-NTD TECH. GRPS.

NO. 114

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# Assessment Log

Revised:  
2/1/2001

Assessment #	Assessment Title	Date	Assessed Org./Facility	Assessment Scope	Assessor / Assessee	Status
ISR-00-001	Survey of JASPER Training and Qualification Program	10/23/2000	JASPER Training / JASPER	Baseline Survey of JASPER Core Staff Training and Qualification	Dooley/Ashbaugh / Blake	Closed
ISR-00-002	Survey of JASPER CW X-ray Sensor, UVCS & Beam Break System	11/15/2000	JASPER Diagnostics / JASPER	Survey of CW X-Ray and UCVS Instrumentation Functionality	Thompson / Whitcomb	Open

**Joint**

**Labs**

# MC&A IRA LOG

Revised: 9/20/2000

Assessment #	Assessment Title	Date	Assessed Org./Facility	Assessment Scope	Assessor / Assessee	Status
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IRA-00-001

\* Use of Tamper Indicating Devices

8/17/2000

MC&A Management /  
CP-100 and DAF

Procurement, storage, issuance,  
application, and removal of TIDs

Dooney /  
Roth

Open

**LLNL Actions on 2000-2 Implementation Plan Through FY01**

	Due Date	Affected Facilities	Task
Commitment 2	11/30/00	All LLNL nuclear facilities	Develop VSS List
Commitment 3	2/28/01	B332	Do Phase I Assessment Safety Class, Confinement Ventilation, Fire Protection
Commitment 4	5/31/01	B231V, B334, B331, * DAF, B233CSU	Do Phase I Assessment Safety Class, Confinement Ventilation, Fire Protection
Commitment 5	6/30/01	B231V, B334, B331, B332, * DAF, B233CSU	Do Phase I Assessment of all remaining VSSs
Commitment 8	3/31/01	* LLNL Nuclear Facilities with VSS ventilation	Review and comment on CRAD for Ventilation Systems
Commitment 10	6/30/01	B332 (if Applicable)	Potentially Do Pilot Assessment of Ventilation
Commitment 11	8/30/01	* LLNL Nuclear Facilities with VSS ventilation	Develop ventilation system corrective actions and enter into tracking system
Commitment 15	3/31/01	* All LLNL nuclear facilities	Review and comment on DOE system engineer concept and draft order
Commitment 20	2/28/01	* All LLNL nuclear facilities	Provide to DOE all prior year appropriate EBSH assessments
Commitment 21	7/31/01	* All LLNL nuclear facilities	Review and Comment on Draft DOE Order on EBSH Assessments

12/20/00

SEPARATION

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# **Defense Nuclear Facility Safety Board Recommendation 2000-2 Vital Safety Systems Assessments**

## **Functional Assessments at U1a Shaft Comple**

The following U1a Shaft Complex functions exist in place of the Vital Safety Systems as defined by the DNFSB Recommendation 2000-2, Configuration Management for Vital Safety Systems. Assessments of the functions have been completed on regular schedules and are described below.

### **Confinement Ventilation Systems**

**Flow Through Ventilation** ? The ventilation for the U1a Shaft complex includes the U1g Ventilation Shaft. Fresh air is drawn down U1a Shaft and out of U1g Shaft by means of a 100 horsepower ventilation fan located at the top of U1g Shaft. The air pulled down through the U1a Shaft is then redirected by a series of fans that exhaust the air to the ventilation plenum at the base of U1g Shaft. All of the primary ventilation fans are operated daily and undergo quarterly preventive maintenance. The design and layout drawings of the ventilation fans, dampers and ducting are available in the field construction office with the original being kept in the design office.

**U1a Fans** ? The U1a fans draw air up U1a Shaft through a ventilation duct and ventilate the U1a Refuge Chamber, U1a Shop and up to Plug #2 in the Main Drift for reentries. These fans also undergo quarterly preventive maintenance.

### **Fire Protection Systems**

**Fire Extinguishers** ? The portable fire extinguishers and the automatic fire suppression on diesel equipment are checked on a monthly basis and are recharged on an annual basis.

**Fire Alarms** ? The audible fire alarm at U1a Shaft complex is tested on a monthly basis.

**Mine Rescue Team** ? The underground Mine Rescue Team has been trained to Mine Safety and Health Administration standards for mine rescue.

Fire Department ? A fully trained Fire Department including Paramedics is available on the surface and does not go underground.

Shaft Water Deluge ? The design and layout drawings of the U1a Shaft a water deluge/sprinklers are available in the field construction office with the original being kept in the design office. The system was tested following installation and the tanks on the surface are kept full and topped off.

#### Active Glovebox Systems

Glovebo ? There is only one glovebox underground at U1a Shaft Complex and would be used for the development of high-speed film, if needed. This glovebox has never been used.

#### Criticality Monitoring Systems

None

#### Radiation Monitoring Systems

Radiation Monitoring ? On a monthly basis Radsafe monitors check the entire facility for radiation contamination. The Radsafe monitoring equipment is calibrated on an annual basis.

#### Continuous Air Monitoring Systems

Air Monitoring ? Industrial Hygiene monitoring personnel check air quality at the U1a Complex during all underground operations prior to work and continuously during the workday. Industrial Hygiene hand held instruments are calibrated on an annual basis.

AQMS ? The Air Quality Monitoring System (AQMS) is calibrated on a monthly basis and undergoes preventive maintenance quarterly.

#### Back-up Power or UPS Systems

Lighting ? The backup generator for lighting circuits undergoes preventive maintenance quarterly.

AQMS ? The AQMS is equipped with an UPS in the case of a power failure.

Mine Rescue Hoists ? Each of the Mine Rescue Hoists (at U1a and U1g) is self-contained with equipment to operate the emergency hoist and undergoes preventive maintenance quarterly

Redundant Power Feeds ? With the addition of the U1a Substation, the U1a Shaft Complex will have a redundant power feed that can be energized in the case of a failure to the primary feed.

SEPARATION

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/001

United States Government

Department of Energy

National Nuclear Security Administration

# memorandum

DATE: February 27, 2001

REPLY TO:  
ATTENTION OF: NADP-6:Dearolph

SUBJECT: **DNFSB RECOMMENDATION 2000-2 IMPLEMENTATION PLAN COMMITMENTS 3 AND 20**

TO: Xavier Ascanio, Director, Office of Operations and Readiness, DP-24, GTN

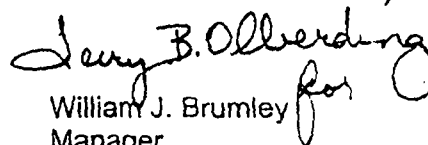
Please find attached three reports for the Phase I operability assessments for the three Y-12 priority nuclear facilities and two summary reports (DOE YAO and BWXT) of the evaluation of ES&H assessments performed during the prior year (Calendar Year 2000).

These are the deliverables for meeting Commitments 3 and 20 as contained in the Implementation Plan.

The Phase I assessments cover Fire Protection (FP) systems designated as Vital Safety Systems (VSS) in the priority facilities (9212, 9215, and 9204-2/2E). No significant deficiencies directly relating to the operability of these systems were identified during the Phase I assessments.

As you are aware, BWXT has recently identified the continuing deficiencies in the Y-12 Fire Protection Program via a Price Anderson Amendment Act (PAAA) Noncompliance Tracking System (NTS) report. These programmatic deficiencies have been determined to have no direct impact on the operability of the VSS FP systems. A comprehensive site-wide action plan addressing these programmatic deficiencies has been developed and is currently being reviewed by my staff for acceptance. In addition, a project task team is being established to address all fire protection deficiencies (programmatic, hardware, infrastructure, projects, etc.) at the Y-12 Site. Improving the overall fire protection safety posture is of high importance to me. The project team and its expected deliverable (comprehensive corrective action plan) will receive my close attention and support to effect the needed improvements.

If you have any questions, please contact Doug Dearolph at 865/241-8398.

  
William J. Brumley  
Manager  
Y-12 Area Office

Attachments:

- 1) 9215 Summary Report
- 2) 9212 Summary Report
- 3) 9204-2/2E Summary Report
- 4) YAO ES&H Assessment Summary Report
- 5) BWXT ES&H Assessment Summary Report

cc's on 2<sup>nd</sup> page

Xavier Ascanio

- 2 -

cc w/attachments:

J. Kimball, DP-45

D. Chaney, DP-24

cc w/o attachments:

T. Olberding, NADP-68, NNSA, YAO

K. Ivey, NADP-67, NNSA, YAO

**Introduction and Purpose:**

In its implementation plan for DNFSB Recommendation 2000-2 (Plan), DOE identified the action that annually the Lead Program Secretarial Officers (LPSOs) will review the results of vital safety system (VSS) Environment, Safety, and Health (ES&H) assessments performed during the previous year and provide the Secretary with a summary report for each of their sites. This action is contained in Commitment 20 of the Plan. This report supports that review by identifying and summarizing the results of the relevant assessments performed by the Y-12 Area Office. The period covered is calendar year 2000. The assessments identified and summarized are those that relate to the status of vital safety systems and the programs that ensure their operability. The vital safety systems addressed in this report are the Y-12 vital safety systems previously identified and reported in response to Commitment 2 of the Plan.

This report addresses the type assessments conducted and the spectrum of VSS and programs assessed. These assessments were performed to the assessment criteria relevant to the focus of the specific assessment, and not to the recently developed and issued Criteria Review and Approach Document (CRAD) for use in the on-going assessments of vital safety systems pursuant to Commitments 3, 4, and 5 of the Plan.

**Summary of Results****Assessments Conducted:**

Sixteen assessments were conducted by the Y-12 Area Office in CY 2000 which specifically addressed the operability and reliability status of vital safety systems or the programs relied upon to ensure that these systems are operable and reliable. The scope of and the significant findings from these assessments are described in Attachment A. Twelve operational safety requirements (OSR) surveillances were conducted by assigned Facility Representatives and four programmatic reviews were conducted by subject matter experts on the Technical division staff. OSR surveillances are in-field observations of the conduct of surveillance procedures that verify the operability status of safety systems. The adequacy of the procedure, conduct of operations and an evaluation of the surveillance criteria are included in this type of review. Of the twelve OSR surveillances conducted, ten surveillances related to the systems identified as vital safety systems. Six diverse vital safety systems were reviewed. Three surveillances were conducted on different fire protection systems and two different vacuum systems were surveyed. Four programmatic reviews were conducted. Program reviews validate the inclusion and proper execution of programmatic elements as contained in the contractual requirement documents. Three reviews were conducted on aspects of the Fire Protection program. One assessment was conducted on the Unreviewed Safety Question (USQ) program.

**Summary of Significant Assessment Results:**

None of the documented YAO assessments during the calendar year 2000 identified significant deficiencies that directly relate to the operability and reliability status of the vital safety systems reviewed. As indicated in the summary of BWXT Y-12 ES&H assessment conducted in CY 2000, YAO also identified deficiencies in the fire protection programs that indirectly relate to ensuring the operability and reliability of fire protection vital safety systems. These deficiencies are consistent with and complement the deficiencies documented in the BWXT Y-12 assessments:

- Significant backlog of *Fire Department December Building Inspections* for those areas with SARs or Basis for Interim Operations (BIOs), such as Buildings 9201-5, 9206 and 9995 credit the fire protection program in the safety basis documents.
- Significant backlog of *Semiannual Testing of Fire Systems* for several buildings. Indications that the testing maintenance and inspection effort does not appear to be moving toward compliance as agreed upon in the approved Request for Approval (RFA).
- Fire Protection Engineering Assessments are not being completed according to the approved schedule and the completed fire protection engineering assessments are not being transmitted to the facility managers for review and disposition.

The Y-12 Plant fire protection programs is not being implemented in compliance with the approved contractual requirements (S/RIDs). These deficiencies have been identified within the site's self-assessments and external reviews. A Price Anderson Act Amendment (PAAA) notice for the fire protection program deficiencies has been issued by BWXT. A comprehensive corrective action plan is currently being developed to address these issues. The resources necessary to resolve the deficiencies will be identified and managed via the Baseline Change Proposal process.

YAO assessment actions are governed by an approved procedure. The procedure identifies the type and frequency of reviews that are included in the assessment program. The FY-2001 Annual Assessment schedule currently includes the following Quarterly assessments: OSR Surveillance, Criticality Safety Surveillance, Environmental Protection Surveillance, Fire Protection Surveillance, Radiation Protection Surveillance. Action will be taken to effect changes to better align the OSR surveillances and program reviews for consideration of the operability and reliability of the vital safety systems that have been identified previously in Commitment 2 of the Plan.



## Attachment 1

### Listing of documented ES&H assessments conducted by DOE Y-12 Area Office during Calendar year 2000:

#### **Operational Assessments:**

**Assessment:** Design and construction of the lightning protection system in the Warehouse (Building 9720-5)

**Results:** Design and construction failures to meet the requirements of the Quality Assurance (QA) Program lead to inadequate installation and testing of the system per compliance to NFPA 780 requirements. The material and equipment used in the lightning protection system were procured using a procurement system not approved for safety significant systems.

**Assessment:** OSR system wiring modifications and surveillance testing for the Criticality Accident Alarm System (CAAS) detector power supply in Building 9212.

**Results:** No significant issues noted.

**Assessment:** OSR Activity Observation for the wet pipe sprinkler system #2 in Building 9204-2E

**Results:** No significant issues noted.

**Assessment:** OSR surveillance for the kill switch actuation for Building 9215 Supply Fan SF-205.

**Results:** No significant issues. Noted weakness: Many alarms on new Edwards Fire System Panels have been in the audible alarm condition in several facilities and for several months. Continual alarm actuation desensitizes workers and could lead to alarm response concerns in the future.

**Assessment:** OSR Surveillance Observation Assessment of the monthly surveillance testing for Firecycle Sprinkler System 4 in Building 9204-2E.

**Results:** No significant issues.

**Assessment:** OSR Surveillance Observation Assessment of EUO (Wet Vacuum System) WVS weekly OSR surveillance checks.

**Results:** No significant issues.

**Assessment:** Y-12 Criticality Accident Alarm System Assessment System Capabilities assessment (Reinspection of actions taken to address results from an assessment conducted in June 30, 1999.) Requirements determined from the ANSI/ANS-8.3-1997 requirements.

**Results:**

1) System Vulnerability. All components of the system SHOULD be located or protected to minimize damage in case of fire, explosion, corrosive atmosphere, or other extreme conditions. *Vulnerabilities will be considered for new installations only.*

2) Seismic Tolerance. The system SHOULD remain operational in the event of seismic shock equivalent to the site-specific design basis earthquake, or to the equivalent value specified by the

Uniform Building Code that applies to the structure. *Seismic shock will be considered for new installations only.*

**Assessment:** Trip Test the Automatic Sprinkler System in Building 81-22

Results: The system initiated as required by the system plugged-up from internal corrosion. Other similar dry pipe systems at the site are deficient in their inspection, testing, and maintenance requirements.

**Assessment:** OSR Surveillance Observation Assessment of 9215 M-Wing Supply Fan SF-205 Fan House Stop Switch

Results: No significant issues.

**Assessment:** OSR Surveillance Observation Assessment of Calibration of each of the secondary cyclone and bag filter trap level detectors on each 9212 E-Wing Dry Vacuum subsystems.

Results: No significant issues.

**Assessment:** OSR Surveillance Observation Assessment of E-Wing Dry Vacuum system in Building 9212

Results: No significant issues.

**Assessment:** OSR Surveillance Observation Assessment of 9212 Wet Vacuum System weekly OSR system surveillance testing for the final system traps in the Fan Room.

Results: No significant issues. Noted weakness: low vacuum alarm was out of service for several months and should be corrected.

### **Programmatic Assessments:**

**Assessment: USQ program**

Results: 1) Several "as-found" conditions have occurred that were not immediately evaluated using the USQD. Specific examples include: 9720-18, 81-22 sprinkler system inoperability (lack of surveillances), water treatment plant transfer, etc. 2) Not all potentially "affected" facilities of the are promptly notified of the "change or discovery."

**Assessment: Fire Protection Program (2).**

Results: Significant deficiencies: Backlog of Fire Department December Building Inspections for those areas with SARs or Basis for Interim Operations (BIOs), such as Buildings 9201-5, 9206 and 9995 credit the fire protection program in the safety basis documents. Backlog of Semiannual Testing of Fire Systems for several buildings. Indications that the testing maintenance and inspection effort does not appear to be moving toward compliance as agreed upon in the approved Request for Approval (RFA). Fire Protection Engineering Assessments are not being completed according to the approved schedule. The completed fire protection engineering assessments are not being transmitted to the facility managers for review and disposition and the site command media fails to establish specific and concise roles and responsibilities regarding recommendations. The Y-12 Plant fire protection programs is not being implemented in compliance with the approved contractual requirements (S/RIDs). These deficiencies are well identified within the site self-assessments and external reviews. A comprehensive corrective action plan is currently being developed. The resources necessary to resolve

the deficiencies will be identified and managed via the Baseline Change Proposal process.

**Assessment:** Fire Hazards Analysis (FHA) program and content

**Results:** In many cases, the revision status of the FHAs and the AB documents do not coincide; there may be FHAs produced (such as the current Building 9215 FHA) that contain information that was not in Building 9215 BIO.

SEPARATION

PAGE

**DNFSB COMMITMENT 20:  
SUMMARY REPORT ON CY 2000 ASSESSMENTS RELATED  
TO VITAL SAFETY SYSTEMS  
FEBRUARY 2001**

**Introduction and Purpose**

In Recommendation 2000-2, the Defense Nuclear Facilities Safety Board (DNFSB) recommended that the Department of Energy (DOE) "Make the scrutiny of the status of all systems serving to protect the public, workers and the environment a regularized part of the assessments performed as required by DOE P 450.5, Line Environment, Safety and Health Oversight."<sup>1</sup> In its implementation plan for DNFSB Recommendation 2000-2 (Plan), DOE stated that "Annually, [Lead Program Secretarial Officers] LPSOs will review the results of [Environment, Safety, and Health] ES&H assessments performed during the previous year and provide the Secretary with a summary report for each of their sites."<sup>2</sup> This report supports that review by identifying and summarizing the results of the relevant assessments performed by the Management and Operating (M&O) Contractor for the Y-12 Complex. The period covered is calendar year 2000. The assessments identified and summarized are those that relate to the status of vital safety systems and the programs that ensure their operability. The vital safety systems addressed in this report are the Y-12 vital safety systems identified in the Conner to Brumley letter dated December 4, 2000.

This is the first Y-12 summary report of previous year assessments prepared in response to Commitment 20 of the Plan. This report addresses a broad spectrum of assessment types (e.g., surveillance documentation, testing, round sheets, surveillances, OSR compliance, procedure validation, integrated safety management, maintenance administration, change control, fire protection) that addressed operability or reliability of vital safety systems or the programs relied upon to ensure that these systems are operable and reliable. These assessments were performed to assessment criteria relevant to the focus of the specific assessment, and they were not performed using the Criteria Review and Approach Document (CRAD) developed in late CY 2000 and early 2001 for use in the on-going assessments of vital safety systems pursuant to Plan Commitments 3, 4, and 5.

**Summary of Results**

Fourteen assessments conducted by the Y-12 Complex M&O Contractor in CY 2000 were identified that specifically addressed the operability and reliability status of vital safety systems or the programs relied upon to ensure that these systems are operable and reliable. The scope and findings of these assessments are described in Appendix A. These assessments included reviews of operability status of 38 of the 68 (56%) vital safety systems identified at the Y-12 Complex. Many of these vital safety systems were evaluated in more than one assessment. In some cases where there were several similar vital safety systems (e.g., several sprinkler systems in a single building), the assessments covered a representative sample of the set of similar vital

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<sup>1</sup> Recommendation 5 of DNFSB Recommendation 2000-2. *Configuration Management, Vital Safety Systems*

<sup>2</sup> Commitment 20 of the DOE Implementation Plan (Plan) for Defense Nuclear Facilities Safety Board (Board) Recommendation 2000-2. *Configuration Management, Vital Safety Systems*.

safety systems rather than the complete set. Furthermore, the assessments included reviews of the programs relied upon to ensure that 65 of the 68 (96%) vital safety systems identified at the Y-12 Complex are operable and reliable. Please note that these assessments: (1) were conducted during CY 2000 prior to the 2001 due dates for Plan Commitments 3, 4, and 5 to conduct operability, reliability and configuration management assessments of vital safety systems, and (2) were not conducted using the CRAD developed for these later vital safety systems assessments.

### **Summary of Significant Assessment Results**

None of the identified Y-12 Complex M&O Contractor assessments during calendar year 2000 identified deficiencies in the operability and reliability status of any vital safety systems. However, the assessments did identify the following fire protection program deficiencies that relate to ensuring the operability and reliability of fire protection vital safety systems:

- Programmatic weaknesses in the lack of testing, maintenance and inspection of fire systems and in the lack of completion of Fire Hazard Analyses and Fire Protection Engineering Assessments.
- Approximately 50 percent of the fire protection requirements related to the minimum testing, maintenance, and inspection requirements have not been formalized within comprehensive procedures. Hydrant flow tests to verify availability of sufficient fire suppression water had not been conducted at Y-12 since 1997 (Except for three special flows related to the Life Safety Upgrade project).
- Although not affecting VSS, in some cases, final post-modification testing of fire protection systems had not been conducted in accordance with pre-approved criteria. On a few occasions, a final system walkdown was not performed before returning the modified fire protection system to service. These issues did not affect VSS but demonstrate a programmatic weakness in the Fire Protection Operations configuration program. Both of these weaknesses were caught during final reviews and either redone correctly or accepted as adequate by Fire Protection Engineering.

These deficiencies are being addressed as a part of the comprehensive site-wide action plan for the improvement of Fire Protection at the Y-12 Complex [Comprehensive Fire Protection Correction Action Plan (ESAMS S4637/I39665)].

**APPENDIX A**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
(None)	Independent Assessment of Compliance with Bldg 9212 and 9206 Operational Safet Requirements	6/5-16/2000	Bldg. 9212 / East / West Casting Furnaces water detection and isolation	<ul style="list-style-type: none"> <li>• Reviewed annual surveillance documentation for line undervoltage indicator</li> <li>• Reviewed quarterly surveillance documentation for Casting Furnace J water detection system</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management
			Bldg. 9212 / Sprinkler System # 7	<ul style="list-style-type: none"> <li>• Observed test and reviewed semi-annual test documentation of 2-inch main drain and water flow verification</li> <li>• Observed monthly surveillance verifying water supply pressure</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management
			Bldg. 9212 / CAAS	<ul style="list-style-type: none"> <li>• Reviewed annual surveillance documentation</li> <li>• Performing the functional test of the ENS loss of power alarm at PSS</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management



**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			Bldg. 9212 / Stacks 38, 48 and 110 HEPA filters	<ul style="list-style-type: none"> <li>Reviewed round sheets documenting differential pressure values for HEPA filters</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management
			Bldg. 9212 / Wet Vacuum System	<ul style="list-style-type: none"> <li>Observed weekly surveillance</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management
			Building 9206/ Sprinkler System # 1	<ul style="list-style-type: none"> <li>Reviewed monthly surveillance</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management
EUO-MA-2K-039	Operations CSA/CSR/OSR Surveillance Coordinators Database	3/20 – 22/2000	Bldg. 9212 / Wet Vacuum	<ul style="list-style-type: none"> <li>Confirm that level detection system surveillances tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			Bldg. 9212 / Headhouse Dry Vacuum	<ul style="list-style-type: none"> <li>Confirm that vacuum trap level detection system surveillances tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9212 / CAAS	<ul style="list-style-type: none"> <li>Confirm that system surveillances tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9212 / Sprinkler System 11	<ul style="list-style-type: none"> <li>Confirm that system surveillances tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			Bldg. 9212 / Stack 38 HEPA filter	<ul style="list-style-type: none"> <li>Confirm that surveillances for differential instruments tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9212 / East/West Casting furnaces water detection and isolation	<ul style="list-style-type: none"> <li>Confirm that system surveillances tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9212 / E-Wing Dry Vacuum	<ul style="list-style-type: none"> <li>Confirm that sprinkler interlock surveillances tracked in EUO Surveillance Database accurately reflect requirements of OSR, CSR, or CSA, as appropriate.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
EUO-MA-2K-043	Procedure Validation	3/30 – 4/24/00	Bldg. 9212 / Holden Gas Furnace Flame Management System	<ul style="list-style-type: none"> <li>Evaluated effectiveness of validation of procedures (including Y54-35-MD-4017)</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			All VSS in Bldg. 9212 and 9206	<ul style="list-style-type: none"> <li>• Overall evaluation of effectiveness of the technical procedure validation process in EUO</li> </ul>	No programmatic deficiencies were identified affecting operability, reliability, or configuration management of any VSS.
EUO-MA-2K-058	Integrated Safet Management System Self-assessment	6/29 – 7/21/00	Bldg. 9212 / E-Wing Dry Vacuum	<ul style="list-style-type: none"> <li>• Review whether Continuing Core Expectations 2-7 from Chapter 4 of DOE G 450.4 are being met. Review included evaluation of Change Package prepared for E-Wing Dry Vacuum System.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9206 / Argon Glovebox	<ul style="list-style-type: none"> <li>• Review whether Continuing Core Expectations 2-7 from Chapter 4 of DOE G 450.4 are being met. Review included evaluation of Change package prepared for Argon Glovebox.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			All VSS in Bldgs. 9212 and 9206	<ul style="list-style-type: none"> <li>Parts of this assessment evaluated Configuration Management and work control/work authorization, USQDs, OSBs, and procedure usage.</li> </ul>	No programmatic deficiencies were identified affecting operability, reliability, or configuration management of any VSS.
EUO-MA-2K-066	Maintenance Administration Review	8/14 – 9/8/00	All VSS in Bldgs. 9212 and 9206	<ul style="list-style-type: none"> <li>Review of the administration and documentation of maintenance planning, package development and performance to determine whether EUO maintenance activities are being performed in a safe and effective manner.</li> </ul>	No programmatic deficiencies were identified affecting operability, reliability, or configuration management of any VSS.
EUO-MA-01-011	EUO Surveillance Program	12/11 – 20/00	Bldg. 9206 / CAAS	<ul style="list-style-type: none"> <li>Review surveillance records to determine whether AB mandated surveillances were being identified, scheduled, tracked and effectively implemented.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			Bldg. 9206 / Sprinkler System 1	<ul style="list-style-type: none"> <li>• Review surveillance records to determine whether AB mandated surveillances were being identified, scheduled, tracked and effectively implemented.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9212 / East / West Casting Furnaces	<ul style="list-style-type: none"> <li>• Review surveillance records to determine whether AB mandated surveillances of water detection systems were being identified, scheduled, tracked and effectively implemented.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9212 / Wet Vacuum System	<ul style="list-style-type: none"> <li>• Review surveillance records to determine whether AB mandated surveillances of level detection were being identified, scheduled, tracked and effectively implemented.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			Bldg. 9720-12 / Sprinkler system 1	<ul style="list-style-type: none"> <li>• Review surveillance records to determine whether AB mandated surveillances were being identified, scheduled, tracked and effectively implemented.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			Bldg. 9720-12 / Portable CAAS	<ul style="list-style-type: none"> <li>• Review surveillance records to determine whether AB mandated surveillances were being identified, scheduled, tracked and effectively implemented.</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.
			All VSS in Bldgs. 9212, 9206, and 9720-12	<ul style="list-style-type: none"> <li>• Evaluate EUO surveillance program to determine whether the surveillances required by the authorization basis documents were being properly identified, scheduled, tracked and implemented.</li> </ul>	No deficiencies were identified affecting operability, reliability, or configuration management of any VSS.
EUO-MA-01-008	EUO Change Control	11/8-17/00	Bldg. 9206 / Argon Glovebox	<ul style="list-style-type: none"> <li>• Review of change package to assess EUO change control corrective actions and improvements in the EUO Configuration Management Program</li> </ul>	No deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			All VSS in Bldgs. 9212 and 9206	<ul style="list-style-type: none"> <li>• Review of the EUO change control corrective actions and improvements in the EUO Configuration Management Program</li> </ul>	No programmatic deficiencies were identified affecting operability, reliability, or configuration management of any VSS.
(None)	Independent Assessment of Compliance with Bldg 9215 Operational Safet Requirements	11/30/00	Bldg. 9215 / CAAS	<ul style="list-style-type: none"> <li>• Review of operations and compliance with Authorization Basis, including performance during OSR surveillance and normal activities.</li> </ul>	No findings or deficiencies affecting system operability, reliability, or configuration management.
			Bldg. 9215 / Stack 3 HEPA Filter House	<ul style="list-style-type: none"> <li>• Review of operations and compliance with Authorization Basis, including performance during OSR surveillance and normal activities.</li> </ul>	No findings or deficiencies affecting system operability, reliability, or configuration management.
			Bldg. 9215 / Sprinkler Systems 1, 2, 3, 4, and 5	<ul style="list-style-type: none"> <li>• Review of operations and compliance with Authorization Basis, including performance during OSR surveillance and normal activities.</li> </ul>	No findings or deficiencies affecting system operability, reliability, or configuration management.



**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
			All VSS in Bldg. 9215	<ul style="list-style-type: none"> <li>Review of operational programs and program to comply with Authorization Basis, including performance during OSR surveillance and normal activities.</li> </ul>	No programmatic deficiencies were identified affecting operability, reliability, or configuration management of any VSS.
MA-DSO-00-3019	Lightning protection system (visual)	02/04/00	Bldg. 9720-5 Lightning Protection System	<ul style="list-style-type: none"> <li>Visual Inspection of Lightning Protection System</li> </ul>	No findings or deficiencies were identified affecting system operability, reliability, or configuration management.
MA-DSO-00-3044	Lightning protection system (visual)	08/21/00	Bldg. 9720-5 Lightning Protection System	<ul style="list-style-type: none"> <li>Visual Inspection of Lightning Protection System</li> </ul>	No findings or deficiencies were identified affecting system operability, reliability, or configuration management.
MA-DSO-00-3045	Lightning protection system (electrical)	Oct. 2000	Bldg. 9720-5 Lightning Protection System	<ul style="list-style-type: none"> <li>Electrical Inspection of Lightning Protection System</li> </ul>	No findings or deficiencies were identified affecting system operability, reliability, or configuration management.

**APPENDIX A (CONTINUED)**  
**ASSESSMENTS ADDRESSING VITAL SAFETY SYSTEMS AND ASSOCIATED PROGRAMS**

Report Number	Title	Date	Facility / Vital Safety System	Assessment Scope	Summary of Results
(none)	Fire Department Inspection of Building 9720-18, 81-22	12/8/00	Bldg. 9720-18, 81-22 Sprinkler	<ul style="list-style-type: none"> <li>Visual Inspection of Sprinkler System for operability and configuration</li> </ul>	No findings or deficiencies were identified affecting system operability, reliability, or configuration management
Y/FPE-069	Fire Protection Program Assessment Y-12 Plant	3/29/00	All fire protection systems (not targeted at VSS exclusively)	<ul style="list-style-type: none"> <li>Comprehensive review of overall fire protection program based upon S/RID.</li> </ul>	<ul style="list-style-type: none"> <li>Failure to complete required test, maintenance, and inspection of fixed fire systems.</li> <li>Failure to complete required FHAs and FPEAs.</li> </ul>
(none)	Fire Protection CONOPS Change Control Process	8/28/00	All fire protection systems (not targeted at VSS exclusively)	<ul style="list-style-type: none"> <li>Review of change control process for fire protection systems including vital safety systems</li> </ul>	<ul style="list-style-type: none"> <li>Occasional failure to conduct final system post-change testing in accordance with pre-approved criteria.</li> <li>Occasional failure to conduct final post-change system walkdown before returning system to service.</li> </ul>

SEPARATION

PAGE

# OAK RIDGE NATIONAL LABORATORY

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February 21, 2001

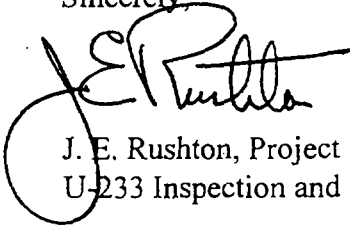
Mr. Harold E. Clark  
ORNL Site Office  
Department of Energy  
Oak Ridge National Laboratory  
Post Office Box 2008  
Oak Ridge, Tennessee 37831-6269

Dear Mr. Clark:

**Contract No. DE-AC05-00OR22725, DNFSB 2000-2 Implementation Plan Commitment No. 20 Deliverable**

Attached you will find a copy of a CY-2000 ES&H Assessment Summary for the Radiochemical Development Facility. The Assessment Summary fulfills Defense Nuclear Facilities Safety Board (DNFSB) 2000-2 Implementation Plan Commitment No. 20. Questions regarding the scope and content of the document may be addressed to me or Gary W. Krantz at 241-9780.

Sincerely,



J. E. Rushton, Project Manager  
U-233 Inspection and Repackaging Project

Attachment

c/att: L. F. Blankner, DOE  
R. A. Bond, Jr.  
J. K. Kimball, DOE  
G. W. Krantz (RC)

## **DNFSB 2000-2 Implementation Plan Commitment No. 20 Deliverable**

*Commitment No. 20 Statement: Annually, LPSOs will review the results of ES&H assessments performed during the previous year and provide the Secretary with a summary report for each of their sites.*

### **Assessment Report Summary-2000**

**SITE:** Oak Ridge National Laboratory (ORNL)

**FACILITY:** Building 3019, Radiochemical Development Facility

#### **BACKGROUND:**

In Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2, the Board recommended that the Department of Energy (DOE) ensure that safety system status and support programs are "scrutinized as a regularized part of assessments performed by the line management." The DOE Implementation Plan to DNFSB 2000-2 committed to a review of line oversight of contractor programs to determine whether safety systems, as well as programs essential to system operability, are included in the assessment programs. In order to provide senior leadership with information obtained from these oversight and feedback processes, DOE committed to review ES&H assessments performed by the maintenance and operation (M&O) contractor and DOE site organizations and to summarize the results for the Secretary. Annually, LPSOs will review the results of site ES&H assessments performed during the previous year and provide the Secretary with a summary report for each of their sites.

#### **INTRODUCTION:**

This ES&H assessment summary is provided to fulfill the commitment for calendar year 2000 for Oak Ridge National Laboratory (ORNL) Radiochemical Development Facility (RDF) Building 3019. The assessment summary objectives, extracted from the DNFSB 2000-2 Implementation Plan, are as follows:

1. Summarize the scope and schedule for ES&H assessments performed over the previous 12 months by the M&O contractor, DOE line management, and the Office of Independent Oversight.
2. Summarize the results obtained from these assessments, both by program and vital safety systems. Using a site-specific list of vital safety systems, the summary report will provide a crosswalk of how ES&H assessment programs at each site review the condition of their vital safety systems and note actions taken to address significant issues.
3. Identify issues where the field element manager has asked for assistance.

The ES&H Assessment Summary contained in Appendix 1 was prepared in accordance with guidance provided by DP-45 "Clarification of Commitment No. 20" (Appendix 2). The Assessment Summary was crosswalked with the RDF VSS (Appendix 3) and with VSS Operability (Appendix 4), as directed in the DNFSB 2000-2 Implementation Plan.

## **ES&H ASSESSMENT SUMMARY RESULTS:**

Forty-four (44) Radiochemical Development Facility (RDF) Building 3019 assessments, reviews, inspections, and surveys were evaluated for this CY-2000 ES&H assessment summary. Of those forty-four assessments, nineteen met the objectives and clarification criteria (Appendix 2) for inclusion in this DNFSB 2000-2 Commitment No. 20 assessment summary and response.

Preservation program assessments appear to predominate over systems operability verification assessments in the RDF. Fourteen of the nineteen CY-2000 assessments focused on "preservation program" elements only (i.e., Conduct of Operations, Configuration Management, ISMS, Authorization Basis/OSR, Maintenance, Testing, Surveillance and/or Training). This may be due, in part, to the well-developed infrastructure and abundance of guidance documentation available for these peripheral VSS topics. Six of the nineteen assessments addressed system operability and reliability. One was the culmination of a 3-year duration, self-directed confinement ventilation review and a second was prepared in response to a DOE-HQ request.

RDF Building 3019 maintains an issue-tracking database for corrective actions resulting from internal and external assessment findings and concerns. It incorporates facility-specific issues, internal issues from the Chemical Technology Division (CTD) related to the RDF, and ORNL internal and external issues associated with the RDF. A current, all-inclusive RDF database "Issue List Report" for CY-2000 was obtained to review tracked issues against the nineteen assessment documents included in this assessment summary. Review of the RDF Issue List Report revealed that corrective actions resulting from occurrence reports, Facility Representative (DOE) issues, and internal or external ES&H assessments are tracked to completion and closure. Although the database does not track all "lessons learned," the RDF has implemented a post-evolution briefing program to meet the ISM feedback/lessons learned core element commitment.

## **CONCLUSIONS:**

The overall status of the RDF ES&H assessment process is satisfactory, however, the focus and emphasis of the facility assessments should be shifted more toward VSS operability and reliability verification. Corrective actions resulting from RDF ES&H assessments are adequately tracked to completion and closure. The field element manager has not asked for assistance in correcting any findings or concerns documented in RDF CY-2000 assessments.

**APPENDIX 1  
RDF ES&H ASSESSMENT SUMMARY**

ASSESSMENT TITLE [DATE] (ORGANIZATION) {PERIODICITY}	ASSESSMENT SCOPE	VSS OPERABILITY CROSSWALK	ASSESSMENT RESULTS, SIGNIFICANT ISSUES/FINDINGS, ASSOCIATED CORRECTIVE ACTIONS AND / OR STATUS
Readiness Self-Assessment for ISMS Phase II [7/00] (CTD) {One Time Assessment}	ISMS Readiness	"Preservation Program" crosswalk to VSS. ISMS	No RDF Significant Issues. CTD Gaps include: Failure of some workers to recognize their ISMS role; Current practices not recognized as ISMS; more ISMS communication needed. All items were closed 9/11/00.
ISMS Self Assessment [7/00](ORNL.) ORNL/CF-00/26 {Routine Assessment}	ISMS Readiness	"Preservation Program" crosswalk to VSS. ISMS	Significant Issues: Worker input to work planning and Job Hazard Identification (Closed); Worker involvement in Self Assessment (Closed); Work planning for small jobs (Closed) Work Smart Standards to CTD work control processes (Open); No clear-cut pathway showing physical location of records, etc. (Closed)
ISMS Phase II Follow-up Verification Assessment [8/2000] (DOE){One-Time Assessment}	ISMS Verification (Implementation)	"Preservation Program" crosswalk to VSS. ISMS	Significant Issues: Inclusion of workers in the JHE not clearly stated (Closed); Formally incorporate ISM Principles into 3019 maintenance work (Closed); ORNL Nuclear Criticality Safety Program-screening approval process (Closed).
Internal Readiness Evaluation for the Thorium-229 Separations Project [August 2000] (ORNL) {One-time Assessment}.	Determine RDF and personnel readiness to initiate Th-229 separations mission work.	"Preservation Program" crosswalk to VSS. Crosswalk review of the people, procedures, VSS (and other equipment), and required infrastructure.	Findings: USQDs/screens have not been conducted on some new or modified equipment. Corrective actions included 2 Pre-starts (Closed) and 3 Post-starts (2 Closed and 1 Open); Positive-lift canisters have not been tested (Post-start) (Closed); Procedures do not always implement commitments and requirements correctly (Pre-start) (Closed); The one-foot-averaged fractional approach to the limit is being calculated using cancelled procedure (Pre-start) (Closed); Required training has not been completed (Pre-start) (Closed); Drill records do not adequately document results of drill program or ensure lessons learned are used to improve drills (Post-start) (Closed).
Fire Hazards Analysis [2/29/00] (ORNL Fire Protection Engineering) {Periodic Assessment}	Assess RDF fire risks and compliance to DOE 420.1 and WSS.	Direct crosswalk VSS Operability / Reliability. Fire Detection, Alarm and Suppression Systems.	Significant issues: Additional suppression sprinklers required. (Corrective action in process); Pre-fire plan needs updated to FHA (Completed); Lighting levels inadequate in some areas (Corrective action in process); Need exit signs (Completed); P-24Thorium nitrate tanks need isolation (Completed); Combustibles & Penthouse Foam issue (Corrective action completed)

ASSESSMENT TITLE [DATE] (ORGANIZATION) {PERIODICITY}	ASSESSMENT SCOPE	VSS OPERABILITY RELIABILITY CROSSWALK	ASSESSMENT RESULTS, SIGNIFICANT ISSUES/FINDINGS, ASSOCIATED CORRECTIVE ACTIONS AND / OR STATUS
Annual Nuclear Criticality Safety Self-Assessment [3/24/00] (RDF) {Annual Assessment}	Self-assess operating procedures, equipment, postings, and training with NCSA COAs, ORNL-NS-PO2 and FAB commitments.	"Preservation Program" crosswalk to VSS. Link to operations, training, procedures, postings, and VSS equipment with NCS COAs.	General Recommendations: Procedures need to be updated to reference ORNL NS-PO2 and updated NCS requirements (Closed); Postings need to be reviewed for applicable rooms designated as FCAs (Closed); A more formal NCS training program, approved by the NCS Section Supervisor, should be developed and implemented in the RDF, using qualified NCS instructors (Closed); Several of the analyses in the FAB are not consistent with the NCS Evaluations (Closed).
Review of RDF Operational Safety Requirements OSR/3019-CTD-R2 MMS/AOSR1030 (OSR 03) [3/1/00] (ORNL) {Annual Assessment}	Review RDF I&C Facility Instrument Plan in accordance with I&C Division OSR program, ORNL/TM- 10846/R2	"Preservation Program" crosswalk to VSS. Links I&C OSR program to RDF VSS instrument maintenance history.	No Significant Issues. One discrepancy was discovered. An instrument tolerance notation, indicating Full Scale, was redline corrected to indicate "span." (Closed) No OSR instruments were identified as requiring excessive maintenance.
SAR Hazards Analysis Methodology Review [8/4/00] (R.D.Shaffer) {One-Time Assessment}	Accident analysis and PHA Hazards Analysis Methodology For SAR development	"Preservation Program" crosswalk to VSS. Reviews hazards analysis methodology for Draft SAR	Significant issue: Fire/Criticality accident analysis weakness; Other Issues: Recommended PHA improvements, i.e., hazards due to proximity of facility with a public facility; pressure transients associated with fire; risk acceptance by DOE; facility worker dose consequences; development of a "parking lot PuEID for MAR" (Closed)
Annual Facility Safety Documentation Review [3/1/00] (CTD Safety Engineer) {Annual Assessment}	Review RDF Safety Documentation	"Preservation Program" crosswalk to VSS (Authorization Basis, operational safety envelope and safety basis)	Significant Issue: Facility Authorization Basis requires updating. (New SAR and TSR are in development; estimated completion date and DOE approval is March 2001).
Material Condition Inspection [2&3/00] (RDF) {One-Time assessment, now conducted weekly}	Assessment of Facility Condition	"Preservation Program" crosswalk to VSS. (Material condition)	Assessment/Inspection produced a room by room list of deficiencies, needed corrective actions and improvements, including itemized listing of broken equipment, improper labels, postings and tags, instruments out of calibration, housekeeping items, burned out indicators and bulbs, chemical cabinet issues, access/egress signs and lights, flammables storage issues, etc. Corrective actions were tracked and completed.



ASSESSMENT TITLE [DATE] (ORGANIZATION) {PERIODICITY}	ASSESSMENT SCOPE	VSS OPERABILITY / RELIABILITY CROSSWALK	ASSESSMENT RESULTS, SIGNIFICANT ISSUES/FINDINGS, ASSOCIATED CORRECTIVE ACTIONS AND / OR STATUS
Facility Rep Surveillance Report [12/21/00] (DOE) {Quarterly Assessment}	Chapter 1, 6, and 7, CONOPS order.	"Preservation Program" crosswalk to VSS. (CONOPS, Formality of operations, procedures)	Significant Issue: Finding 3019A-2000-09-01, late (8-hour) categorization of an occurrence; other issues related to weakness in ISM program; building notification list. (Closed).
Facility Rep Surveillance Report [05/11/00] (DOE) {Quarterly Assessment}	CONOPS, ISM, configuration management, chemical vulnerability.	"Preservation Program" crosswalk to VSS. (CONOPS, reporting, configuration control, drawings)	Significant Issue: Concern 3019A-2000-03-01, glovebox off-gas fan electrical fault not reported promptly, handled or critiqued correctly (Closed); Concern 3019-2000-03-02, scope of configuration items is narrowly applied, a considerable body of configuration changes (modifications) may not be adequately controlled and documented (Open); Concern 3019-2000-03-03, Inadequate CONOPS-lack of approved drawing for tie-down of inspection chamber, inadequate configuration control of system modification cross-alignment (Open).
Facility Rep Surveillance Report [08/10/00] (DOE) {Quarterly Assessment}	Chapter 2, 3, 4, and 11 CONOPS order	"Preservation Program" crosswalk to VSS. Formality of operations, shift routines, logkeeping,	Significant Issue: Concern 3019-2000-03-02, "Inadequate Identification and Evaluation of Reportable Events" (Closed).
I&C OSR Instrument Maintenance History Report [2/14/00] (ORNL) {Annual or as requested}	OSR/TSR Instrumentation	Direct crosswalk to VSS Operability / Reliability. OSR instrument operability and calibration	I&C conducts planned and scheduled OSR/TSR instrument operability verification and calibration activities. A comprehensive computerized assessment report, provided annually (or as requested), provides OSR/TSR instrument performance history and needed (historical) calibration adjustments.
Confinement Ventilation Assessment of the RDF [7/00] ORNL/CF-00/13 (RDF) {One-time Assessment}	Confinement ventilation systems	Direct crosswalk to VSS Operability / Reliability and support systems. 250 page published report	Significant Issues: Report identified numerous deficiencies and concerns that warrant further attention, more in-depth technical review and corrective actions. Four of the deficiencies were categorized as High priority Issues that required six corrective actions to be tracked to completion (Closed).
Assessment of Potential Vulnerabilities Due to Degraded HEPA Filters in ORNL Nuclear Hazard Cat 1,2,&3 Facilities, [5/00] (UT-Battelle, LLC), {One-time Assessment}	All Haz. Cat. 1, 2, 3 facility filters that perform an accident mitigation function, including standby or bypass filter banks.	Direct crosswalk to VSS Operability / Reliability. Did not address support systems	RDF Building 3019 Results: Four of the 20 HEPA filters/banks are of unknown age and presumed to be over 10 years old. Another is known to be 10 years old. This represents a potential vulnerability per the assessment CRAD. One HEPA filter stage had been subjected to moisture from a steam coil leak. It was later replaced. No other required RDF corrective actions.

<b>ASSESSMENT TITLE [DATE] (ORGANIZATION) {PERIODICITY}</b>	<b>ASSESSMENT SCOPE</b>	<b>VSS OPERABILITY / RELIABILITY CROSSWALK</b>	<b>ASSESSMENT RESULTS, SIGNIFICANT ISSUES/FINDINGS, ASSOCIATED CORRECTIVE ACTIONS AND / OR STATUS</b>
Conduct of Operations Program Assessment [8/29/2000] (RDF) {Annual Assessment}	DOE 5480.19 and ORNL-FS-G05 (Guidelines) applicability and conformance	"Preservation Program" crosswalk to VSS. (Linked to formality of operations of facility VSS equipment)	Deviations: Revise the RDF Org Chart; Develop facility operations status board; Develop a controlled Facility Emergency Response procedure; Provide additional COOP training; Revise RTS-026 COOP procedure; Provide a status board; Develop controlled drawings.
Review of the SAR and TSR for the Building 3019A Complex, Radiochemical Development Facility [10&11/00] (DOE) {Periodic Assessment}	Evaluate the compliance of the RDF SAR with DOE O 5480.23 and DOE Std. 3009-94.	Direct crosswalk to VSS Operability / Reliability, and "Preservation Program" crosswalk.	The SAR/TSR review/assessment resulted in a total of 106 formal comment items and issues from eight review team members. The scope of the comments and issues was broad, covering compliance, RDF VSS systems and equipment, emergency response, fire protection water sources, controls, maintenance programs, training and qualification, and other safety analysis operations and authorization basis items. The items and issues were incorporated into the revised Draft of the SAR/TSR.
Facility V&V Systems Drawing Assessment [7-12/00] (RDF) {One-time Assessment}	Assess, verify and validate drawings	"Preservation Program" crosswalk to VSS. (VSS confinement ventilation system configuration control)	Facility drawings need updated per Configuration Management Program. VSS Confinement Ventilation Systems and Fire Detection and Alarm systems were walked down, drawings were updated, redlined, revised and verified to "as-built" drawings. Confinement Ventilation System drawings were validated. Fire Detection and Alarm drawings will be as-built validated.

## APPENDIX 2

### CLARIFICATION OF COMMITMENT NO. 20 OF THE IMPLEMENTATION PLAN FOR DNFSB RECOMMENDATION 2000-2 CONFIGURATION MANAGEMENT, VITAL SAFETY SYSTEMS

**Clarification:** The response to Commitment No. 20 is to include all assessments that directly address some aspect of VSS operability and/or reliability. Thus, any assessment of a VSS would be included, as would any assessment of a safety management or other program that helps ensure the continued operability and reliability of VSSs over time. Such programs are referred to by the DNFSB as "preservation programs" and include conduct of operations, configuration management, maintenance, testing and surveillance, training and qualification, etc. All assessments meeting these criteria should be included regardless of the organization performing the assessment (internal or external). There is no need to include assessments that do not meet the above criteria. It is recognized that for many assessments that do not directly address VSSs or associated preservation programs, it can usually be argued that there will be at least some minor influence on VSS operability. However, the intent of requesting this information to learn whether VSS operability is being adequately addressed by current assessments, and if the issues, corrective actions, and lessons learned from the assessments are being properly addressed. Therefore, assessments that do not specifically address some aspect of VSS operability (including preservation programs) should not be included. Engineering judgement should be used to determine whether or not to include an assessment. If an assessment covers both aspects that are related to VSS operability, and aspects that are not, only those aspects related to VSS operability need to be included in the response. Also, it is only necessary to include assessments that address VSS operability/reliability at Defense Nuclear Facilities of Interest listed in Appendix E of the IP. Some of these assessments may not be system or facility specific (e.g., an assessment of a maintenance program may be conducted on a site-wide basis), so care should be taken to ensure assessments are not applicable before they are excluded from the response. The minutes from the DP 2000-2 conference call on January 9, 2001 provide additional guidance on the length and content of the summary report to be provided in response to Commitment 20.

**APPENDIX 3**  
**RDF ASSESSMENT SUMMARY CROSSWALK TO VSS <sup>(1)</sup>**

<b>CY-2000 ES&amp;H Assessment</b>	<i>Fire Protection System (Detection, Alarm, Suppression)</i>	<i>COG and LOG HEPAs</i>	<i>COG and LOG Systems</i>	<i>Penthouse Crane</i>	<i>Vacuum Lift Magnetic Lift, Grapple</i>
Readiness Self-Assessment for ISMS Phase II					
ISMS Self Assessment					
ISMS Phase II Follow-up Verification Assessment					
Internal Readiness Evaluation for the Thorium-229 Separations Project					
Fire Hazards Analysis	X				
Annual Nuclear Criticality Safety Self-Assessment					
Review of RDF Operational Safety Requirements OSR/3019-CTD-R2 MMS/AOSR1030					
SAR Hazards Analysis Methodology Review					
Annual Facility Safety Documentation Review					
Material Condition Inspection					
Facility Rep Surveillance Report [12/21/00]					
Facility Rep Surveillance Report [05/11/00]			X		
Facility Rep Surveillance Report [08/10/00]					
I&C OSR Instrument Maintenance History Report			X		
Confinement Ventilation Assessment of the RDF		X	X		
Assessment of Potential Vulnerabilities Due to Degraded HEPA Filters in ORNL Nuclear Hazard Category 1,2,&3 Facilities		X	X		
Conduct of Operations Program Assessment					
Review of the SAR and TSR for RDF Building 3019	X	X	X	X	
Facility V&V Systems Drawing Assessment	X		X		

(1)Vital Safety Systems (DNFSB 2000-2 DEFINITION AND CLARIFICATION)

- "Active" Systems only (in Cat. 1, 2, and 3 facilities)
- Safety Class
- Safety Significant
- Defense In Depth and "Preservation Program" (Line Management identifies)

**APPENDIX 4**  
**RDF ES&H ASSESSMENT SUMMARY CROSSWALK TO VSS OPERABILITY**

<b>CY-2000 RDF ES&amp;H Assessment</b>	<b>Preservation Program</b>	<b>Operational Readiness</b>	<b>Operational Reliability</b>	<b>System Performance</b>	<b>System Maintenance</b>	<b>Support Systems</b>
Readiness Self-Assessment for ISMS Phase II	X					
ISMS Self Assessment	X					
ISMS Phase II Follow-up Verification Assessment	X					
Internal Readiness Evaluation for the Thorium-229 Separations Project	X					
Fire Hazards Analysis		X	X	X	X	X
Annual Nuclear Criticality Safety Self-Assessment	X					
Review of RDF Operational Safety Requirements OSR/3019-CTD-R2 MMS/AOSR1030	X					
SAR Hazards Analysis Methodology Review	X					
Annual Facility Safety Documentation Review	X					
Material Condition Inspection	X					
Facility Rep Surveillance Report [12/21/00]	X					
Facility Rep Surveillance Report [05/11/00]	X		X	X		
Facility Rep Surveillance Report [08/10/00]	X					
I&C OSR Instrument Maintenance History Report		X	X	X	X	
Confinement Ventilation Assessment of the RDF		X	X	X	X	X
Assessment of Potential Vulnerabilities Due to Degraded HEPA Filters in ORNL Nuclear Hazard Category 1,2,&3 Facilities		X	X	X	X	
Conduct of Operations Program Assessment	X					
Review of the SAR and TSR for RDF Building 3019	X		X	X	X	X
Facility V&V Systems Drawing Assessment	X					

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United States Government

Department of Energy

# memorandum

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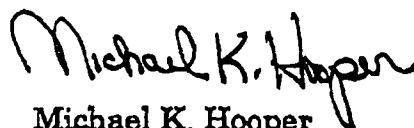
REPLY TO

ATTN OF: Michael K. Hooper, Assistant Manager for National Security (AMNS)

SUBJECT: Oakland Operations Office (OAK) Response to Defense Nuclear Facilities  
Safety Board Recommendation 2000-2 Implementation Plan  
Commitment #20 (AMNSNST:010070)REFERENCES: Letter from B. Richardson to J. Conway dated October 31, 2000 with DOE's  
Implementation Plan for Recommendation 2000-2, *Configuration Management,  
Vital Safety Systems*

TO: Ralph Erickson, Chief Operating Officer, Defense Programs

This memorandum addresses OAK's response to Commitment #20 of DOE's Implementation Plan for Defense Board Recommendation 2000-2 (see reference). Two attachments are enclosed that constitute our response. The first attachment is the submittal letter and reviews/assessments performed by LLNL. Note that only Appendix E facilities information was submitted at this time. The remaining nuclear facility information will be provided by April 15, 2001. The second attachment is the review/assessments performed by DOE of all LLNL nuclear facilities. OAK has identified the area of systems engineering oversight as an area that might require assistance. Please contact Carol Sohn of my staff at (925) 424-3308 if you have any questions concerning this information.



Michael K. Hooper  
Assistant Manager  
for National Security

## Attachment:

- (1) Letter from D. Fisher to M. Hooper, *Submittal of LLNL response to commitment #20 of DOE Implementation Plan for DNFSB Recommendation 2000-2*, Dated February 26, 2001
- (2) DNFSB 2000-2, Commitment 20 DOE Reviews and Assessments (2/1/00 through 1/31/01)



R. Erickson

-2-

cc: D. Miotla, DP-17 w/attachment  
K. Loll, DP-17 w/o attachment  
J. Kimball, DP-45 w/attachment  
M. Oldham, EM-3 w/o attachment  
W. Boyce, EM-5 w/attachment  
J. Arango, S-3.1 w/attachment  
D. Fisher, LLNL, L-005 w/attachment  
R. Beach, LLNL, L-005 w/attachment  
A. Garcia, LLNL, L-352 w/o attachment  
A. Copeland, LLNL, L-360 w/attachment  
K. Perkins, LLNL, L-360 w/attachment

R. Erickson

-3-

bcc: M. Hooper, AMNS w/o attachment  
R. Corey, AMNS w/o attachment  
C. Sohn, AMNS w/attachment  
P. Hill, LSOD w/attachment  
R. Mortensen, DPOD w/o attachment  
J. Davis, AMEN w/o attachment  
D. Nakahara, AMEN w/attachment  
M. Brown, AMEN w/attachment  
J. Wood, AMEN w/attachment  
A. De La Paz, AMNS w/attachment  
R. Scott, LSOD w/attachment  
R. Kopenhaver, ESHD w/attachment  
NST File

**ATTACHMENT 1**

**LETTER FROM D. FISHER TO M. HOOPER  
SUBMITTAL OF LLNL RESPONSE TO  
COMMITMENT #20 OF DOE  
IMPLEMENTATION PLAN FOR DNFSB  
RECOMMENDATION 2000-2**



# Lawrence Livermore National Laboratory

02-26-141133 11:00

*Deputy Director for Operations*

February 26, 2001

Michael K. Hooper  
Assistant Manager for National Security Administration  
U.S. Department of Energy  
1301 Clay Street  
Oakland, CA 94612-5208

**Subject: Submittal of LLNL response to commitment #20 of DOE  
Implementation Plan for DNFSB Recommendation 2000-2**

Reference: Letter from Camille Yuan-Soo Hoo to C. Bruce Tarter, dated  
November 9, 2000, DNFSB Recommendation 2000-2  
Implementation Plan

*ml*  
Dear ~~Mr. Hooper~~,

Attached is our response to Commitment #20 of the DOE Implementation Plan for  
DNFSB Recommendation 2000-2.

ES&H assessments performed from February 1, 2000 through January 31, 2001 that  
relate to the operability of vital safety systems are shown for the facilities listed in  
Appendix E of the Implementation Plan plus one additional Category 3 nuclear  
facility, B239.

Per DOE guidance forwarded through DOE/OAK on February 14, 2001, the requested  
assessment information for nuclear facilities not listed in Appendix E may be  
supplied at a later time. This information, for the LLNL nuclear facilities not  
included in the attachment, is expected to be submitted to you by March 30, 2001.

If I can be of any assistance, please contact me directly, or Alan Copeland, x2-8188, if  
there are specific questions.

Sincerely,

A handwritten signature in black ink that reads "Dennis K. Fisher".

Dennis K. Fisher  
Acting Deputy Director for Operations

Michael K. Hooper

- 2 -

February 26, 2001

Attachment

Copy:  
George Campbell  
Alan Copeland  
John Gilpin  
Carol Sohn (DOE)

DKF:CY01-138

**DNFSB 2000-2, Commitment 20**

**Self-Assessments 2/1/00 through 1/31/01**

(Consistent with DOE guidance, scheduled and routine operability checks of Vital Safety Systems and Authorization Basis related assessments are not included here).

**B-331 Tritium Facility**

Title	Scope Summary	Date(s)/ Periodicity	Issues & Findings	Actions Taken	Related POCMs
<p>B331 Self-Assessment for 3rd Quarter 2000 Lock-Out &amp; Tagging including Gloveboxes and Fire Detection Systems.</p>	<p>Verification of Lock-Out &amp; Tagging of energy sources including those for Vital Safety Systems.</p>	<p>September 25, 2000/ Annually</p>	<p>No Findings. Concerns included: Consistent labeling throughout facility; Documentation of multiple energy source equipment; Use of Lock-Out &amp; Tag locks instead of administrative locks on two pieces of equipment.</p>	<p>Labeling inconsistencies were corrected.  Management is evaluating multiple energy source documentation options.  Improper lock usage was corrected immediately.</p>	<p>None</p>
<p>NMTP Management Reviews for 2nd and 3rd Quarters 2000.</p>	<p>Management reviews of open deficiencies regarding all of the Vital Safety Systems and their documentation.</p>	<p>November 10, 2000/ Annually, now Bi-Monthly</p>	<p>No Findings or Concerns.</p>	<p>Program Management established bi-monthly reviews of open deficiencies to ensure prompt attention and closure.</p>	<p>None</p>
<p>B331 Self-Assessment for 4<sup>th</sup> Quarter 2000 – Fire Safety.</p>	<p>Inspection of Facility to confirm adequacy of Fire Detection and Suppression Systems and housekeeping.</p>	<p>December 10, 2000/ Biennially</p>	<p>Minor housekeeping and access shortcomings noted. Also recommendations on improving fire separations.</p>	<p>Improvements and corrections are in progress.</p>	<p>None</p>

**DNFSB 2000-2, Commitment 20**  
**Self-Assessments 2/1/00 through 1/31/01**

**B-332 Plutonium Facility**

<b>Title</b>	<b>Scope Summary</b>	<b>Date(s)/ Periodicity</b>	<b>Issues &amp; Findings</b>	<b>Action Taken</b>	<b>Related POCMs</b>
B332 Self-Assessment for 1st Quarter 2000 - Lock-Out & Tagging Activities including those for Vital Safety Systems.	Verification of proper Lock-Out & Tagging of energy sources for: Gloveboxes, Room Ventilation, Continuous Air Monitoring, Glovebox Exhaust, Fire Detection, Inert Gas System, Hydrogen Gas System, Emergency Power, Criticality Alarm System	February 4, 2000/ Annually	No Findings. Concerns regarding consistent labeling throughout facility and documentation of multiple energy source equipment.	Procedures for labeling in progress; management evaluating documentation options.	None
B332 Self-Assessment for 3rd Quarter 2000 - Conduct of Operations.	Verification that conduct of operations requirements are met for: Structure, Gloveboxes, HEPA Filters, Room Ventilation, Continuous Air Monitoring, Glovebox Exhaust, Downdraft, Fire Suppression, Fire Detection, Inert Gas System, Hydrogen Gas System, Emergency Power, Criticality Alarm System.	October 27, 2000/ Biennially	No Findings or Concerns.	None Required.	None
HCD Team 1 Assessment of: Perchlorate Presence on all fume hoods in 132J.	Assessment to confirm that no perchlorate has accumulated in the Glovebox Exhaust system.	October 30, 2000/ One Time	No Findings or Concerns.	None Required.	None
NMTP Management Reviews for 2nd and 3rd Quarters 2000.	Management reviews of open deficiencies regarding all of the Vital Safety Systems and their documentation.	November 10, 2000/ Annually, now Bi-Monthly	No Findings or Concerns.	NMT Program Management established bi-monthly reviews of open deficiencies to ensure prompt attention and closure.	None
B332 Facility Safety Committee Walk-Throughs.	Inspection by 20 3-person teams of all areas of the facility looking for shortcircuiting room-by-room. Required inspections include components of: Structure, Gloveboxes, Room Ventilation, and Fire Suppression.	Teams inspect different area Bi-Weekly	No Findings. Concerns referred to appropriate room supervisor for immediate action.	Concerns not remedied immediately were referred to the Facility Assurance Manager for tracking to closure.	None

FEB. 25. 2001 2:38PM DOE/LNL/RMNS 510-423-4279

NO. 188 P. 9/30

**DNFSB 2000-2, Commitment 20**  
**Self-Assessments 2/1/00 through 1/31/01**

**B-334 HETB Facility**

<b>Title</b>	<b>Scope Summary</b>	<b>Date(s)/ Periodicity</b>	<b>Issues &amp; Findings</b>	<b>Actions Taken</b>	<b>Related POCMs</b>
B334 Self-Assessment for 2nd Quarter 2000 - ES&H issues including those for VSSs.	Focus was on signage and documentation, but included any safety issues noted by the inspectors, including fire suppression and the HEPA filters and plenums.	July 7, 2000/ Annually	A fire extinguisher in one room was not readily available. Housekeeping in another room was inadequate.	Items blocking the fire extinguisher were removed to grant ready access. The room was cleaned.	None
NMTP Management Review for 4th Quarter 2000.	Management reviews of open deficiencies regarding all of the Vital Safety Systems and their documentation.	December 21, 2000/ Annually, now Bi-Monthly	No Findings or Concerns.	Program Management established bi-monthly reviews of open deficiencies to ensure prompt attention and closure.	None

**B-231 Vault**

<b>Title</b>	<b>Scope Summary</b>	<b>Date(s)/ Periodicity</b>	<b>Issues &amp; Findings</b>	<b>Actions Taken</b>	<b>Related POCMs</b>
Fire Hazard Assessment (FHA).	The FHA reviews the facility fire loading, the materials at risk, the building configuration, changes in operations from the previous FHA, and the ability of the fire suppression system and detection system to meet the facility requirements.	March 2000/ Triennially	N/A	N/A	None

FEB. 26. 2001 2:39PM DOE/LLNL/RMNS 510-423-4279

NO. 188 P. 10/30



**DNFSB 2000-2, Commitment 20**  
**Self-Assessments 2/1/00 through 1/31/01**

**B-233 Container Storage Unit (CSU)**

Title	Scope Summary	Date(s)/ Periodicity	Issues & Findings	Actions Taken	Related POCMs
OS233 CSU TRU/Classified Storage Self- Assessment.	Walk-Through/inspection of B233 Container Storage Unit by ES&H Team including Automatic Fire Sprinkler System.	3/20/00 Biennially	No deficiencies were reported to HWM regarding these inspections.	None	None
Discipline/Team Action Plan Fire Prevention Inspection.	Walk-Through/inspection of facility including Automatic Fire Sprinkler System.	3/9/00 Annually	No deficiencies were reported to HWM regarding these inspections.	None	None

**B-239 High Energy Radiography Facility**

Title	Scope Summary	Date(s)/ Periodicity	Issues & Findings	Actions Taken	Related POCMs
None conducted.*	N/A	N/A	N/A	N/A	None

\*Recent upgrade by DOE OAK to Hazard Category 3 will result in new assessment program.

## **ATTACHMENT 2**

**DNFSB 2000-2, COMMITMENT 20  
DOE REVIEWS AND ASSESSMENTS  
(2/1/00 THROUGH 1/31/01)**

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
<b>Reviews of Laboratory and OAK</b>					
DP-17/DP-45 Limited Scope Review of PAAA and Authorization Basis	Review of OAK nuclear safety oversight and PAAA oversight at Livermore Site Office	02/01/00-02/03/00	<ul style="list-style-type: none"> <li>• Current contract between DOE/UC does not contain adequate performance measures related to authorization basis activities to effectively influence contractor performance</li> <li>• LSO does not have direct authority over the funding used for the Contractor's authorization basis activities in order to influence budgeting and prioritization of these activities</li> <li>• LSO does not have a formal process for the conduct of PAAA-related activities, nor has DP developed and disseminated expectations for these programs</li> </ul>	<ul style="list-style-type: none"> <li>• Contract performance measure prepared</li> <li>• Enhanced integration of LSO in DP budget preparation</li> <li>• PAAA procedure prepared</li> </ul>	N/A
OAK Criticality Safety Self Assessment	OAK conducts a self assessment of how it manages and oversees LLNL criticality safety progra	02/00	<ul style="list-style-type: none"> <li>• LSO Participation in the LLNL criticality safety budget or resource allocation activities</li> <li>• Documentation of occurrence reports by LSO criticality safety manager</li> <li>• Feedback/reports on contractor self assessments to OAK Senior management</li> <li>• LSO Criticality safety manager not reviewing adequate sample of LLNL Plutonium facility CSEs</li> </ul>	<ul style="list-style-type: none"> <li>• Corrective action plan prepared with 4 corrective actions</li> </ul>	N/A
OAK For Cause Assessment of LLNL Electrical Safety	Scope included training, implementation of safety practices and procedures, configuration management, management oversight, self assessment/deficiency tracking, incidents/corrective actions and safety culture	2/28/00-3/10/00	<ul style="list-style-type: none"> <li>• Program implementation</li> <li>• Procedures and drawings</li> </ul>	<ul style="list-style-type: none"> <li>• Report transmitted to Lab and corrective actions developed</li> <li>• CAP due to DOE by 2/28/01</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
EH-10 Review of PAAA	EH-10 review of prior PAAA corrective actions and issues associated with 11/5/99 letter (authorization basis)	03/00	<ul style="list-style-type: none"> <li>• No issues associated with prior PAAA corrective actions</li> <li>• Follow-up on 11/5/99 letter completed with issuance of enforcement actions</li> </ul>	<ul style="list-style-type: none"> <li>• Laboratory Authorization Basis root cause analysis and corrective action plan</li> </ul>	Mid-year FY00 nuclear safety performance measure; FY01 NS performance measure
OAK Nuclear Safety Self Assessment	OAK conducts a self assessment of how it manages and oversees LLNL nuclear safety progra	03/00 Issued 04/28/00	<ul style="list-style-type: none"> <li>• Representing OAK as the single authority on nuclear safety to its contractor</li> <li>• Formalizing a systematic method for reviewing negative USQs annually in conjunction with FRs</li> <li>• Routinely meeting with LLNL operations management for non-nuclear facilities</li> <li>• Implementation of FRAM roles and responsibilities for nuclear safety</li> <li>• Participation in the LLNL nuclear safety budget or resource allocation activities</li> </ul>	<ul style="list-style-type: none"> <li>• Corrective action plan prepared with 7 corrective actions</li> </ul>	N/A
OAK Readiness Review of LLNL Institutional ISMS Phase B	Recommendation to OAK as to whether to proceed with verification of Phase B looking at qualification and competency of ARO review team, breadth and depth of ARO review, validity and integrity of ARO review	04/10-20/00	<ul style="list-style-type: none"> <li>• Closure of Superblock corrective actions</li> <li>• Sampling was insufficient</li> <li>• Integration of feedback and improvement remains open</li> </ul>	<ul style="list-style-type: none"> <li>• Report transmitted to Lab</li> <li>• Corrective actions developed and identified</li> </ul>	N/A
DOE ISMS Verification of LLNL Phase I/B/IIB, Part 1	Directorate Implementation Plans, gap analysis, evaluation of two Associate Directorates	05/00	<ul style="list-style-type: none"> <li>• Lack of completeness and consistency in directorate gap analyses</li> <li>• Utilization of issues management tools</li> <li>• Process for developing hazard classification and</li> </ul>	<ul style="list-style-type: none"> <li>• Corrective actions identified and tracked</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
			analyses for non-nuclear facilities needs to be strengthened <ul style="list-style-type: none"> <li>• Configuration management procedures</li> <li>• Compensatory measure implementation</li> <li>• Assurance of training and qualification</li> <li>• Authorization of maintenance activities</li> <li>• Process to identify hazards for maintenance activities needs to be developed</li> <li>• OAK Feedback and improvement processes need strengthening</li> <li>• OAK Directives management system needs strengthening</li> </ul>		
OAK/LLNL Joint For Cause Assessment of LLNL Laser Safety	Review of laser safety program including requirements/standards, implementation of requirements, safety management associated with lasers, past accidents and occurrence reports	Issued 5/26/00	<ul style="list-style-type: none"> <li>• Lack of compliance with procedures/requirements</li> <li>• Lack of flowdown of requirements into ES&amp;H Manual</li> <li>• Unclear Roles and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Report issued to Lab and corrective actions developed</li> </ul>	N/A
DOE ISMS Verification of Oakland Operations Office	Verification of OAK for ISMS declaration	08/00	<ul style="list-style-type: none"> <li>• Processes and mechanisms have not been sufficiently integrated by top-level documentation</li> <li>• Perceived inequities in application of annual physicals</li> <li>• FRAM does not reflect recently approved OAK reorganization</li> <li>• Some contracts do not contain requirement on performing hazard analysis supporting authorization</li> </ul>	<ul style="list-style-type: none"> <li>• Corrective actions developed and tracked by OAK</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
			<ul style="list-style-type: none"> <li>• bases</li> <li>• OAK procedures for readiness reviews</li> </ul>		
DOE ISMS Verification of LLNL Phase IB/IIB, Part 2	Review of four directorates and implementation between AD and activity levels	09/00	<ul style="list-style-type: none"> <li>• As part of continuation of effort, upgrade safety basis documentation</li> <li>• Result of S-300 PrHA should be communicated to workers and corrective actions developed</li> <li>• Additional improvements to IWS process related to environmental hazards and controls</li> </ul>	<ul style="list-style-type: none"> <li>• Report transmitted to Lab</li> <li>• Corrective actions developed</li> </ul>	N/A
OAK Appendix F Review (2000)	Annual review of contract performance measures	09/00-present (to be issued)	<ul style="list-style-type: none"> <li>• Report on hold pending HQ review</li> </ul>	<ul style="list-style-type: none"> <li>• Report on hold pending HQ review</li> </ul>	All
DOE OA Initial Joint Review of Wildland Fire Safety at DOE Sites	Prevention and response to wildland fires	10/15/00-12/15/00	<ul style="list-style-type: none"> <li>• DOE order and policy guidance do not clearly establish/convey expectations for establishing wildland fire management programs</li> <li>• Site hazards assessments do not adequately address wildland fires</li> <li>• Needs associated with effectively managing response to severe wildland fires have not been addressed</li> <li>• Interfaces with off-site agencies need improvement</li> <li>• Formal feedback and improvement processes have not been applied to wildland fire prevention and response</li> </ul>	<ul style="list-style-type: none"> <li>• Lessons learned</li> <li>• Formal CAP to be submitted by 3/23/01</li> </ul>	N/A
DOE Facility Representative Self evaluation	Evaluate OAK Facility Representative progra to requirements	1/8/01-1/12/01 (to be issued)	<ul style="list-style-type: none"> <li>• Report to be issued</li> </ul>	<ul style="list-style-type: none"> <li>• Dependent upon report issues</li> <li>• CAP to be developed</li> </ul>	N/A

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**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
<b>OAK Operational Awareness Reviews (includes activities involving observation, walkthroughs of facilities, confirmation of documentation via facility observations)</b>					
OAK Operational Awareness	B-332/B-331/B-334 lifting and placing of poles and netting	02/01/00	<ul style="list-style-type: none"> <li>• Lack of consequence evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked as anomaly, disposition session with Lab</li> </ul>	N/A
OAK Operational Awareness	B-332/B-331/B-334 lifting and placing of Superblock security poles	02/03/00	<ul style="list-style-type: none"> <li>• Date of completion of natural phenomenon analysis.</li> <li>• Documentation of critical lift plan review by Engineering</li> <li>• Level of contamination in Increment 1</li> </ul>	<ul style="list-style-type: none"> <li>• Disposition with RCRs and direction letter with Lab</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612	02/03/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 evaporator and carbon adsorption unit USQ	02/04/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 tent	02/04/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-334 authorization basis change for national training exercise	02/09/00	<ul style="list-style-type: none"> <li>• Scope of work is very general</li> <li>• Requirements of Chapter 33 of ES&amp;H Manual</li> <li>• Controls need to be listed that are taken credit for</li> </ul>	<ul style="list-style-type: none"> <li>• Comment disposition session with Lab for all three issues</li> </ul>	N/A
OAK Operational Awareness	B-334 Chapter 33 ES&H Manual applied to NTE	02/10/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-334 alternative site evaluation to LACEF	02/10/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1362	02/11/00	<ul style="list-style-type: none"> <li>• Work procedures do not conform to ES&amp;H Manual</li> <li>• Criticality limit postings signatures are not consistent with procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Information submitted to Lab as Level 2</li> <li>• Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1329	02/11/00	<ul style="list-style-type: none"> <li>• Cracked of glovebo windo</li> <li>• Cracked polyethylene bottle of nitric acid next to peroxide bottle</li> </ul>	<ul style="list-style-type: none"> <li>• Information submitted to Lab as Level 1</li> <li>• Information submitted to Lab as Level 1</li> </ul>	N/A
OAK Operational Awareness	B-612 Walkthrough of hazardous waste facility and packaging and processing building	02/11/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1338	02/15/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Work permit 00-0068 and PuFO 00-042	02/15/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough and document review of AB	02/16/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A

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**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
	modification				
OAK Operational Awareness	B-332 BNFL bagless transfer equipment for stabilization and packaging plutonium	02/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 Evaporator and Carbon Adsorption Unit interim status	02/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 drum USQ	02/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 NEPA documentation	02/29/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-612/514/625 Surveillance of Hazardous Waste Management Division Training Progra	02/29/00	<ul style="list-style-type: none"> <li>Submit updated TIM and identification of requirements in TIM</li> <li>Assessment of Training Program QA</li> <li>Need to use SCBA during initial spill or emergency response actions</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	B-332 Radiation Protection Progra	03/01/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1010	03/02/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Pit bisector	03/02/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 TRU waste storage areas	03/03/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-612 Fire Protection Program Surveillance	03/06/00	<ul style="list-style-type: none"> <li>Clear space between Category 3 nuclear segment I and segment II</li> <li>Appropriate construction for radioactive waste storage</li> <li>Openings in B-514 firewall</li> <li>Adequacy of proposed B-233CSU (Container Storage Unit) firewater collection</li> <li>Hazard for high voltage lines above 612-1</li> <li>Need for fire protection sprinklers</li> <li>Need for fire protection technical basis in B514/612</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 1</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 1</li> </ul>	N/A
OAK Operational Awareness	B-332 final installation of the poles and netting	03/07-08/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A



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Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
OAK Operational Awareness	HWM Area 514 electrical safety	03/07/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 facility condition	03/07/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 electrical safety	03/09/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 observation of liquid waste transfer	03/09/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-693 fire suppression system	03/09/00	<ul style="list-style-type: none"> <li>Container not meeting 3-day requirement</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-131/B-332 supporting activity for Object 77	03/13/00	<ul style="list-style-type: none"> <li>Personal protective equipment issues</li> <li>Critical lift plan development</li> </ul>	<ul style="list-style-type: none"> <li>Letter issued to Lab</li> </ul>	N/A
OAK Operational Awareness	B-231 air and water	03/16/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-231 Beryllium inventory review	03/16/00	<ul style="list-style-type: none"> <li>Management not taking ownership of personal exposure results for Be</li> <li>Required exposure assessment has not been done</li> </ul>	<ul style="list-style-type: none"> <li>Information tracked as an anomaly</li> <li>Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	LLNL Self Assessment of Nuclear Criticality Safety Program	03/17/00	<ul style="list-style-type: none"> <li>Most comments were clarifications</li> </ul>	<ul style="list-style-type: none"> <li>Comments were provided directly to Lab</li> </ul>	N/A
OAK Operational Awareness	B-332 object 77 CSE	03/17/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 safing activity pre-job briefing	03/17/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, B-334 transfer of W80 program	03/17/00, 03/28/00, 03/29/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-233CSU DTSC walkthrough	03/20/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-514 DTSC walkthrough	03/20/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-693 DTSC walkthrough	03/20/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 with DTSC	03/21-22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 Criticality Safety Audit Report	03/22/00	<ul style="list-style-type: none"> <li>Secondary finding</li> <li>Level of detail</li> <li>Emergency response plan for criticality accident</li> <li>Lack of personnel to perform assessment</li> </ul>	<ul style="list-style-type: none"> <li>Information provided directly to Lab</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1345 and Criticality Safety SOP (Standard Operating Procedure)	03/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A

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**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
OAK Operational Awareness	B-332, Room 1010	03/22/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-332, B-331, B-334 installation of clips	03/29/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-332 Observation of Item 77 Safing Operation	03/29/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 follow-up on incident analysis	03/30/00	• Site specific packaging requirements not enough specificity or addressing PPE (personnel protective equipment)	• Information submitted to Lab as Level 2	N/A
OAK Operational Awareness	HWM T-622 propane unloading	03/30/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 observe work in progress	04/03/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 personnel observation and review containers in WAA (Waste Accumulation Area) for compliance with RCRA	04/03/00	• Containers had not been moved to WAA within 3-days	• Information submitted to Lab as Level 2	N/A
OAK Operational Awareness	B-251 Familiarization	04/10/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-612/B-693 Surveillance of HWMD, assess compliance with RCRA requirement	04/13/00	• ES&H Manual does not specify requirement	• Information submitted to Lab as Level 2	N/A
OAK Operational Awareness	B-332 Airborne Effluent Monitoring WSS	04/19/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 observe HEPA trailer and address DTSC SOV (summary of violations) issues	04/20/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 perimeter walk around	04/24/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 walkthrough of Lab-packing and 90-day storage area	04/27/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 Fire Protection	04/28/00 – 05/09/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 RCRA issues check	05/02/00	• Four containers exceeded 3-day storage limit	• Information submitted to Lab as Level 2	N/A
OAK Operational Awareness	B-233 Complex Waste Accumulation Area	05/03/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-231 Vault to view LiH storage, including the storage racks	05/03/00	• Lithium Hydride storage rack additional tie-downs	• Information tracked as an anomaly	N/A
OAK Operational Awareness	B-251 Seismically securing Mosler safes	05/08/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 SAR update	05/10/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-514 machine shop	05/11/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-331 walkthrough with DNFSB representatives	05/16/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-251 walkthrough with DNFSB representatives	05/17/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-231 walkthrough with DNFSB representatives	05/17/00	• No findings	• Not applicable	N/A

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**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
OAK Operational Awareness	HWM Analysis of tents in Fire Hazards Analysis	05/17/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-331 walkthrough in conjunction with review of SAR	05/22/00	<ul style="list-style-type: none"> <li>Bounding tritium release and source term analysis</li> <li>Radiological Environmental monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Discussed in SER and tracked as an anomaly</li> <li>Tracked as an anomaly</li> </ul>	N/A
OAK Operational Awareness	B-331 Walkthrough in conjunction with review of SAR	05/23/00	<ul style="list-style-type: none"> <li>Fire warning with ne glovebox windows</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	B-332 Implementation of Criticality Safety	06/06/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-233CSU Walkthrough	06/08/00	<ul style="list-style-type: none"> <li>Work instruction did not reflect current approved authorization basis</li> <li>B-233CSU co-located facility hazards need to be evaluated</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> <li>Tracked as anomaly; to be addressed in SER</li> </ul>	N/A
OAK Operational Awareness	B-332 Verification of LLNL corrective actions from 1999 ISM verification	06/08/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 OAK Manager's Office Walkthrough	06/14/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-239 Walkthrough of building and bays	06/21/00	<ul style="list-style-type: none"> <li>Laser power level labeling conflict</li> <li>B-239 procedures past expiration dates</li> <li>Co-located external gas hazards analysis</li> <li>Labeling conflict with RGD survey</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> <li>Tracked as anomaly</li> <li>Tracked as anomaly</li> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 Review of Criticality Safety Evaluation, room 1337	06/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-334 review of criticality safety evaluation	06/22/00	<ul style="list-style-type: none"> <li>Exemption fro independent review CSM 1159</li> <li>Adequacy/implementation of measurement request forms</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-693/DWTF (Decontamination and Waste Treatment Facility) Conduct of Operations walkthrough	06/26/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-331 management walkthrough	06/26/00	<ul style="list-style-type: none"> <li>Room 157 monitor readings</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as an anomaly</li> </ul>	N/A
OAK Operational Awareness	B-251 walkthrough	06/28/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A

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**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
OAK Operational Awareness	B-332 HYDOX process, specific WSS in regard to fire protection features	06/29/00	<ul style="list-style-type: none"> <li>Fire protection requirements for Pu HYDOX line in B-332</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 exterior walkthrough	07/03/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-233CSU Exterior walkthrough	07/03/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-693 Exterior walkthrough	07/03/00	<ul style="list-style-type: none"> <li>Unlatched flammable gas storage locker outside building</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 Review of USQ99-004D, Common mode failure of Automatic Transfer Switches	07/04/00	<ul style="list-style-type: none"> <li>Negative USQ should be positive</li> </ul>	<ul style="list-style-type: none"> <li>Letter of direction prepared for Lab</li> </ul>	N/A
OAK Operational Awareness	B-334 Implementation of criticality safety	07/05/00	<ul style="list-style-type: none"> <li>Lack of Integration worksheet for recent operation</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-334 Management walkthrough	07/05/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-334 Walkthrough and document review	07/05/00	<ul style="list-style-type: none"> <li>Backup power tests</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-334 walkthrough	07/05/00	<ul style="list-style-type: none"> <li>Walkthrough prior to re-test of security</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 management walkthrough	07/07/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 fire protection walkthrough for managers, fire protection USQ walkthrough	07/07/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-612-2 Freezer walkthrough	07/10/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 system walkdown for H2 and software QA for SAR Chapter 5	07/12/00	<ul style="list-style-type: none"> <li>Software that controls H2 and O2 and interlocks was not under configuration management and QA control</li> </ul>	<ul style="list-style-type: none"> <li>Letter/discussion with Laboratory</li> </ul>	N/A
OAK Operational Awareness	B-251 familiarity walkthrough	07/18/00	<ul style="list-style-type: none"> <li>Monitoring posting/radiological practices inconsistencies</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough of Room 1362 for criticality safety	07/21/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough of Room 1370 for criticality safety	07/21/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough of Room 1353 for criticality safety	07/21/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough of Room 1322 for criticality safety	07/21/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough of Room 1321 for criticality safety	07/27/00	<ul style="list-style-type: none"> <li>No criticality safety findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
			<ul style="list-style-type: none"> <li>Outdated procedure in work area</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as Anomaly</li> </ul>	
OAK Operational Awareness	B-332 walkthrough of Room 1329 for criticality safety	07/27/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 increment walkthrough	07/27/00	<ul style="list-style-type: none"> <li>Empty waste dru blocking access to Ca-gluconate gel for HF spill</li> <li>Room pre-filter is very dirty, scheduled for changeout</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-231 fire accident scenario revie	08/03/00	<ul style="list-style-type: none"> <li>No findings</li> <li>Walkthrough of B-231 fire protection of radiological materials</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> <li>Track as anomaly</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 walkthrough for use of stepladder	08/08/00	<ul style="list-style-type: none"> <li>Improper use of stepladder</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 and 612 to review curiu storage	08/08/00	<ul style="list-style-type: none"> <li>Review curium storage in HWM facilities for HWM SAR</li> </ul>	<ul style="list-style-type: none"> <li>Tracking as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-239 and B-251 authorization basis documentation revie	08/09/00	<ul style="list-style-type: none"> <li>PAAA discussions on B-239 and B-251</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 Bioassay Issue	08/10/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 walkthrough	08/15/00	<ul style="list-style-type: none"> <li>RCRA 3-day issue</li> </ul>	<ul style="list-style-type: none"> <li>Tracking as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-514, B-612 Walkthrough for verification of critical assumptions	08/15/00	<ul style="list-style-type: none"> <li>Flowdown of critical assumptions</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 2</li> </ul>	N/A
OAK Operational Awareness	HWM Area 693 walkthrough	08/15/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough	08/21/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 review of LLNL RCR responses on SAR/TSR review	08/22/00	<ul style="list-style-type: none"> <li>Draft document does not fully address radiation dose evaluation concerns</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-612, B-693 contractor meeting on Integrallon worksheet	08/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 Security and program walkthrough	08/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-334 and Superblock yard security and program walkthrough	08/22/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-233CSU, B-612, B-693, Area 514 Surveillance of sodium potassium and water reactive metals and HWM's management of these wastes	09/07/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
OAK Operational Awareness	B-332 Pu238 glovebo	09/12/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1378 criticality safety walkthrough	09/12/00	<ul style="list-style-type: none"> <li>No findings, follow-up on interim storage of liquid bearing uranium materials</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-334 Test	09/16/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough with DNFSB staff and OAK staff	09/21/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332, Room 1200	09/21/00	<ul style="list-style-type: none"> <li>No findings</li> <li>Potential for water to leak onto critical electrical components</li> <li>Seismic support of overhead water piping appears inadequate</li> <li>Nut on one overhead support not tight</li> <li>Corroded carbon steel piping</li> <li>Poor housekeeping in portions of Room 1200</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> <li>Information submitted to Lab as Level 2</li> <li>Information submitted to Lab as Level 2</li> <li>Tracked as anomaly</li> <li>Information submitted to Lab as Level 2</li> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 DNFSB Electrical Safety Walkthrough	09/28/00	<ul style="list-style-type: none"> <li>Emergency electrical shutdown procedure not in workplace at stated location</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 Surveillance of 20' clear zone	09/29/00	<ul style="list-style-type: none"> <li>No findings</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 Draft SAR and TSRs (document review)	10/01/00	<ul style="list-style-type: none"> <li>Clarifications of SAR text</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-514, B-612 room 1004, B-625, B-693 HWM Mercury waste handling areas surveillance	10/02/00	<ul style="list-style-type: none"> <li>Improperly stored and out of date mercury vacuu cleaner</li> <li>Change mercury vacuu maintenance procedures</li> <li>Vacuum cleaner tagged out due to out of date test sticker</li> </ul>	<ul style="list-style-type: none"> <li>Information submitted to Lab as Level 2</li> <li>Tracked as anomaly</li> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 SAR/TSRs walkthrough	10/03/00	<ul style="list-style-type: none"> <li>Overdue calibration on magnahelics</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 SAR, Chapter 7 radiation protection	10/04/00	<ul style="list-style-type: none"> <li>Review of chapter 7 anomalies</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 SAR/TSRs walkthrough	10/04/00	<ul style="list-style-type: none"> <li>Legacy HCl gas cylinder in</li> </ul>	<ul style="list-style-type: none"> <li>Tracked as anomaly</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
			<ul style="list-style-type: none"> <li>gas cabinet</li> <li>• Lack of available funding to complete installation of new fire detection system on schedule</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked as anomaly</li> </ul>	
OAK Operational Awareness	B-332 Observation of use of COMATS for criticality administrative controls	10/04/00	<ul style="list-style-type: none"> <li>• Material transferred in sealed primary container and open secondary container</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-332 waste management walkthrough for SAR/TSR review	10/05/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-331 waste management walkthrough for B-332 draft SAR/TSR review	10/05/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 walkthrough of SAA and WAAs in conjunction with SAR/TSR review	10/05/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 EMD Response and review of B-332 run card	10/06/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-332 review of radioactive sealed source inventory	10/10/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 observation of tent repair	10/12/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 conduct of operations	10/12/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-233CSU conduct of operations	10/12/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-693 DWTF conduct of operations	10/12/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-514, B-513 Hazards Analysis walkthrough	10/24/00	<ul style="list-style-type: none"> <li>• B-513 glovebox not described in FSP</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked as anomaly</li> </ul>	N/A
OAK Operational Awareness	B-612 Hazards Analysis walkthrough for conduct of operations	10/24/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-693 conduct of operations	10/25/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 rainwater evaluation	10/30/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	B-233 CSU storm draining surveillance	10/30/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 storm drainage surveillance	10/20/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 adequacy and condition of structures	11/13/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 review of structures	11/13/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 514 adequacy and condition of structures	11/16/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
OAK Operational Awareness	HWM Area 612 external review of structures	11/16/00	<ul style="list-style-type: none"> <li>• No findings</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
OAK Operational Awareness	B-332, status of MD new installations	11/21/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 fire protection	11/22/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 ventilation	11/27/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-239 radiography testing of stockpile part	11/28/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-332 hazards analysis integration with DNFSB staff	11/20/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 fire protection	11/22/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 ventilation syste	11/27/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 CAM (Continuous Air Monitor) surveillance	12/04/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 air monitors	12/04/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 514 CAM surveillance	12/06/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 continuous air monitors	12/06/00	• Respirator not worn during CAM alarm response	• Tracked as anomaly	N/A
OAK Operational Awareness	B-332 DNFSB walkthrough of metal conversion glovebox and 94-1 packaging syste	12/07/00	• DNFSB walkthrough without progra representative	• Tracked as anomaly	N/A
OAK Operational Awareness	B-233CSU Fire sprinkler maintenance	12/07/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-331 review of RCR and SER for SAR/TSR	12/14/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-332 management walkthrough of metal conversion glovebox installation	12/21/00	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-625 CAM alarm response	01/02/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-693 external ladder, B-233CSU	01/03/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 CAM, riser	01/09/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-251 walkthrough	01/19/01	<ul style="list-style-type: none"> <li>• Natural gas piping in roo 1313 does not appear to have adequate seismic support</li> <li>• Earthquake may cause fire suppression system to become inoperable</li> <li>• Vaults are credited as barriers in the seismic analysis but have no requirements for periodic verification</li> <li>• Consider increment 8 as</li> </ul>	<ul style="list-style-type: none"> <li>• Information submitted to Lab as level 2</li> <li>• Information submitted to Lab as level 2</li> <li>• Information submitted to Lab as level 2</li> <li>• No findings</li> </ul>	N/A



**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
			possible location for temporary storage of low-level nuclear waste in drum		
OAK Operational Awareness	B-334 management walkthrough	01/24/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-332 management walkthrough	01/24/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-331 management walkthrough	01/24/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	HWM Area 612 fire protection familiarization	01/25/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-625 crane bolts, B-612 riser surveillance	01/31/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-332 CSM 1171 document review	01/31/01	• No findings	• Not applicable	N/A
OAK Operational Awareness	B-251 observation of Np removal dry run	01/31/01	• No findings	• Not applicable	N/A

**DNFSB 2000-2, Commitment 20**  
**DOE Reviews and Assessments**  
**2/1/00 through 1/31/01**

Title	Scope Summary	Date(s)	Issues & Findings	Actions Taken	Related POCMs
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OAK Document Reviews (note issues may include conditions of approval or confirmation of controls proposed by Laboratory)					
OAK Document Review	Superblock Security Poles Lifting and Placement	02/03/00	<ul style="list-style-type: none"> <li>Conditions</li> <li>RCRs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> <li>Disposition</li> </ul>	N/A
OAK Document Review	B-334 RGD, B-332 Entry	02/10/00	<ul style="list-style-type: none"> <li>RCRs</li> <li>Conditions</li> </ul>	<ul style="list-style-type: none"> <li>Disposition</li> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	HWM SAR Comments	02/16/00	<ul style="list-style-type: none"> <li>RCRs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-239 Hazard Categorization	02/28/00	<ul style="list-style-type: none"> <li>Use of DOE-STD-1027</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	HWM USQ	03/02/00	<ul style="list-style-type: none"> <li>Controls</li> <li>RCRs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> <li>Disposition</li> </ul>	N/A
OAK Document Review	HWM Fire Protection Program	03/06/00	<ul style="list-style-type: none"> <li>FHAs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-251 SAR	03/08/00	<ul style="list-style-type: none"> <li>PISAs (Potential Inadequacy to the Safety Analysis)</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-231 Request for Continued Lithium Hydride Storage	03/08/00	<ul style="list-style-type: none"> <li>RCRs (Review Comment Records)</li> </ul>	<ul style="list-style-type: none"> <li>Disposition</li> <li>Letter to Lab with conditions</li> </ul>	N/A
OAK Document Review	B-332 Closure of Positive USQ Legacy Ite	03/13/00	<ul style="list-style-type: none"> <li>Conditions</li> <li>Controls</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-332 Authorization to proceed with Disposition	03/14/00	<ul style="list-style-type: none"> <li>Not approved</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-332 Entry	03/16/00	<ul style="list-style-type: none"> <li>Conditions</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-332 Change 4 Fire Protection Questions	03/17/00	<ul style="list-style-type: none"> <li>Questions</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-332 Approval of Safing of Legacy Ite	03/20/00	<ul style="list-style-type: none"> <li>Conditions</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-332 Approval of Installation of Superblock Overhead Security Cable Intersection Clips	04/05/00	<ul style="list-style-type: none"> <li>Conditions</li> <li>RCRs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> <li>Disposition</li> </ul>	N/A
OAK Document Review	B-251 Resolution of Potential Inadequacies	04/07/00	<ul style="list-style-type: none"> <li>PISAs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	HWM SAR Update	04/24/00	<ul style="list-style-type: none"> <li>Positive USQs (Unreviewed Safety Questions)</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-251 USQDs (Unreviewed Safety Question Determinations)	04/28/00	<ul style="list-style-type: none"> <li>Reaffirm controls</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-334 Radiation Measurements	05/02/00	<ul style="list-style-type: none"> <li>Interim controls</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	Superblock Nuclear Facilities' Plan for Reconciliation with LLNL Work Smart Standards	05/19/00	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A
OAK Document Review	B-331 SAR/TSRs (Technical Safety Requirements)	06/29/00	<ul style="list-style-type: none"> <li>RCRs</li> </ul>	<ul style="list-style-type: none"> <li>Letter to Lab</li> </ul>	N/A

SEPARATION

PAGE



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## Department of Energy

Washington, DC 20585

March 8, 2001

### MEMORANDUM FOR THE SECRETARY

FROM: CAROLYN L. HUNTOON *Carolyn L. Huntoon*  
ACTING ASSISTANT SECRETARY  
FOR ENVIRONMENTAL MANAGEMENT

SUBJECT: Information: Annual Review of ES&H Assessments  
at Environmental Management (EM) Defense  
Nuclear Facilities

ISSUE: Commitment No. 20 of the Department's  
Implementation Plan for Defense Nuclear Facilities  
Safety Board (DNFSB) Recommendation 2000-2  
states: "Annually, Lead Program Secretarial Offices  
will review the results of Environment, Safety and  
Health (ES&H) assessments performed during the  
previous year and provide the Secretary with a  
summary report for each of their sites." The due  
date established in the Implementation Plan for EM  
to meet this commitment is the end of February  
2001 for the first report. The summary report for  
meeting this commitment is attached.

BACKGROUND: In Recommendation 2000-2, the DNFSB  
recommended that the Department of Energy (DOE)  
ensure safety system status, as well as supporting  
programs, are scrutinized as a regularized part of  
assessments performed by line management. In  
accepting DNFSB's Recommendation, DOE  
committed to a review of line oversight of  
contractor programs to determine whether safety  
systems, as well as programs essential to system  
operability, are being included in those programs.

DOE Policy P450.5, Line Environment, Safety and  
Health oversight, sets forth the expectations for  
ES&H oversight.

In order to provide senior leadership with  
information obtained from these oversight and  
feedback processes, DOE committed to begin a  
regular practice of annually reviewing ES&H

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assessments performed by DOE and the Management and Operating (M&O) contractor at each site, and summarizing the results for the Secretary.

**SENSITIVITIES:** None.

**POLICY IMPACT:** In accordance with DOE's Implementation Plan for DNFSB Recommendation 2000-2, the Assistant Secretary for Environment, Safety and Health is responsible for institutionalizing the annual review of ES&H assessments as a requirement in the Directives system by the end of July 2001.

**NEXT STEPS:** The attached summary reports provide a great deal of information on ES&H assessments at EM sites. We will use this initial feedback to (1) learn how to improve assessments of vital safety systems at our sites, and (2) how best to succinctly capture their status in future annual summaries. My line management will work with our sites to accomplish these objectives. I have provided a complete set of annual summaries to EH for their use in developing guidance based on the best aspects of the site reports.

Attachment

EM Annual  
ES&H  
Summary

**Office of Environmental Management  
Year 2000 Annual Summary Report  
Environment, Safety and Health Assessments**

**Background:**

In Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2, Configuration Management, Vital Safety Systems, the Board recommended that the Department of Energy (DOE) ensure that safety system status and support programs are scrutinized as a regularized part of assessments performed by line management. In order to provide senior DOE management with information obtained from these oversight and feedback processes, DOE committed to review Environment, Safety and Health (ES&H) assessments performed by the maintenance and operation (M&O) contractor and DOE site organizations, and to summarize the results for the Secretary. Commitment Number 20 of the Implementation Plan reads as follows: *Annually, LPSO's will review the results of ES&H assessments performed during the previous year and provide the Secretary with a summary report for each of their sites.*

**HQ Guidance:**

In accordance with DOE's Implementation Plan for DNFSB Recommendation 2000-2, the Assistant Secretary for Environment, Safety and Health is responsible for institutionalizing the annual summary of ES&H assessments as a requirement in the Directives System by the end of July 2001. Meanwhile, limited guidance was provided in the Implementation Plan as follows:

- Summarize the scope and schedule for ES&H assessments performed over the previous 12 months by the M&O contractor, DOE line management, and the Office of Independent Oversight;
- Summarize the results obtained from these assessments, both by program and vital safety system. Using a site-specific list of vital safety systems, the summary report will provide a crosswalk of how ES&H assessment programs at each site review the condition of their vital safety systems;
- Note actions taken to address significant issues; and
- Identify issues where the field element manager has asked for assistance.

**Office of Environmental Management ES&H Assessment Summary Results:**

Each EM site with defense nuclear facilities submitted a summary report of ES&H assessments for year 2000 as required by the DOE Implementation Plan for DNFSB Recommendation 2000-2.

These Sites are as follows:

<u>Field/Operations Office</u>	<u>Site</u>
Idaho Operations Office	INEEL
Ohio Field Office	FEMP
Ohio Field Office	MEMP
Richland Operation Office	Hanford
Office of River Protection	Hanford (Tank Farms)
Rocky Flats Field Office	RFETS
Savannah River Operations Office	SRS
Carlsbad Field Office	WIPP
Oak Ridge Operations Office	ETTP, Y-12, ORNL

In the interest of brevity, lengthy lists of assessments and sample assessment reports have been removed but are available upon request. Although the Office of Science is LPSO for Oak Ridge, we have included a summary assessment of the EM facilities at Oak Ridge in this package for informational purposes.

All of the EM site reports are informative but they vary considerably in content. A review of the site summary reports indicate that:

- All EM sites have instituted assessment programs as part of oversight and feedback mechanisms that address the requirements of DOE P 450.5, Line Environment, Safety and Health Oversight.
- EM sites and contractors generally reported a large number of assessments. Even some smaller sites such as FEMP reported thousands of assessments and inspections annually.
- EM ES&H assessment efforts generally address programmatic aspects of vital safety systems.
- With the exception of fire protection systems, ventilation systems, and radiation protection systems, EM sites generally do not consistently assess the material condition of specific vital safety systems.
- The focus and degree of maturity of assessment programs vary considerably from site to site and within sites. We need to assure that important issues are not being overlooked.
- Lack of emphasis on preventive maintenance at EM sites is evident.
- Increasing emphasis on ISM and VPP at EM sites is encouraging.



- Several EM sites described innovative approaches such as bringing in outside organizations to assist and/or perform assessments.
- All EM sites have implemented CATS, DOE's corrective action tracking system. Site have also implemented local systems for tracking additional ES&H findings or open issues to closure.
- Most sites reported significant issues that had been or were being corrected. One site Rocky Flats, reported serious contractor safety concerns, including inadequate management, inadequate lessons learned program, roles and responsibilities for material handling, lack of effective safety and health oversight, and deficient culture. This issue is described more fully in the attached summary for Rocky Flats and it's attachments. Management is working closely with the contractor to resolve these issues.

### **Conclusion and Opportunities for Improvement:**

This has been a valuable feedback and improvement tool. Some sites were able to succinctly capture the substance of their ES&H assessment programs while others were not. EM needs to work closely with the Office of Environment, Safety & Health to draft a directive that provides guidance based on the best of these annual reports as well as those from other LPSOs. Meanwhile, EM will make the reports available so that all sites may benefit from the work and innovations of others. Some sites obviously did not meet the intent with respect to assessments of vital safety systems and EM HQ Site Office Directors will work with each site individually to improve the quality of future annual reports. Where site summary reports are incomplete, EM must take steps to assure that adequate assessment programs are in place.

# memorandum

Idaho Operations Office

Date:

Subject: Idaho National Engineering and Environmental Laboratory Environmental, Safety, and Health Assessment Summary Report per DNFSB 2000-2 Commitment #20 (TS-OSD-01-027)

Ref: DNFSB Recommendation 2000-2 Implementation Plan Commitment #20, Annual Review of ES&H Assessments, M. J. Oldham memo to distribution, January 29 2001

To: W. Boyce  
EM-5, 1E-268/FORS

This information is the Idaho National Engineering and Environmental Laboratory (INEEL) response to commitment #20 of the Implementation Plan for DNFSB Recommendation 2000-2 which states: "Annually, LPSOs will review the results of the ES&H assessment performed during the previous year and provide the Secretary with a summary report for each of their sites."

The INEEL conducts periodic Environmental, Safety, and Health (ES&H) assessments in accordance with DOE P 450.5 "Line Environmental, Safety, and Health Oversight" and ID O 450.A "Line Environmental, Safety, Health and Quality Assurance Oversight".

In calendar year 2000, DOE-D and the INEEL M&O contractor (BBWI) conducted assessments that had an oversight role in equipment that would later be defined as Vital Safety Systems (VSS). VSS are defined as those active systems important to the protection of the public, workers, or the environment that are classified as safety class or safety significant structures, systems, or components (SSCs), as defense-in-depth, or confinement ventilation or fire suppression systems that provide a defense-in-depth function as defined in the safety analysis report or as defined by DOE line management. In support of the referenced request, we have summarized the DOE-ID and contractor ES&H assessments related to VSS.

Assessment summaries provided are those that both specifically focus on VSS and those that reviewed the programs that support VSS. Examples of support programs are the Fire Protection, Unreviewed Safety Question, Safety Analysis, Conduct of Operations, and Conduct of Maintenance, and Nuclear Facility Work Control Programs. Examples of assessments that reviewed VSS directly are Fire Safety Systems and Ventilation System Testing.

Assessment Results have been valuable to the INEEL's efforts in maintaining quality ES&H programs. Opportunities for improvement are being properly addressed through the Idaho Corrective Action Tracking System (INCATS, DOE-ID) and the Issue Communication and Resolution Environment (ICARE, contractor). INEEL issue resolution is addressed in ID Order 410.A "DOE-ID Issue Management", and ID Manual 410.A-1 "DOE-ID Issue Management Manual". All issues have been closed or on schedule for timely closure. Assessment summary results are attached.

As requested by the referenced memorandum, Mr. Robert Boston of my staff has provided

an electronic copy of this summary report to you. We appreciate your guidance in the preparation of the summary report and other matters related to the implementation of DNFSB Recommendation 2000-2. IF you have any questions, please call Tom Wichmann at 208-526-0535 or Robert Boston at 208-526-0356.

**Beverly A. Cook**  
**Manager**

**Attachments**

EXTERNAL bcc DISTRIBUTION:  
G. T. Paulson, MS 3206

ID DISTRIBUTION:

G. L. Beausoleil, MS 4201  
L.L. Fritz, MS 1118  
R. V. Furstenu, MS 7135  
R. A. Taft, MS 4160  
E. J. Ziemianski, MS 4160  
OS Reading File (g)  
OS Record File (y)

CONCURRENCE:

T.W. Smith \_\_\_\_\_  
J. L. Lyle \_\_\_\_\_  
R. M. Stallman \_\_\_\_\_  
G. C. Bowman \_\_\_\_\_

RECORD NOTES:

1. This correspondence provides the response to the Michael Oldham memo of January 31, 2000 "DFNSB Recommendation 2000-2 Implementation Plan Commitment #20, Annual Review of ES&H Assessments, M. J. Oldham memo to distribution".
2. The memo was prepared by Robert Boston and staffed by T. L. Wichmann.
3. This memo was transmitted electronically to Terry Krietz and Collette Broussard (EM-41).
4. This letter/memo closes OATS number 3240.
5. The attached correspondence has no relation to the Naval Nuclear Propulsion Program. Naval Reactors concurrence is not required.

## INEEL Contractor

### Summary of Scope of Assessments from January 2000 to January 2001

Facility personnel, oversight personnel, and technical support personnel performed assessments of the implementation of programs relating to vital safety systems and performed routine surveillance and calibration of stack monitors, radiation monitoring systems, continuous air monitoring systems, ventilation systems, fire protection systems, nuclear criticality safety systems, and back-up power systems.

Programmatic and oversight assessments were performed on specific aspects of vital safety systems, as summarized below:

**Industrial Hygiene.** The company Industrial Hygiene Ventilation Testing Group performed scheduled testing on all specialized ventilation systems used to control toxic and highly toxic materials. Testing is performed after installation, modification, and repair and, at a minimum, annually thereafter.

**Fire Protection.** Independent assessment of fire system inspection, testing and maintenance was conducted. An internal Fire Protection Program Assessment and Improvement Strategy was conducted. A Fire Protection Inspection, Testing and Maintenance (IT&M) Performance Indicator Report was issued on a quarterly basis. A Focused Safety Management Evaluation with emphasis on fire protection systems at INTEC and the Scoville Substation was conducted.

**Radiation Protection.** The Radiological Controls Directorate conducted an INEEL-wide review of recent "sealed radioactive source controls" events and issues to identify common causes and/or a root cause as appropriate, evaluate effectiveness of corrective actions, identify remaining actions needed, and identify any related non-radiological weaknesses. The Radiological Controls Directorate also conducted an INEEL-wide review of recent "Radiological Work Controls" events and issues. The assessment analyzed the more significant radiological events in the previous 18 months to identify common causes and/or a root cause as appropriate, evaluate effectiveness of corrective actions, identify remaining actions needed, and identify related non-radiological weaknesses. INEEL-wide assessments (six in total) were performed over several months to evaluate status of and current performance adequacy of areas identified as concerns during a 1999 assessment. The areas assessed at each INEEL facility were radiological area entry and exit controls, radiological surveys and documentation, material release practices, area posting and item labeling, radiological records, and radiological work controls.

#### **Independent Oversight.**

Two audits were conducted on the identification of and training on vital safety systems. Two assessments were conducted related to shipping casks for nuclear/radioactive materials. There are only passive vital safety systems involved with casks. Nine assessments were conducted which directly or indirectly addressed vital safety systems, including: multidisciplinary assessments at the Advanced Test Reactor (ATR), the ATR Critical Facility, and the Nuclear Material Inspection and Storage (NMIS) Facility; validation assessments of the INEEL CO2 Accident Corrective Action JONS; an assessment of the Calibration Program at SMC; an audit of the Unreviewed Safety Question (USQ) Program; an audit of the Emergency Preparedness Program; ES&H assessments of INTEC and RWMC; a Fire Hazards Analysis Assessment; and an audit of the Implementation of the SMC SAR and Technical Safety Requirements (TSRs).

### Summary of Results of Assessments

Generally, assessments performed found minor issues relating to procedural issues and general communication problems. One facility did indicate a significant issue relating to procedural non-compliance, which resulted in disciplinary action.

Functional Area results for Radiological Protection and Fire Protection and Authorization Basis are listed below.

### **Radiological Protection**

- The INEEL Sealed Radioactive Source Program event rate was determined to have been excessive in recent months. The source control program was found adequate to protect the environment, workers and public. Problems with implementation of the procedure requirements are related to program clarity in the governing procedure, program oversight, and fundamental "procedure compliance" problems. These problems are impacting the effectiveness of ongoing source control activities in the INEEL facilities. The rate of problems involving source controls has abated since June 2000.
- The INEEL Radiological Work Controls Program event rate was determined to have been excessive. The radiological work controls program was found adequate to protect the environment, workers and public. Problems with implementation of the procedure requirements are related to the pre-job planning process, work area and worker preparations, line-management ownership of work level safety, radiological controls work monitoring and oversight principles, and hazard controls implementation. These problems are impacting the effectiveness of ongoing radiological work activities in the facilities. The rate of radiological work controls problems reduced in the second half of the calendar year.

### **Fire Protection**

Key issues and concerns identified by the cited assessments include:

- A number of required maintenance inspections were not completed for water-based fire suppression systems.
- A number of impaired water-based systems were neither restored to service nor were INEEL Fire Marshal approved mitigating measures instituted in a timely manner.
- A number of maintenance and utilities personnel were not fully qualified to work on water-based fire suppression systems.
- Programmatic changes to the existing Fire Protection Inspection, Testing and Maintenance Program are warranted.

### **Independent Oversight**

- Multidisciplinary (ESH&QA) assessment #00-MDA-007 of ATR, ATRC, and NMIS resulted in findings and concerns related to conflicting procedure requirements, missing information in training records, improperly filed USQ screens and evaluations, USQ screens not properly signed by qualified screeners, lack of facility familiarity by some USQ screeners and evaluators, inadequate USQ training process, and work order deficiencies.
- Validation #00-JON-008 of the CO2 Corrective Action JONS resulted findings and concerns related to failure to track reviews of safety basis documents, incomplete Engineering Change Forms, and work orders not capturing all lockout and tag-out requirements.
- Assessment #00-QA-012 of the SMC Calibration Program resulted in concerns related to entering calibration results into a database and maintaining the calibration and repair database current.
- Audit #00-AB-021 of the USQ Program resulted in findings and concerns related to inadequately screened proposed activities, deficient USQ procedures, deficient USQ Training Program, and deficient USQ training records.
- Assessment #00-FP-015 of Fire Hazard Analyses resulted in several findings and concerns. Overall, the FHAs appeared to meet the intent of DOE orders; however, deficiencies were identified for each FHA.
- Assessment #00-ESH-019 of RWMC ES&H resulted in several findings and concerns. The only applicable finding was that the Calibration Program has not been fully implemented for radioactive sources used in assaying waste destined for the Waste Isolation Pilot Plant (WIPP).
- Audit #00-QA-023 of the SMC SAR/TSR resulted in findings and concerns relating to inadequate identification of radioactive material inventory, failure to establish the maximum quantity limits for certain chemicals, and failure to identify equipment used to mitigate accidents as safety-related equipment.

### **Summary Actions Taken to Address Significant Issues**

Significant issues were addressed in CY-2000 relating to radiation protection, fire protection, and authorization basis. Actions to address issues relating to vital safety systems continue in CY-2001. The following actions were taken for issues that were considered to be significant:

#### **Radiological Protection**

- An INEEL wide source inventory was conducted to formally define and evaluate conditions of all sources. Several

procedure changes were implemented to strengthen the controls on sources. Other actions included initiatives to evaluate the need for sources and to reduce numbers of sources where appropriate and to improve the source inventory documentation forms to include source use rate and expected source strength values. This issue was raised as a PAAA issue to ensure appropriate management involvement in resolving the issues.

- The results of the assessment were shared with all radiological controls and facility management. The issues raised were related primarily to ineffective work planning and controls. The report concluded finalizing and fully implementing the INEEL ISMS would best drive improvement. Significant improvements were made to radiological work controls at critical facilities. In addition, INEEL set forth a risk reduction initiative to reduce the size of INEEL Contamination Areas. Radiological controls enhancements were included in procedure revisions issued to update the INEEL Radiation Protection Program Plan implementation documents.
- Procedure revisions were incorporated to address issues raised through assessments. Radiological Controls personnel were briefed on the issues and problems noted.
- Corrective actions addressing radiation monitoring device calibrations included establishing additional administrative controls to preclude inadvertently placing non-calibrated devices into service and performing additional assessments to determine the extent of radiation monitoring device calibration issues for potential programmatic implications.

#### **Fire Protection**

- Validated completeness of the list of fire protection systems/devices for INEEL nuclear and radiological facilities.
- Reviewed and validated applicable inspection, testing and maintenance requirements for systems/devices
- Evaluated existing water based fire protection system impairments in nuclear and radiological facilities to establish priorities for repair and validate compensatory measures.
- Established and implemented training and qualification requirements for personnel inspecting, testing and maintaining installed water-based fire suppression systems in nuclear and radiological facilities.
- Assessed water based fire protection system inspection, testing and maintenance for compliance.
- Communicated a prioritized schedule for completion of fire hazard assessments and performing fire hazard analysis in accordance with the prioritized schedule.

#### **Authorization Basis**

- Authorization basis corrective actions included installing engineering controls on life safety systems, establishing a review process to ensure validity of safety basis throughout the year, initiating standards for implementing authorization basis requirements and monitoring facility performance against these standards, developing SAR/TSR training for facility support personnel, and directing additional resources to self-assessment by facility managers.

February 15, 2001

CCN 18449

Mr. Terry W. Smith  
U.S. Department of Energy  
Idaho Operations Office  
850 Energy Drive, MS 4160  
Idaho Falls, ID 83401-1563

**CONTRACT NO. DE-AC07-99ID13727 - REQUEST FOR SUMMARY OF ENVIRONMENTAL, SAFETY AND HEALTH PROGRAM (ES&H) ASSESSMENTS IN SUPPORT OF DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB) 2000-2 IMPLEMENTATION PLAN COMMITMENT NO. 20 (TS-OSD-01-020)**

Reference: T. W. Smith letter to Richard S. Watkins, (TS-OSD-01-020), external correspondence, February 6, 2001

Dear Mr. Smith:

As requested in the referenced letter, attached is a summary of ES&H assessments conducted at our nuclear facilities during CY-2000. The assessment information focused on the 27 nuclear facilities located at Idaho Nuclear Technology and Engineering Center, Test Reactor Area, Test Area North, Specific Manufacturing Capability, Waste Reduction Operations Complex, and Radioactive Waste Management Complex.

The information was tabulated by Vital Safety Systems, Conduct of Operations, and Conduct of Maintenance. The sources for the summary assessment information included: 1) self-assessments initiated by the Nuclear Facility Managers, 2) assessments performed by functional areas, 3) assessments performed by Independent Oversight, and 4) special assessments such as Integrated Safety Management System, CO<sub>2</sub>, Legacy, and Focused Safety Management Evaluation.

If you have any questions, please contact Isabel Waddell at 526-7366 or Jim Sahr at 526-1660.

Sincerely,

Richard S. Watkins, General Manager  
ESH&QA

JBS:sd

**Attachments**

1. Vital Safety Systems Summary
2. Conduct of Operations Summary
3. Conduct of Maintenance Summary



Mr. Terry W. Smith

February 15, 2001

CCN 18449

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cc: R. D. Boston, DOE-ID, MS 4160  
R. J. Hoyles, DOE-ID, MS 1221  
L. A. Sehlke, MS 3810  
T. L. Wichmann, DOE-ID, MS 4160

Mr. Terry W. Smith  
February 15, 2001  
CCN 18449  
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bcc: J. N. Davis, MS 3428  
T. D. Lee, MS 3406  
J. C. Okeson, MS 3406  
G. T. Paulson, MS 3710  
J. B. Sahr, MS 3406  
I. R. Waddell, MS 3406  
Correspondence Control, MS 3601  
Richard S. Watkins File (RWS-05-01)

Uniform File Code: 0352

Disposition Authority: A22-2-b-1

Retention Schedule: Cut off upon completion of audit or investigation. Destroy when 10 years old.

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.

# **DOE-ID VITAL SAFETY SYSTEM AND CONDUCT OF MAINTENANCE ASSESSMENTS**

In response to the memorandum "Defense Nuclear Facilities Safety Board Recommendation 2000-2 Implementation Plan Commitment No. 20, Annual Review of ES&H Assessments" (W. Boyce, January 29 2001), DOE-ID has reviewed the ID Oversight Information Management System (OIMS) to provide an overview of the surveillances and assessments performed for Vital Safety Systems (VSS) and Conduct of Maintenance (COM). This review covers the period January 2000 to January 2001. Findings and observations are discussed for each assessment. Findings or observations are not discussed when they have no relation to VSS.

Nuclear Regulatory Commission Fuel Assembly Mover at Test Area North (OSD-2000-6, January 2000) This surveillance was conducted to ensure that safety analysis report commitments and Technical Safety Report requirements were identified and being followed at Test Area North. One observation was noted: Procedure limits were not identified as TSR controls.

Spent Nuclear Fuel Monthly Report (INTEC-2000-38, May 2000)  
Routine ESH&QA oversight activities were documented in this report. No findings or observations were found.

Safety Related Document Review and TAN-607 Walk-down (CFT-2000-41, May 2000)  
As part of the pre-brief for the Readiness Assessment of the Three Mile Island Fuel Storage in TAN-607 SES room, a review of safety related documentation and a walk-down of the facility was conducted. Three findings were identified: (1) Procedures were not verified as completed; (2) Buffer Area sign was visually obstructed; (3) Inadequate identification of confined space.

Spent Nuclear Fuel Monthly Report (INTEC-2000-42, June 2000)  
Routine ESH&QA oversight activities were documented in this report. One finding or observation was found.

Spent Nuclear Fuel Monthly Report (INTEC-2000-55, July 2000)  
Routine ESH&QA oversight activities were documented in this report. Three findings or observations were found.

Bi-annual Conduct of Operations Assessment of Test Area North (CFT-2000-24, May 2000)  
The Conduct of Operations and Maintenance of the Test Area North nuclear operations was conducted from March to May 2000. A notable practice related to facility VSS was observed, in the area of control of equipment and system status. This assessment discovered 36 findings, notable practices, or observations. 35 of these were in the conduct of operations area.

Integrated Work Control Process, STD-101 rev 3 (OSD-2000-103, August 31 2000)  
Assessment conducted by Operational Safety Division (OSD) and ID Program Manager for Maintenance. This assessment was initiated at the request of the DOE-ID Deputy Assistant

Manager for Operations. The assessment team conducted reviews of work packages for both nuclear and non-nuclear facilities. The review was conducted to assess the alignment of nuclear and non-nuclear work control documentation to STD-101 methodology (Company wide procedure to implement Integrated Safety Management into the maintenance process). The assessment found 1 finding and 1 observation were found: (1) Work package requirements not in accordance with 29CFR1910.305; (2) Worker understanding of work control process must be improved.

Fire Protection and Life Safety Maintenance (OSD-2000-102, August 2000)

The purpose of this assessment was to conduct a follow-up review concerning the inspection, testing, and maintenance of the fire protection and life safety features at the INEEL. The review was performed to provide facility specific information at two INEEL nuclear facilities. One finding was found: The contractor failed to perform preventative maintenance and testing of fire protection systems and equipment.

Safety Analysis Report Surveillance (OSD-2000-100, August 2000)

Concerns over possible misinterpretation of the unreviewed safety question (USQ) requirements as they were applied to the Radioactive Waste Management Complex (RWMC) safety analysis report (SAR) prompted this surveillance. This surveillance resulted in two observations: (1) Safety analysis report used mitigating factors in the hazards evaluation, contrary to DOE-STD-3009; (2) Real Time Radiography Units exceed the DOE-ID Evaluation Guidelines.

Fire Protection Life Safety (OSD-2000-98, August 2000)

The purpose of this assessment was to conduct a review of the inspection, testing, and maintenance of the fire and life safety protection at the INEEL. This assessment was initiated due to perceived program failures. This assessment resulted in 3 findings: (1) Conditions of equivalency to national standards were not met; (2) Program execution guidance not met, inadequate subject matter expert support; (3) Program execution guidance not met, preventative maintenance not performed on fire protection equipment.

Spent Nuclear Fuel Surveillance Report (INTEC-2000-61, August 31 2000)

Routine ESH&QA oversight activities were performed by the DOE-ID Facility Representative. Walkdowns of CPP-666 and CPP-603 were conducted to observe conduct of maintenance and conduct of operations at these nuclear facilities. Numerous fissile material transfers were observed. One notable practice and two observations were found.

Quality Assurance (QA) Assessment of the Software Used for the Advanced Test Reactor (ATR) Confinement Unreviewed Safety Question (USQ) Resolution (OSD-2000-118, September 27, 2000)

The Engineering Design Files used in support of the ATR Confinement USQ Resolution were reviewed. The review focused on the quality assurance controls used to ensure the software used for the calculations needed to resolve the USQ were adequate for a Hazard Category 1 Reactor.

The software used for the USQ resolution was found to be adequate. One finding was discovered: (1) Contractor procedure does not fully implement NQA-1.

Preventative Maintenance Performance (CFT-2000-103, September 2000)

This surveillance reviewed the inspection requirements for the Three Mile Island core debris storage canister vent tubes. One observation was found: (1) Several Vent Tubes for Three Mile Island canisters were missing splash guards.

Spent Nuclear Fuel Monthly Report (INTEC-2000-66, September 2000)

Routine ESH&QA oversight activities were documented in this report. One observation was found: Design improvements in Type 126 fuel canisters at the Irradiated Fuel Storage Facility (CPP-603) need to be made.

Spent Nuclear Fuel Monthly Report (INTEC-2000-75, October 2000)

Routine ESH&QA oversight activities were documented in this report. One observation was found: Information from post-job reviews are not entered into work packages in a timely manner.

Conduct of Maintenance at the Power Burst Facility (PBF) (RWC-2000-7, November 2000)

This assessment focused on determining the level of compliance to STD-101 at PBF. STD-101 is the company level requirements for the planning and performance of maintenance at the INEEL. No findings or observations were discovered.

Advanced Test Reactor Confinement Leak Rate Installation (TRA-2000-40, November 2000)

Part of the resolution of the ATR Confinement USQ was the installation of a new building leak rate system whose purpose was to measure the leakage from the ATR Confinement. The Confinement Leak Rate System installation was reviewed by DOE-ID as part of the Safety Evaluation Report review effort. No findings or observations were discovered.

Nuclear Safety Analysis (OSD-2000-36, November 2000)

DOE-ID reviewed safety analysis documentation to assess the adequacy of the DOE-ID and Contractor safety analysis programs. Bechtel, Babcox & Wilcox Inc (BBWI) reviewed the contractor safety analysis program for adequacy. Two findings and five observations were discovered: (1) Safety analysts are weak in knowledge of company safety analysis procedures; (2) Safety analysis reports (SARs) not performed in accordance with 10CFR830 subpart B "safe harbor"; (3) DOE review of SARs often exceed one year; (4) The contractor does not have procedures to use interim controls on technical safety requirements; (5) Some safety analysts had a lack of knowledge of the USQ process; (6) DOE does not routinely send safety evaluation reports (SER) to the contractor; (7) The contractor USQ procedure does not require a review of the SER.

Review of the INTEC Calcined Solids Storage Facilities 2-5 SAR (OSD-2000-156)

A high level review of the SAR and associated Technical Safety Requirements (TSRs) for the CSSF 2-5 was conducted. The review was conducted to ensure this SAR and TSRs met the requirements of 10CFR830, and related safety analysis DOE Orders. No findings or observations were found.

Safety Analysis Review and Approval Process (INTEC-2000-80, December 2000)

The Safety Analysis Review (SAR) procedures and practices employed by DOE staff and management at INECT were reviewed. The assessment found that SAR review processes at

**INTEC were well implemented. One finding was discovered; Scheduled time for DOE review is not included in the review plans.**

## Conduct of Operations

### Summary of Scope Assessments from January 2000 to January 2001 (i.e. Areas of Inquiry Assessed)

Assessments were performed relating to all Conduct of Operations (COO) Elements, as prescribed in DOE Order 5480.19 and implemented in company procedures. Assessments relating to COO were performed at all of the nuclear facilities by both line and oversight personnel. Assessment frequencies varied depending upon the required minimum frequency and management perception of risk. Many elements of COO were routinely assessed utilizing management walkthroughs and operator tours.

### Summary of Results of Assessments (i.e. Number of Deficiencies or Concerns Identified by Area of Inquiry Listed Above)

The majority of COO issues were related to programmatic implementation of operations requirements, followed by control of equipment and system status, then work control and operation procedures. These four elements accounted for almost 80% of all of the deficiencies noted. Summary data provided through the first three quarters of CY-2000 for the INEEL indicates the following breakdown of numbers of issues:

<u>COO ELEMENT</u>	<u>Number of Issues</u>
Control Area Activities	26
Control of Equipment	294
Equipment Labeling	42
General Conduct of Operations	273
Independent Verification	8
Lockouts and Tagouts	57
Logkeeping	35
Operation Procedures	174
Operation Turnover	14
Operation Communications	40
Operations Organization	64
Operations Processes	54
Operator Aids	18
Required Reading	8
Security	7
Shift Routines	19
Timely Orders	10
Work Control	181
Work Processes	37

### Summary Actions Taken to Address Significant Issues

A variety of actions were taken to address significant issues. Most actions were administrative in nature, including revising or developing procedures, clarifying roles and responsibilities, modifying or strengthening assessments, and enhancing communications. In some cases, engineering controls were put into place or systems were repaired. Modifications were also made to design to design of some systems. In at least one case, disciplinary action was taken.

## Conduct of Maintenance

**Summary of Scope & Schedule of Assessments from January 2000 to January 2001 (i.e. Areas of Inquiry Assessed and Time Frame, such as Annual, Quarterly, Monthly, Weekly)**

Assessments were performed relating to all Conduct of Maintenance (COO) Elements, as prescribed in DOE Order 4330.4B and implemented in company procedures. Assessments relating to COM were performed at all of the nuclear facilities by both line and oversight personnel. Assessment frequencies varied depending upon the required minimum frequency and management perception of risk. Many elements of COM were routinely assessed utilizing management walkthroughs and operator tours. These inspections are known as, "Zone Inspections", "Monitor Watches", "Observed Evolutions", and "Facility Excellence Walkthroughs", depending upon the facility or program performing them.

**Summary of Results of Assessments (i.e. Number of Deficiencies or Concerns Identified by Area of Inquiry Listed Above)**

The majority of COM issues were related to general conduct of maintenance, lack of equipment preventative maintenance, or inadequate documentation of equipment history. These three elements accounted for over 80% of all of the deficiencies noted. The Facility Excellence Program was most effective in finding deficiencies or concerns. These were summarized for the CY-2000 as follows:

Technical Areas of Assessment	Number of Deficiencies And Concerns
• ISM/VPP incorporated into work control and daily work in the field.	80
• Work orders developed per STD-101 and the Integrated Work Control Process.	110
• Facility labeling and signs including equipment labels, electrical system labeling and electrical circuit distribution labeling.	135
• Facility and system operating status and condition including current calibrations and scheduled servicing (PM's).	85
• Material availability and condition for support of maintenance.	35
• Work Control administration center processes per STD-101.	55
• The use of Feedback and Lessons Learned.	18

**Summary Actions Taken to Address Significant Issues**

A variety of actions were taken to address significant issues. Most actions were administrative in nature, including revising or developing procedures, clarifying roles and responsibilities, modifying or strengthening assessments, providing additional training and enhancing communications. In some cases, engineering controls were put into place or systems were repaired. The prescribed preventative or other type of maintenance required was performed.



United States Government

Department of Energy

Ohio Field Office

# memorandum

Fernald Environmental Management Project

DATE: FEB 20 2001

REPLY TO

ATTN OF: FEMP:Boettjer

DOE-0348-01

SUBJECT: **DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 2000-2 IMPLEMENTATION PLAN COMMITMENT NO. 20, ANNUAL REVIEW OF ES&H ASSESSMENTS**

TO: Ward Best, OH/OCS

Attached per your request is a summary report of assessments performed during the previous year (CY 2000) by the Fernald Environmental Management project and by the contractor, Fluor Fernald, Inc. This is in response to commitment No. 20 of the Implementation Plan for DNFSB Recommendation 2000-2.

If you have any questions or require additional information, you may contact me at (513) 648-3187 or you can contact Mona Boettjer at (513) 648-3116.



David R. Kozlowski  
Associate Director,  
Office of Safety and Assessment

## Attachment

cc w/attachment  
W, Boyce, EM-5  
R. Everson, OH/OCS  
M. Boettjer, OH/FEMP  
J. Neyer, OH/FEMP

**Summary Report**  
**Defense Nuclear Facilities Safety Board Recommendation 2000-2, Implementation Plan**  
**Commitment No. 20, Annual Review of ES&H Assessments**

**SUMMARY OF CATS ACTIONS**

There were no open CATs during FY 2000 at the Fernald Environmental Management Project.

**SUMMARY OF THE DOE-FEMP ASSESSMENT PROGRAM**

The Department of Energy, Fernald Environmental Management Project (DOE-FEMP) under the guidance of the Technical Management Plan (TMP), identifies the technical requirements and responsibilities to manage the FEMP. The TMP also serves as the project Functions, Responsibilities and Assignments Manual (FRAM) documenting and identifying DOE responsibilities for environment, safety, and health management and oversight of the contractor. The TMP applies to all federal personnel involved in the technical direction and oversight of the FEMP.

The DOE-FEMP oversight activities include regular walkthroughs and Assessments of the Contractor. Assessments are planned in advance using the Master Assessment Schedule in the TMP, which is updated annually for each fiscal year.

For FY 2000, DOE-FEMP performed 16 oversight assessments, 8 self-assessments, and 251 walkthroughs. Major issues are as follows:

- Waste Management 1) Characterizing and packaging wastes for disposal; 2) failed to identify, trend, and correct major deficiencies

The DOE-FEMP requires the contractor to respond formally to all Concerns and Findings within 45 days, including a root cause determination for Concerns. Corrective actions are tracked to closure and verified closed by the assessment team leader before the assessment is considered closed.

**SUMMARY OF THE FLUOR FERNALD, INC. ASSESSMENT PROGRAM**

The Fluor Fernald, Inc. Management Plan RM-0016 describes the requirements for Environment Safety and Health (ESH) and Quality Assurance (QA). The Quality Assurance Program Plan RM-0012 with its 9 supporting site-wide Quality Assurance procedures implements the assessment function.

During calendar year 2000, the contractor performed 19 Quality Assurance audits, 16 Conduct of Operations assessments, 806 surveillances, 413 self-assessments and 2672 inspections. In addition there were 8 external assessments of the contractor. There are less than 10 non-conformances with overdue closure actions. Major issues identified were:

- Procedures were either inadequate or were not followed;
- Lack of management attention.

Fluor Fernald, Inc. develops corrective actions to address any issues identified during audits, assessments, surveillance's and inspecting corrective actions are tracked to closure and verified closed before the nonconformance issue is closed.

United States Government

Department of Energy

**memorandum**Ohio Field Office  
Miamisburg Environmental Management Project

DATE: FEB 22 2001

REPLY TO: MEMP:PUNCH MB-0215-01  
ATTN OF:

SUBJECT: Summary Report of Vital Safety Systems and ES&H Assessments

TO: Ward Best, Assistant Manager, Office of Compliance and Support, OH

As requested in the Office of Site Operations, Office of Environmental Management letter dated January 29, 2001, attached is the MEMP's summary report of Vital Safety Systems and a summary of ES&H assessments conducted in Fiscal Year 2000. The report provides the input necessary for response to Commitment No. 20 of DNFSB Recommendation 2000-2.

Should you have any questions, please contact me at 3252 or Danny Punch at extension 3784.

Sincerely,



Richard B. Provencher  
Director

Enclosure

cc w/enclosure:  
D. Eckman, MEMP  
J. Zimmerman, MEMP  
B. Everson, OCS

RESPONSE TO DNFSB 2000-2 RECOMMENDATION IMPLEMENTATION PLAN  
FOR  
COMMITMENT NO. 20, ANNUAL REVIEW OF ES&H ASSESSMENTS

**SUMMARY OF DOE ASSESSMENT PROGRAM**

The Miamisburg Environmental Management Project (MEMP) Technical Management Plan (TMP), MEMP-450, identifies the responsibilities and tasks of the MEMP technical staff for the monitoring and oversight of work performed at MEMP. Section 3.3.1 provides an overview of the various monitoring and oversight initiatives that are performed by the MEMP staff. These oversights, coupled with the numerous oversight external to MEMP (OH, DOE-EM, DOE-EH, etc.), provide an effective framework for monitoring and/or cross-cutting the various projects and safety programs to ensure that the required environment, safety and health requirements are integrated into the work processes.

MEMP oversight activities include regular audits of all BWXTO projects and functional groups. These reviews are subdivided into assessments, surveillances, MEMP management walkthroughs, and joint (MEMP Director / BWXTO Plant Manager) walkthroughs. Assessments, the most formal of the audit types, are normally planned in advance. An Assessment Schedule, having a 3-year scope for planning purposes, is distributed to the site contractor at the beginning of each fiscal year.

For FY 2000 there were 22 assessments, 175 surveillances, 40 MEMP management walkthroughs, and 12 joint walkthroughs. The compilation of information from these reviews highlighted a total of 19 concerns or significant issues. Characterization of these issues included the following areas:

- Inadequate Procedures: 1) lack of procedures, 2) inadequate procedures, and 3) inattention to following procedures;
- Inadequate Training: 1) lack of training, 2) inadequate training;
- Inadequate Suspect/Counterfeit Item Program;
- Inadequate Stable Metal Tritides Program;
- Inadequate RWP Bioassay Determinations;
- Inadequate Lessons Learned Program and;
- Inadequate Startup/Restart Process.

The MEMP Assessment Program requires the contractor to respond formally with corrective actions to all concerns and findings, including submittal of root cause determinations. Each corrective action is tracked to closure and verified closed, before the contractor is notified that MEMP considers the assessment closed. [Note: See Appendix A for a summary of the specific issues identified and tracked during FY 2000.]

## SUMMARY OF BWXTO (CONTRACTOR) SELF ASSESSMENT PROGRAM

The BWXTO PP-1059C, Self-assessment and corrective action program plan describes the contractor's independent self-assessment program and management and worker self-assessment procedure for the monitoring and work performed at MEMP.

In FY 2000 ES&H programs conducted 143 self-assessments. ES&H assessments were conducted by the Environmental Safeguards and Compliance (ES&C) group, the Radiological Controls (RadCon) group, the Industrial Safety and Hygiene (IS&H) group, and the Quality Assurance and Assessments (QAA) group. The following tables summarize the efforts by function and type:

Function	Number of Assessments
Environmental Safeguards and Compliance	42
Industrial Safety and Hygiene	47
Quality Assurance and Assessments	40
Radiological Controls	14

The second table attempts to generalize what areas the groups assessed. They were categorized into four types:

- Administrative – these included such things as review of QA plans, Conduct of Operation matrices, competence commensurate with responsibilities and feedback and continuous improvement assessments;
- Regulation/Order – these assessed compliance with a particular regulation or order such as the Clean Water Act or the Clean Air Act;
- Procedural compliance assessments and;
- Programmatic compliance assessments – these are similar to regulation assessments but ended to be Industrial safety related. They included assessments of Hazard Controls programs and chemical hygiene programs.

	Administrative	Regulation/Order Compliance	Procedural Assessment	Programmatic Compliance
ES&C	10	14	16	2
ISH	15	2	7	23
RadCon	8			1
QAA	13	1	6	18
<b>TOTAL</b>	<b>46</b>	<b>17</b>	<b>29</b>	<b>54</b>

Issues identified from these assessments are summarized as follows:

Administrative assessments from these organizations identified the following types of issues:

- Expired training
- New employee – incomplete training
- Additional training requirements added (STP training)

- Ergonomic issues
- Updates to Quality Plans and Assessment schedules

#### Regulatory/Order Compliance assessments

- Update to procedures
- Update corrosion control methods

#### Procedural assessments

- Procedural clarification
- Uncontrolled procedure

#### Programmatic Compliance assessments

- No serious issues identified

The major assessment focus for the year involved the Stable Tritiated Particle (STP) Contractor Readiness Assessment (CRA) and the Bioassay/RWP assessment. BWXTO prepared a comprehensive technical basis document to support the STP work. Additionally numerous procedures were developed and implemented. New analytical techniques were developed and implemented. Pre start findings identified involved work package preparation, hazards communication and identification, and concerns regarding adequate staffing.

In addition, several improvements have been made in radiological characterization for specification of bioassay requirements (the RWP process). Additional equipment was procured, analytical techniques were developed, procedures were prepared and implemented, and personnel were reassigned to enhance the identification of required bioassays.

## Appendix A: Summary of the specific issues identified and tracked during FY 2000

- Inadequate Tritium Training: 1) Personnel performing work in tritium areas without required training, 2) No master system in place to track training, and 3) existing tritium training is inadequate.
- Inadequate USQ program: 1) Contractor was not performing USQ independent assessments, 2) also there is no site-wide USQ manual
- Preventative maintenance not performed and documented for La Bounty Shear.
- Inadequate Startup/Restart Process: 1) Startup Notification Report does not meet requirements, 2) no consistent process for determining when a readiness review is required.
- Inadequate LCO Completion for TERF Combustible Gas Monitor: 1) Check was not performed on weekly basis as required 2) The definition of LCO check frequency was not understood.
- Inadequate Installation of OSW Chiller: 1) poor work planning, 2) inadequate safety oversight, 3) inadequate safety documentation.
- Inadequate Air Monitoring in Building 38, A-Line: 1) Airflow Pattern Studies are ambiguous in procedure and practice.
- Inadequate Suspect/Counterfeit Items Program: Needs improvement in 1) purchasing, 2) incoming inspections, 3) checking items in inventory, and 4) checking items being installed or used at work-site.
- Inadequate Program for Stable Metal Tritides: 1) Formality needed in developing work packages, 2) Improved process needed for identifying and resolving problems, and 3) worker PPE needs to be reviewed to insure appropriate level is determined and utilized.
- Inadequate Oil Spill Response Procedures: 1) Inconsistencies and redundancies are present in oil spill response procedures.
- Inadequate RWP Bioassay Determinations: 1) Spreadsheet used for determinations was not proceduralized, 2) Radiological Control Management did not use a formalized process for RWP bioassay reviews, and 3) no procedural guidance regarding how to perform characterization and how to choose the isotopic analysis method.
- Inadequate Lessons Learned Program: 1) No quantitative measurement of LL program effectiveness.

DNFSB Recommendation 2000-2  
Implementation Plan Commitment No. 20

Annual Review of ES&H Assessments  
Calendar Year 2000

Rocky Flats Environmental Technology Site

February 2001



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## **Introduction:**

This information is the Rocky Flats Field Office (RFFO) response to commitment No. 20 of the Implementation Plan for the Defense Nuclear Facilities Safety Board (DNFSB) recommendation 2000-2. Commitment No. 20 reads, "Annually, Lead Program Secretarial Officers (LPSO) will review the results of ES&H assessments performed during the prior year and provide the Secretary with a summary report for each of their sites". This response was prepared in accordance with guidance recently provided by EM-5 regarding this commitment.

The Rocky Flats Environmental Technology Site (RFETS) performs a wide variety of Environmental Safety and Health (ES&H) oversight activities at a variety of levels. Below is a general description of Site ES&H oversight.

## **Site ES&H Oversight Methods:**

### **Rocky Flats Field Office:**

RFFO day to day Field Oversight: RFFO uses its Facility Representatives and Field Assessors to perform day-to-day oversight of contractor operations throughout the Site. Facility Representatives perform their work in accordance with RFFO procedures and DOE-STD-1063-2000, Facility Representatives. Field observations are documented in a centrally managed Observations and Evaluation (O&E) database system and scored for performance and Integrated Safety Management (ISM) applicability utilizing numerous specific categories. RFFO management reviews all inputs for significance and quality of content and to assure appropriate action is taken by RFFO in response to the observations. RFFO personnel documented greater than 4000 observations in the O&E Database in Calendar Year 2000. Further, when significant technical questions regarding the operations or implementation of are encountered, Technical Evaluation Requests (formerly PN's) are prepared for evaluation by appropriate subject matter experts.

### **RFFO Activity Oversight and Readiness Reviews:**

Part of the RFFO oversight and assessment program includes the Readiness Determination process in accordance with DOE Order 425.1A. This includes Operational Readiness Reviews (ORRs) and Readiness Assessments (RAs). During the year 2000, one (1) ORR was performed by RFFO to validate readiness to start-up Building 906, a TRU-waste storage facility. The RAs performed during 2000 were performed by Kaiser-Hill with Kaiser-Hill as the start-up/restart authority. Some of these activities included: D&D size reduction activities in Building 771, restart of waste handling activities in Building 440 after a shutdown due to various non-compliances, start-up of headspace gas sampling and analysis in Building 991, and Pipe Overpack Container storage in Building 984. For RAs performed by Kaiser-Hill, RFFO utilized activity oversights to ensure the adequacy of the KH review. The activity oversights are performed by small RFFO teams that primarily oversee, but in some limited instances participate in the Kaiser-Hill RA. The oversight team is responsible to ensure that Kaiser-Hill's review is thorough and effectively evaluates readiness to perform the new activity.

A process related to the Readiness Determination process is the Implementation Validation Review (IVR) process, which is conducted for authorization basis document changes to ensure that the new control set has been effectively implemented. IVRs were conducted for all significant AB changes during the year 2000. These reviews were conducted by Kaiser-Hill teams and RFFO provided oversight with activity oversight teams.

## **PAAA Significant Issues**

The Price Anderson Amendment Act Program utilizes management, performance, program, and independent assessments for finding problems before they become events.

There were three (3) significant issues in CY 2000.

### **Occupational Exposure Limit Exceeded (NTS-RFO--KHLL-779OPS-1999-0002)**

May 19, 2000, Enforcement Action

Issue: Radiological exposure limit of 50 rems to the tissue or any organ for a general worker was exceeded.

K-H management failed to recognize a change in the work scope and failed to re-evaluate the hazards and apply appropriate controls. A combination of design features and administrative control procedures to limit a worker's radiological exposure were not implemented.

### **Combustible Gas Generation Pgm. Failure (NTS-RFO--KHLL-FACOPS-1999-0003)**

August 2, 2000, Enforcement letter

Issue: Failure to fully perform the required surveillances

Methanol tanks are required to be sampled monthly and tanks that generate hydrogen were to be sampled and purged quarterly per procedures. It was determined that these tanks were only sporadically sampled and purged in previous years.

### **Incorrect Acquisitions (NTS-RFO--KHLL-SITEWIDE-2000-0005)**

September 11, 2000, Enforcement Letter

Issue: Procurement related deficiencies are similar to the deficiencies for which contractor was cited previously.

Breakdowns with the design specification and acquisition of various safety-related items led to continued concerns by Oversight of Price Anderson Enforcement.

## **RFFO Assessments:**

RFFO performs periodic assessments under the Closure Project Oversight Program Manual. This manual was issued on October 11, 2000 and establishes the roles and responsibilities, policies and procedures for RFFO oversight of the contractor. The assessments are scheduled on the Integrated Assessment Schedule, which was developed early in the fiscal year as the plan for the fiscal year. The database shows start to finish and responsible organizations. Assessments with findings are transmitted to the contractor for their submission of corrective action plans that are tracked through closure by RFFO. FY 00 schedule is attached as Attachment 2.

## **Kaiser-Hill Company, L.L.C. Program**

Kaiser Hill's (KH) goal is to manage oversight in order to effect performance improvement, enhance safety, support mission accomplishment and minimize events that negatively impact work. The K-H's Site Integrated Oversight Manual satisfies the requirements of 10 CFR 830.120 and DOE Order 414.1A for independent assessments (Criteria 10) and management assessments (Criteria 9) and embodies the concept of Integrated Safety Management (ISM). Assessments are the foundation of oversight and support the feedback mechanism of ISM. Management assessments and independent assessments include a mix of compliance-based assessments to determine the degree of compliance with requirements and performance-based assessments conducted to improve the work process. The K-H assessment schedule for calendar year 2000 is attached as Attachment 1.

There are four fundamental elements of K-H's oversight strategy. The first element is the self-identification of items of non-compliance and performance issues by line management and workers as part of their daily routine. A management and supervision team that is diligent in overseeing activities on a routine basis and which implements a comprehensive management assessment program to further enhance the self-identification of performance issues will have a successful first element. The management assessment program also serves to periodically examine the Site infrastructure programs to ensure the continued and adequate flow-down of applicable requirements from directives and rules to implementing procedures. Management assessments are documented evaluations that focus on how well a manager's area of responsibility is performing. Proper implementation of the management assessment program is required by the Authorization Basis for several facilities. Deficiencies identified during management assessments are processed in accordance with the Site's Corrective Action Program to ensure that deficiencies are determined, corrective actions are taken to preclude recurrence and follow-up action is taken to verify implementation of corrective actions.

The second element is the conduct of performance oversight by K-H Vice Presidents and Closure Project Managers to monitor the performance of their respective Projects. Performance oversight identifies issues related to the project's ability to safely conduct its defined scope of work on schedule and within budget. Also included in the second element is the performance of program oversight by some Site infrastructure program owners to monitor the overall performance, including "floor level compliance", of key Site infrastructure programs. These infrastructure programs areas (including Waste Management, Conduct of Operations, Quality Assurance, and Fire Protection) conduct management assessments to ensure that appropriate

standards have been identified and effectively reflected in controlling documents for assigned program areas; requirements are appropriately promulgated, and implementing work control documents reflect these requirements.

The third element is the integrated independent assessment programs of K-H. These programs promote continued improvement, validate satisfactory implementation of the management assessment program, and add a higher level of assessment for items of non-compliance and opportunities for performance improvement. These programs also assess the effective implementation of Site infrastructure program requirements. Independent assessments are those formal assessments conducted by trained and qualified personnel having no responsibility for the area being assessed. The evaluation process identifies and documents deficiencies, observations and noteworthy practices within the specific area; initiates corrective actions; and reports the effectiveness, adequacy and efficiency of programs, activities and processes to the responsible manager. Deficiencies identified during management assessments are processed in accordance with the Site's Corrective Action Program to ensure that deficiencies are determined, corrective actions are taken to preclude recurrence and follow-up action is taken to verify implementation of corrective actions.

The fourth element is the conduct of periodic collective evaluations of events and the assessment products to produce an integrated view of the Site's performance.

Kaiser-Hill's oversight program is described in detail in the Site Integrated Oversight Manual, and implemented through a variety of documents including the following procedures: Kaiser-Hill Company, L.L.C. Management Assessment Program; Conduct of Independent Assessment Activities; and Integrated Planning and Scheduling of Independent Assessment Activities.

K-H identified concerns through a Common Cause Analysis which was completed on August 30, 2000. The annual report period is April 1999 – March 2000. A total of 179 documents, including occurrence reports, causal analysis, and assessments were analyzed, with 303 inappropriate actions being identified. Evaluation of the inappropriate actions revealed that two (2) global issues, Administrative Procedure Noncompliance and Non-Conservative Decision Making, were associated with approximately 74 percent of the events occurring at the Site. In 1998 and 1999 these same issues accounted for 71 and 78 percent, respectively, of the events occurring on Site.

### **Office of Independent Oversight:**

The Office of Independent Oversight and Performance Assurance conducted a transportation emergency management review and a follow-up review of the emergency management program at RFETS in February 2000. The primary purpose of this review was to assess the effectiveness of the Department's emergency management programs for transportation events involving hazardous materials (not related to transuranic waste or nuclear weapons components) and to determine the adequacy of direction provided by DOE line management to sites under their cognizance. This review also examined the effectiveness of the RFFO and contractor processes for feedback and continuous improvement as mechanisms for identifying, analyzing, and addressing program deficiencies, implementing corrective actions, and demonstrating and

verifying the effectiveness of those actions. In addition, an assessment was made of the status of corrective actions taken to address program elements identified as needing management attention in the 1998 DOE complex-wide review of emergency management programs.

The complete report can be found on <http://tis.eh.doe.gov/iopa/reports/reports.html>.

### **Significant Issues in CY 2000:**

The following summarizes some of the more significant actions taken at RFETS in response to safety concerns raised in CY 2000. RFFO Management has made a determination on how to best respond to these safety concerns with some being handled as Monetary Fee Deductions while others are handled with other management action.

**Safety Concerns:** Calendar Year 2000 events culminated in a letter dated January 5, 2001 from the RFFO Manager to K-H to "... express serious concerns regarding safety performance of the Kaiser-Hill Company, L.L.C. (KH) Management Team". This letter highlights a series of specific and general safety concerns related to Site performance. The letter was written utilizing RFFO data that had been collected over a period of time. It highlighted five (5) areas of concern. They were:

- Inadequate Management
- Inadequate lessons learned program and fact-finding process
- Material movement roles and responsibilities
- Effective independent safety and health oversight organization
- A serious deficiency in the safety attitude at Rocky Flats

RFFO management is working closely with K-H management, in their development of corrective actions that will address each one of the listed concerns. The letter is attached as Attachment 3.

**Building 771 Radiological Uptakes:** On October 17, 2000 a DOE-RFFO Facility Representative noticed during routine surveillance in Building 771 that an air sampler being used in a containment tent was past its calibration due date. Pursuing the issue further the Facility Representative determined routine measurements from that air sampler also were not properly documented. This resulted in requests of eleven (11) workers who had worked in the tent during the period of inadequate documentation to submit bioassay (fecal) samples. Ten (10) of the 11 workers had positive fecal counts. It was unclear whether the source of these exposures was actually the tent with the uncalibrated air sampler. This resulted in the contractor launching an extensive evaluation of Building 771 Radiological practices and event history to isolate the source and events leading to the contamination. The investigation continues and has included a detailed oversight of the investigation by RFFO, and a follow on audit of the investigation led by EH-2.

**List of Assessments Performed by RFFO in 2000**

1. Transportation Compliance Assessment
2. Building 779 Demolition Activity Oversight
3. HSP 31.11 Implementation Assessment
4. Building 776/777 Basis for Interim Operations Followup Implementation Validation Review
5. 10CFR835 Revision Assessment
6. Safety and Cost Effectiveness of Maintenance Activities
7. FEOSH Program
8. Carlsbad Area Office Certification Audit
9. Authorization Basis Compliance Assessment of Building 371/374
10. Readiness for Site Quality Assurance Program Re-Certification
11. RFFO Criticality Safety Assessment
12. 10CFR835 Implementation Assessment
13. RCRA Program Compliance Management
14. Waste and Environmental Management System Followup
15. Analytical Laboratory/Cost/Quality Assurance/Project Costs
16. Building 750 Pad Pond Sludge Activity Oversight
17. Building 991 Activity Oversight

United States Government

Department of Energy

Rocky Flats Field Office

# memorandum

DATE: JAN - 5 2001

REPLY TO  
AHHN OF: AMFPA:PH:01-00021

SUBJECT: Safety Concerns

TO: Robert G. Card  
President  
Kaiser-Hill Company, L.L.C.

As the Rocky Flats Field Office (RFFO) Manager and Head of Contracting Authority for the Rocky Flats Closure Contract number **DE-AC34-00RF01904** (the Closure Contract), I am writing to express serious concerns regarding the safety performance of the Kaiser-Hill Company, L.L.C. (**KH**) Management Team. In several key areas, **KH's** safety performance is not meeting DOE expectations. There has been a trend of significant safety events since the contract became effective February 1, 2000. The Closure Contract allowed KH a period of time to develop the infrastructure necessary to implement this contract. The RFFO is concerned that the infrastructure developed thus far is inadequate to ensure an effective safety posture for work performed at the site.

The RFFO's concerns regarding KH safety performance fall into several key areas.

First, RFFO is concerned that there is inadequate management-at every level and in each project-to ensure safe, productive operations. This lack of adequate management has led to ineffective work control.

Second, RFFO is concerned that **KH** has not developed an adequate process for ensuring that lessons learned from safety events are incorporated into future work activities. Further, **KH** has not developed and implemented a fact-finding process for identifying key information on safety events as well as root causes.

Third, RFFO is concerned that **KH** workers, especially those engaged in critical activities involving the handling of material, do not understand their roles and responsibilities. This applies to both supervisors and workers.

Fourth, RFFO is concerned that **KH** has not developed an effective independent safety and health oversight organization.



Any one of these concerns is serious in its own right. Cumulatively, they **suggest a serious** deficiency in the safety attitude at Rocky Flats. These issues also potentially mean that **KH** is not complying with some provisions of the Closure Contract.

The RFFO has issued three notices of fee reduction penalty for significant degradation of safety pursuant to Contract Clause **B.6(e)(3)**. These penalties were a result of "events or incidents . . . that indicate or reflect a lack of focus on improving safety, safeguards or security performance. . . ." They were intended to influence **KH** to improve its safety performance. The RFFO is disappointed and disturbed that **KH's** safety performance has still not improved sufficiently to meet our expectations and requirements.

The areas related to these B.6 (e)(3) events were inadequate operation of the Building 371 ventilation system, material movements and handling, and inadequate implementation of Integrated Work Control Program.

The first contract fee penalty involved upsets to the Building 371 ventilation system in February 2000, which resulted in the spread of contamination and required extensive decontamination. A fee penalty of \$60,000 was assessed for these incidents.

The second contract penalty resulted from numerous **sitewide** material handling incidents. A fee penalty of \$100,000 was assessed for these incidents on June 30, 2000.

The third contract fee penalty resulted from insufficient work control due to inadequate implementation of the Integrated Work Control Program. Events in Buildings 771 and 776 were identified as specific examples of inadequate work controls. A \$250,000 fee penalty was assessed for these incidents on November 1, 2000.

Although these contract fee penalties have steadily increased, the RFFO has not observed an improvement in the safety performance of the Site as a result of these notices. Further, there have been additional safety events since the issuance of these penalties.

The most recent events were criticality safety limit infractions in Building 707. The first involved the packing of uranium in lo-gallon drums **that** violated the mass limit of the Criticality Safety Operating Limit (CSOL). The second incident involved packing contaminated waste that violated the posted CSOL mass limit for the **55-gallon** drum container. These events are disturbing for several reasons:

- (1) The work crew indicated that operators were not expected to check mass loading information for containers of material that they were handling.
- (2) There were inadequacies in the associated packaging procedures.
- (3) The items to be packed in the **55-gallon** drum were documented and independently verified as exceeding the CSOL for this drum on four separate occasions.
- (4) The fact-finding for both of these events was inadequate.

A common theme of the two events is that workers handling material violated or ignored criticality safety limits based on perceived management or supervisory direction. This is disturbing both because the workers perceived they were directed to disregard these limits and did not stop the activity, and because they in fact did disregard them and exceeded the CSOL. The operator who packages or handles material is the last line of defense to prevent a criticality. The supervisor does not have the authority to override a criticality safety limit.

The criticality infractions in Building 707 also raise concerns regarding the effectiveness of **KH's** management and application of corrective actions. The corrective actions from a June 2000 criticality infraction associated with packaging of material were not applied or implemented effectively. Effective implementation of these corrective actions might have prevented the criticality infractions reported on December 21 and 29, 2000.

The **RFFO's** concerns are not limited to criticality infractions or to Building 707. Prior to these criticality infractions, the RFFO was concerned about the adequacy of work controls in Building 771. Eleven workers in that building who were performing deactivation and decommissioning size reduction work in the building received radiological uptakes of plutonium without any workplace indicators detecting the contamination.

The RFFO is concerned that this trend of safety deficiencies raises the potential that **KH** may not be fully complying with certain sections of the contract.

The Rocky Flats Closure Contract Clause C. 1.2 states, "The mission is to accelerate closure of the Rocky Flats Environmental Technology Site . . . The Contractor shall accomplish site closure in a safe, compliant and efficient manner . . . The RFETS closure project must be accomplished so as to maintain the site in a safe condition for the workers, the public, and the environment and by complying with all applicable laws, regulations and agreements."

The DOE is concerned that **KH** has not fully implemented the requirements of the Clause I. 109, DEAR 970.5204-2, Integration of Environment Safety and Health into Work Planning and Execution, and appendix J, Attachment B, LAWS, REGULATIONS, AND DOE DIRECTIVES APPLICABLE TO RFETS of the Rocky Flats Closure Contract.

The DEAR Clause requires in part that:

(b) The contractor shall perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment and shall be accountable for safe performance of work.. .

The contractor shall, in the performance of work ensure that:

- (1) Line management is responsible for the protection of employees, the public and the environment.. .
- (2) Personnel possess the experience, knowledge, skills and abilities that are necessary to discharge their responsibilities.. .

(g) The contractor shall promptly evaluate and resolve any noncompliance with the applicable ES&H requirements and the [Safety Management] System..

The RFFO believes that **KH** has not adequately implemented this clause, and that this lack of implementation is contributing to the site's safety issues.

Additionally, RFFO believes that **KH** has not fully implemented the following regulations related to safety performance:

- The RFFO considers **KH** to not be determining facts, root causes and necessary corrective actions to prevent recurrence associated with reportable events. Specific Directives related to these inadequacies are:
  - DOE 0 232.1 A, Occurrence Reporting and Processing of Operations Information
  - DOE 0 414.1A, Quality Assurance
  - 10 CFR830.120, Quality Assurance
- The RFFO considers the formality and prescribed control of operations to have been inadequate for the Building 707 events and the B.6 events listed above. Specific Directives related to these inadequacies are:
  - DOE 0 5480.19, Conduct of Operations Requirements for DOE Facilities
  - DOE 0 420.1, Facility Safety

The RFFO considers a significant element in these safety issues is an inadequate management of each project to assure safe and productive operations. Additionally, RFFO considers that these safety issues are in part the direct result of the lack of effective independent safety oversight and the lack of effective enforcement of corrective actions to prevent recurrence of similar problems. The requirement to perform this oversight is required by Clause E.4 of the Rocky Flats Closure Contract.

The RFFO also considers the lack of staffing of the Chief Operating Officer (COO) may be another contributing factor to the present inadequate safety culture. The Closure Contract Clause H. 11, Key Personnel, prescribes that "under no circumstances will a key personnel position remain unfilled, acting replacements aside, for more than four months." The COO position was specified by **KH** and approved by DOE but has not been filled since inception of the contract on February 1, 2000.

The DOE is aware that **KH** has suspended certain nuclear operations as a result of the events in Building 707. In light of the concerns and issues identified in this memorandum, RFFO expects **KH** to take the following additional minimum actions:

- Develop a comprehensive corrective action plan to improve the safety performance at the site.
- This plan must be briefed to and concurred in by the RFFO Manager.

JAN - 5 2001

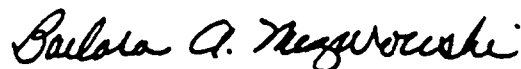
- Those actions required by the plan to be completed prior to resuming those nuclear operations suspended by **KH** will be completed by **KH** and assessed by RFFO prior to recommencing these activities. (Exempt from this restriction are material handling operations required to complete inventory and Limiting Condition of Operation surveillance requirements.)

Upon completion, all elements of this plan will be assessed by the RFFO.

Upon further internal review by **KH** of the safety concerns described in this memo, DOE reasonably anticipates that **KH** may identify further actions to enhance the safety culture onsite.

The RFFO expects that safety will improve at the Site as a result of the **KH** actions taken in response to this memo. The RFFO reserves the right to implement further contractual actions if **KH** fails to meet RFFO expectations to improve the safety culture at the Site, or if further significant safety events occur. It is our hope that **KH's** actions in response to this memorandum will make such contract actions unnecessary.

It is the mutual goal of **KH** and RFFO to achieve a safe cleanup of Rocky Flats. I look forward to working with you to undertake the necessary steps to ensure that we do reach this mutual goal.



Barbara A. Mazurowski  
Manager

cc:

C. Huntoon, EM-1  
M. Oldham, EM-3  
D. Stadler, EH-2  
R. Scott, EM-5  
J. Fiore, EM-30  
M. Jones, EM-33  
D. Owens, DNFSB  
P. Golan, OOM, RFFO  
C. Dan, CMD, RFFO  
M. Roy, OCC, RFFO  
H. Dalton, AMFD, RFFO  
J. Karpatkin, OOM, RFFO

# memorandum

DATE: FEB 22 2001

REPLY TO

ATTN OF: EPD (Jackson, 803-725-8078)

SUBJECT: Defense Nuclear Facilities Safety Board Recommendation 2002-2 Implementation Plan  
Commitment No. 20, Annual Review of Environment, Safety, and Health (ES&H) Assessments  
(Memo Oldam to Distribution, dated 01-29-01)

TO: William Boyce, Office of Environmental Management (EM-5), HQ

As requested in the above referenced memorandum, attached is the report from the Savannah River Site summarizing ES&H Assessments conducted during Calendar Year 2000. An electronic copy of the report was provided to you on February 21, 2001.

Any questions you have may be directed to me or to Donna Jackson, of my staff, at the above number.

EPD:DAJ:lgs

VH-01-031

Attachment:  
SRS Report

  
Dennis W. Godbee, Director  
Environmental Protection Division

**DNFSB Recommendation 2000-2  
Implementation Plan Commitment:**

**Summary of Environmental,  
Safety Health and Quality  
Assurance (ESH&QA)  
Assessments for Calendar  
Year 2000**

**Savannah River Site  
February 2001**

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## **I. Introduction**

DOE Policy 450.5, "Line Environment, Safety and Health Oversight," Integrated Safety Management System (ISMS) concepts, and a philosophy of continuous improvement form the foundation for assessment of Environment, Safety, and Health (ES&H) performance at the Savannah River Site (SRS). Westinghouse Savannah River Company (WSRC) conducts self-assessments, management evaluations, and in-house independent assessments. DOE-SRS maintains operational awareness, performs operational readiness and verification reviews, and conducts assessments of contractor performance. The DOE-SRS assessments include confirmation of the contractor's safe performance of work and evaluation of the contractor's self-assessment program. Reviews conducted by external organizations provide validation of Site programs and also offer opportunities for improvement.

## **II. DOE Savannah River Site**

DOE-SRS maintains operational awareness through Facility Representatives, support staff, and program managers. DOE-SRS Facility Representatives evaluate the contractor's day-to-day performance and conduct vital safety system walkdowns. Facility Representatives also review and approve final occurrence reports and may participate on technical assessment teams. Support staff conduct technical assessments and review technical documents (such as safety authorization basis documents) for an assigned facility or group of facilities. Program managers provide specialized matrix support to line organizations, oversee site-wide programs, and conduct technical assessments on their programs. All three groups conduct readiness assessments, operational readiness reviews, and verification reviews. Information is shared among organizations by the Facility Representative Council, the Technical Assessment Program Committee, and individual program managers. DOE-SRS is developing a database for tracking ES&H issues that will serve as another tool for communication.

DOE-SRS line organizations establish an annual plan for Facility Representative activities; line and program organizations establish an annual plan for technical assessments. The Annual Technical Assessment Plan includes required assessments and assessments targeted as special interest. The 21 S/RID categories are used to capture major topical areas; these categories are similar, but not identical, to the categories used by WSRC (see Attachment). During the year, as events occur or special needs develop, reactive assessments are planned and conducted. Deficiencies are tracked by the applicable DOE-SRS organization.

DOE-SRS has identified issues for contractor attention, and WSRC has been responsive in resolving issues. There have been no issues of such significance that DOE-SRS has requested assistance.

In general, DOE-SRS has found the contractor's self-assessment program to be effective. Not surprisingly, there is variation on the maturity of the program across the Site, and DOE-SRS has provided feedback to the contractor on areas for improvement. This feedback process will focus on continuous improvement.

DOE-SRS requested the Institute of Nuclear Power Operations (INPO) to provide assistance in improving DOE-SRS oversight of site activities. The INPO team conducted



their assist visit in March 2000 and found that DOE-SRS had developed and implemented a thorough and complex assessment process to oversee contractor activities. While the team found that assessments were conducted using a variety of methods and approaches that provided DOE-SRS staff with an operational awareness of contractor activities, the team also noted that most of the assessments were compliance-based and narrowly focused. Using the information in the INPO team's report, DOE-SRS revised its assessment program to broaden the scope of assessments, emphasize the review of the contractor's self-assessment and corrective action efforts, and begin work on a DOE-SRS common site-wide issue tracking system.

### **III. Westinghouse Savannah River Company Operations**

#### **A. Background**

Westinghouse Savannah River Company has been the prime operating contractor for the Department of Energy at the SRS since 1989. In 1996, WSRC was awarded the contract through a re-bidding process and most recently WSRC received an extension to the contract to 2006. A key element of the success of WSRC in meeting the department's needs has been an emphasis on safety throughout all of the company's operations. The recent award of VPP "Star Status" to the company by the Department of Energy recognized the significance of WSRC's sustained excellence in safety performance.

During 1996, WSRC embarked on full implementation of the Department's Integrated Safety Management System (ISMS) process and was the first site to successfully achieve Phase I verification of the system by DOE and subsequently achieve validation of the ISMS during the Department's Phase 2 verification reviews. Within the context of Integrated Safety Management (ISM), WSRC recognizes that all of the individual ISM core functions are most effective when operating together as part of an organization's daily business routine. WSRC has embraced this philosophy and has been successful in achieving this desired level of integration. Summarized below are the key elements and results from implementation of ISM by the WSRC. While this summary deals primarily with the Feedback & Improvement core function, it should be noted that the other ISM core functions are embedded in this function since they established the mechanism by which we ensure the safety of our personnel, the public and protection of the environment.

#### **B. Assessment Methods**

WSRC recognized the need to transition from expert-based systems to a standards-based system as part of the company's implementation of DNFSB Recommendation 90-1. This was further reinforced with the implementation of Recommendation 95-2, Safety Management. As part of the institutionalization of the standards-based approach, a set of Performance Objectives and Criteria (PO&C) were developed for 23 company-wide functional areas (see attachment) that are linked back to the ES&H requirements in the WSRC S/RID. These PO&C are contained in WSRC's SCD-4 Manual. To measure the effectiveness of the company in meeting these requirements, WSRC employs a multi-level approach for all assessment activities. This approach includes: Readiness Reviews to ensure facilities are ready for initial and restart operations; Independent Assessments to ensure WSRC organizations are effectively implementing ES&H requirements; Self-assessment by all organizations; and,

Management Evaluations to ensure all feedback is analyzed, non-compliances resolved and improvement plans initiated. While each of these mechanisms is unique, all of them are geared to ensure WSRC is maintaining its committed compliance envelope, identifying issues for appropriate corrective action, and maintaining a focus on continuous improvement.

## C. Assessment Results

### 1. External Assessments

A key part of the overall multi-level approach to assessment and improvement used by WSRC is the integration of results from numerous external assessments conducted at SRS each year. External assessments for this section include those conducted by organizations external to WSRC, except for oversight conducted by DOE-SRS or DOE-HQ. The DOE oversight activities are reported in Section II of this report. During CY2000, the following external assessments were notable in defining the status of performance at SRS and providing meaningful opportunities for improvement.

- The Logistics Management Institute (LMI) was requested to conduct an independent assessment of SRS programs, operations and resources. The purpose of the assessment was to ensure that SRS is able to effectively and efficiently transition to the stewardship role and is correctly positioned to continue serving the nation through safe, secure and cost-effective management of the nuclear weapons stockpile, nuclear materials and the environment. The aim of SRS is to work safely, conduct all jobs within a framework of formal disciplined operations, find cost-effective ways to do all work, and examine all parts of every job to find ways to continuously improve. The assessment was performed during the last quarter of CY1999 and the first quarter of CY2000. The focus of the assessment was on site functional support costs, facilities and infrastructure, information technology infrastructure, requirements implementation, programs, and mission and organizational alignment. Overall, LMI found SRS to be a well-run operation, with several opportunities to reduce costs and further streamline some processes.
- In March 2000, the Institute of Nuclear Power Operations (INPO) was requested to provide assistance to WSRC to improve self-assessment and corrective action processes within the company. The INPO team found that WSRC has implemented a detailed and formal self-assessment program that provides meaningful and accurate feedback on site operations to management. However, the team also noted opportunities for improvement and provided several recommendations relative to the INPO document on *Principles for Effective Self-Assessment and Corrective Action Programs*. These recommendations led to the benchmarking of a commercial nuclear installation and the current pilot activities of a self-evaluation process noted in Section F below.
- In June 2000, representatives of the South Carolina Department of Health and Environmental Control (SCDHEC) conducted the annual Comprehensive Monitoring Evaluation (CME) of the SRS for compliance with solid and hazardous waste management regulations. Approximately 150 areas of the site were examined and no deficiencies were identified by SCDHEC during the evaluation. The team offered a number of suggestions regarding various items, such as secondary containment for all satellite containers holding liquids.
- In August 2000, an independent agency performed a surveillance of the SRS Environmental Management System (EMS) for re-certification to ISO 14001 requirements. Although four items were identified for corrective action and eight other observations were noted as opportunities for improvement, the evaluation did result in re-certification for the site. The noted items were

determined to represent isolated instances of weakness in the site's communication of ISO 14001 requirements within operational and support organizations.

- In the fall of 2000, a team from DOE-HQ reviewed the safety performance of WSRC to the criteria of the DOE Voluntary Protection Program (VPP) and re-examined the Company's attention to employee involvement attributes. The team determined that the expectations for full VPP recognition are being satisfied and awarded Star status to WSRC.
- Late in the year, a review of British Nuclear Fuels, Limited (BNFL) ESH&QA practices was satisfactorily completed. The DOE Secretary commissioned this review in response to the falsification of QA documents at the BNFL Sellafield plant. The review was very favorable in describing BNFL's safety and quality management. One minor issue was identified and corrected.

## **2. Independent Assessment**

The WSRC Facility Evaluation Board (FEB) conducts company level independent assessments. The FEB teams are chartered to: satisfy contractual requirements for company level independent oversight; provide accurate, consistent evaluations of performance effectiveness; and evaluate the adequacy of the line self-assessment process. In general, FEB assessments are based on all 23 functional programs in the WSRC SCD-4 Manual. These same sets of Performance Objectives and Criteria are applied to facility and organizational assessments to obtain comparable results. FEB assessments for nuclear and radiological facilities are conducted at 8-24 month intervals depending on facility hazard classification and the most recent evaluation grade. Other facilities, support organizations, and all Functional Programs are scheduled at longer intervals (approximately every 24-36 months).

Facility performance has improved in CY2000, as witnessed by the overall improvement in FEB grades. Of the 13 facilities evaluated, 12 were graded Average with only 1 receiving a Below Average grade.

- The Radcon and Engineering assessment areas reflect an improving trend.
- The Organization and Administration, Operations, and Maintenance assessment areas remain steady.
- The Environment, Safety, Health and Quality Assurance assessment area grades have recently declined due to company-directed emphasis in certain areas and the enhancement of FEB functional area expertise in those areas.
- The Training and Support assessment area grades reflect a declining trend primarily due to the added emphasis in Safeguards and Security, some persistent issues regarding personnel re-qualification, and issues regarding quality of procedure development and validation.

Independent assessments are also conducted on specific functional programs, using selected portions of the SCD-4 Manual. In CY 2000 the following programs were assessed: Maintenance, Nuclear Criticality Safety, Configuration Management, Design, and Safety Documentation.

## **3. Self-Assessment**

The WSRC self-assessment program is comprised of two main elements: line management assessments of individual operating and support organizations and self-assessments of each of the company's 23 functional programs by the respective functional program managers. The bases for these self-assessments, which occur

throughout the year, are the PO&C contained in the WSRC SCD-4 Manual, described in section B above. The results of self-assessments are coupled with many other performance results, from sources such as external assessments, independent assessments, occurrence reports, and DOE oversight reports, for analysis and management evaluations. The results of the management evaluations are, in turn, used to establish corrective actions and define the scope and schedules of self-assessments for the ensuing period. The period of management evaluations for individual organizations generally matches the frequency of FEB ISMEs, whereas the period for functional programs reviews is annual. The corrective actions are tracked and managed by the individual organizations and functional programs.

The self-assessment methodology and scope of the individual organizations depends upon several factors, including site mission, work scope and past performance. The self-assessments might cover all of the functional areas or be focused on specific functional areas based on past performance or senior management direction. For example, the WSRC High Level Waste Management Division performed 1,246 assessments in CY2000 covering all 23 functional areas. In comparison, the Facility Decommissioning Division completed 70 assessments covering most, but not all, of the 23 functional areas. Examples of issues identified by the individual operational and support organization management evaluations include:

- Establish a WSRC point of contact and process for interfacing with external research organizations.
- Improve management field presence effectiveness.
- Enhance the control of toxic materials and chemicals.

Self-assessments are performed for each of the WSRC functional programs at various times throughout a given year. The scope of these self-assessments generally focuses on the respective functional program PO&C, but also might include related performance involving other cross-cutting functional programs, such as training, conduct of operations, procedures, and quality assurance. The corresponding management evaluations are conducted annually by the responsible functional program manager for site-wide program performance, and those management evaluations conducted during CY 2000 were reviewed as part of this summary. The issues are identified, categorized for significance and managed using the WSRC Corrective Action Program. Some issues identified for this period include:

- Inadequate training records/documents.
- Weakly established framework and mechanics for conducting a Job Hazard Analysis (JHA).
- Needed improvements in Unreviewed Safety Question (USQ) process application and implementation.
- Needed improvements in the documentation of Hazardous Material Inventories in facilities.
- Procedure related violations and/or inadequacies (QA, Conduct of Operations, and Hazardous Energy Control).
- Weaknesses in Technical Baseline data control, integrity and retrievability.

#### **4. PAAA Significant Issues**

##### **Expired Training (NTS-SR-WSRC-ESH-1999-0002)**

Noncompliances were identified with portions of the General Employee Radiological Training (GERT) requirements from 10CFR835. More specifically, a

portion of the SRS nonradiological workforce did not complete their GERT retraining in 1998 within the two-year period required by 10CFR835. In addition, some individuals permitted to enter SRS (i.e., temporary visitors and individuals badged at other DOE locations) had the ability to enter selected radiological Controlled Areas without having received GERT. Issues include:

- Compliance to and enforcement of site training requirements.
- An effective system to track and account for regulatory training.

**Procurement Issues Related to Standard Waste Boxes (NTS-SR-WSRC-ALABF-1999-0001)**

An assessment of TRU PACT II Standard Waste Boxes (SWBs) procured for the Savannah River Site was conducted. The assessment identified two areas where existing procedural controls were not followed properly. In response to evaluating issues identified during an EH-10 visit, WSRC has identified an additional noncompliance concerning Unreviewed Safety Question (USQ) screening. Issues include:

- Procurement - Multiple errors were identified with compliance to established WSRC procurement process requirements.
- Quality Management - Quality Engineering (QE) oversight of the procurement process, QE involvement in procurement package generation, and quality verification at receipt inspection were less than adequate.
- Weaknesses in WSRC packaging and transportation activities.

**Personnel Contamination with Positive Nasal/Saliva Smears (NTS-SR-WSRC-FBLINE-1999-0002)**

There was internal and external contamination on FB-Line personnel while conducting a routine facility vault operation. Issues include:

- Poor quality control and inspection process of the bagless transfer can welding operation.
- Less than adequate response to off-normal conditions.
- Less than adequate procedural compliance.

## **D. Additional Issues from DOE**

The number of activities associated with the health of SRS workers, former workers, and the surrounding community continued to rise during CY2000. Currently there are approximately twenty activities ongoing, including epidemiological studies, medical screening programs, public health assessments, and community health activities. On February 1, 2000, WSRC established a point of contact and process for interfacing with external research organizations conducting epidemiological or other studies of SRS employees. WSRC performed a self-assessment evaluating past performance in this area and identified areas for improvement.

As a result of the promulgation of 10CFR850, WSRC developed a Chronic Beryllium Disease Prevention Program (CBDPP) plan. One key element of the plan was an extensive review and documentation of the historical use of beryllium at SRS. A second key element was the development and issuance of a survey to targeted workers who worked in facilities where the exposure to beryllium may have been possible, or workers who worked at other DOE facilities where beryllium was present. Over 1100 surveys were issued with approximately an 80% return rate. The survey will be used as an initial screening tool to help determine who should be enrolled in a beryllium medical surveillance program.

DOE-HQ issued Safety and Health Hazards Alert issued as a result of the Type A Accident Investigation of Pu-238 uptakes at the LANL TA-55 facility. In response to this Alert, the DOE-SRS Manager requested WSRC to provide a plan to inspect: (1) piping connectors in glovebox systems to ensure proper installation and maintenance and (2) Teflon components in radioactive environments, such as gloveboxes, on a regular basis to ensure they are performing as intended. The requested plan was submitted in August 2000 and implemented through the balance of the calendar year. The following actions were implemented by WSRC with the noted results:

- SRS nuclear and hazardous material facilities were examined for the condition of compression fittings and the inappropriate use of Teflon. No leaking fittings were found, but several had to be tightened to pass the gauge test. The use of Teflon in areas with potential exposure greater than the material's limit were not found; however use below this limit was observed within the material's capability.
- Special briefings were held with construction field forces to emphasize the need to follow manufacturers' installation instructions for fittings.
- Programmatic evaluations of preventative maintenance for valves with Teflon components were completed, resulting in additional controls and training for the installation of compression fittings and the use of Teflon sealants in radiological service and environments.

## **E. Issue/Corrective Action Summary**

To ensure issues identified through the various assessment processes discussed in Section C are appropriately addressed, WSRC has developed and implemented a comprehensive corrective action program. While WSRC experienced several events resulting from a breakdown in management systems, most of the problems that have been identified and fixed as a result of assessment activities have been categorized at the lower significance levels. These problems are the precursors to more significant events. The Corrective Action Program, described in WSRC Management Policy 5.35, contains all of the necessary attributes of effective corrective action systems. These program attributes were confirmed during the INPO assessment in March 2000. The system employs a tailored approach based on the actual significance of the problem; is linked to WSRC's Occurrence Reporting System (ORPS/SIRIM); and ensures issues are properly addressed from a Problem Analysis, Lessons Learned, Corrective Action and Effectiveness perspective. Corrective actions for these issues are in various stages of implementation and are managed at the facility, division and company level as appropriate.

Numerous corrective action initiatives that are underway or have been completed as a result of issues identified in CY2000 include the following:

- Deployed a toolkit of practices for improving management field presence effectiveness. The core of the toolkit is derived from INPO Human Performance Improvement practices.
- Developed and executed crosscutting initiatives to validate glovebox and compression fitting integrity and evaluate Teflon use in radioactive service in response to LANL Type A Investigation.
- Developed and executed crosscutting initiatives to evaluate areas of concern and identify facility specific corrective action plans in response to the SRS FB Line Type B Investigation. Areas of concern included pre-job briefings and communications, principle of operations and procedure compliance, drill program effectiveness, and reduction of false alarms in process and radiological monitoring systems. Progress is monitored by the FEB, and each facility will complete a WSRC President directed follow-up evaluation of corrective action effectiveness in 2001.
- Benchmarked self-assessment practices in the commercial nuclear industry and formulated a revised process for WSRC focused on continuous improvement rather than solely confirmation of compliance.
- Evaluated SRTC ventilation systems, emphasizing safety-related confinement ventilation systems, to identify additional improvements in consonance with DNFSB 2000-2. WSRC is integrating recommendations with the annual Facility Improvement Plan and project planning activity.

## **F. Assessment Enhancements**

Although WSRC has implemented effective assessment processes throughout the company's operations, enhancements that improve their effectiveness continue to be identified and appropriately implemented. One example is the transition of the company's Facility Evaluation Board process to performing broader performance-based Integrated Safety Management Evaluations. This has enhanced the comprehensiveness of WSRC's independent assessment process and ensured the evaluation of the company's ISMS from a holistic and integrated perspective. Within the area of self-assessment, the company is currently piloting the application of a self-evaluation process modeled on a "Best in Class" utility identified by INPO. This model fully integrates self-assessment, benchmarking, operating experience review (lessons learned), management evaluation and the corrective action program. Pilots are currently underway in WSRC's High Level Waste, Nuclear Material Stabilization & Storage and Defense Program Divisions. Lastly, enhancements to the corrective action program to streamline the systems for identification of potential issues and to support improved trending capabilities at all levels within the company are currently underway.

## **IV. Conclusions and Summary**

DOE-SRS's contractor oversight encompasses operational awareness, review of significant activities, and evaluation of the contractor's self-assessment program. DOE-SRS encourages the development of a robust, vigorous contractor self-assessment program and is actively involved in the continuous improvement of this program. The WSRC multi-level self-assessment program is designed to evaluate performance or mission objectives, regulatory compliance, and vital safety system program implementation. Deficiencies are reviewed in the corrective action system, and significant issues are elevated to the ORPS/SIRIM reporting program. Corrective actions are planned and completed commensurate with the significance of the deficiency. These issues are evaluated as part of the facility, organization or program's overall performance during the following management evaluation.

**V. Attachment**

**Functional Areas**

<b>S/RID Functional Area (DOE-SRS)</b>	<b>Title</b>	<b>SCD-4 Functional Area (WSRC)</b>	<b>Title</b>
1	Management Systems	1	Design
2	Quality Assurance	2	Construction
3	Configuration Management	3	Management Systems
4	Training and Qualification	4	Training and Qualification
5	Emergency Management	5	Procedures
6	Safeguards and Security	6	Safety Documentation
7	Engineering Program	7	Environmental Protection and Waste Management
8	Construction	8	Quality Assurance
9	Conduct of Operations	9	Configuration Management
10	10 Maintenance	10	Maintenance
11	Radiation Protection	11	Radiation Protection
12	Fire Protection	12	Fire Protection
13	Packaging and Transportation	13	Emergency Preparedness
14	Environmental Restoration	14	Review, Assessment, and Oversight
15	Decontamination and Decommissioning	15	Nuclear Criticality Safety
16	Waste Management	16	Testing
17	Research and Development & Experimental Activities	17	Occurrence Reporting
18	Nuclear Safety	18	Safeguards and Security
19	Occupational Safety and Health	19	Packaging and Transportation
20	Environmental Protection	20	Occupational Safety and Health
		21	Procurement
		22	Conduct of Operations
		23	Project Management



United States Government

Department of Energy

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# memorandum

Carlsbad Field Office  
Carlsbad, New Mexico 88221

DATE: February 9, 2001

REPLY TO  
ATTN OF: CBFO:OOM:CW:GS:01-0012:UFC 1100.00

SUBJECT: WIPP Environment, Safety, and Health Assessment Summary Report

TO: William Boyce, DOE/EM-5

This information is the Carlsbad Field Office (CBFO) response to commitment #20 of the Implementation Plan for DNFSB Recommendation 2000-2 which reads: "Annually, LPSOs will review the results of ES&H assessments performed during the previous year and provide the Secretary with a summary report for each of their sites."

The Waste Isolation Pilot Plant (WIPP) conducts periodic Environment, Safety, and Health (ES&H) assessments to identify opportunities for improvements. Program, process, and system level assessments are conducted in accordance with DOE O 414.1A, Quality Assurance. In calendar year 2000, the WIPP implemented new mechanisms in the assessment process to provide additional direction and emphasis on continuous improvement. Those included a methodology for conducting continuous improvement assessments through the development and implementation of WP 13-09, *Continuous Improvement Assessments*, as well as a premise for including safety awareness components in WP 13-07, *Self-Assessment Program Plan*. These enhanced mechanisms provided demonstrable continuous improvement in meeting DOE expectations specified in DOE P 450.5, "Line Environment, Safety, and Health Oversight".

Program level assessments are used to determine whether overall organizational programs are properly established and implemented, including the integration of processes designed to achieve organizational goals and customer expectations. The assessments serve as a management tool for monitoring ES&H performance measures and indicators. They also focus on the effectiveness of special safety programs such as the Integrated Safety Management System and the Voluntary Protection Program.

Process level assessments involve the examination and verification that work controls are effectively implemented to protect workers, the public, and the environment. This includes a myriad of assessments such as:

- Involvement of the system engineers in conducting periodic facility conditions inspections through the site's Condition Assessment Surveys and Capital Asset Management Process Inspections program;
- Annual assessment and update of the Fire Hazards Analysis;
- Pre-MSHA inspections of the surface and underground facilities;
- Emergency Management drill and exercise program; and
- Formal audits of the processes such as lockout/tagout.

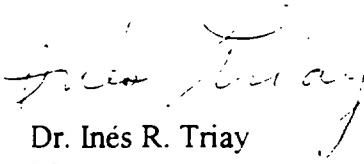
System level assessments focus on whether appropriate leadership and support systems are provided to enable the safe implementation of work processes. System level assessments include:

- Standards/Requirements Identification Document (S/RID) reviews pertaining to overall programmatic compliance and validation involving assessment of DOE Orders, the CFR, and other regulatory drivers;
- Assessments/investigations resulting from incidents, injuries, and near misses;
- Industrial safety field monitoring assessments of areas such as noise monitoring, dust exposure evaluation, and ergonomic reviews; and
- Assessments conducted to address employee safety concerns.

These three levels of assessments all provide formal documentation, trending, and a corrective action process to resolve deficiencies. The scopes of audits, assessments, and surveillances were based on evaluations of previous assessment results, current work scopes, as well as applicable requirements and regulatory drivers.

Assessment results have been valuable to WIPP's efforts in enhancing ES&H programs. Opportunities for improvements are being properly addressed through the CBFO Corrective Action Request (CAR) system, tracked on the WIPP commitment tracking system, and have been closed, or are currently on schedule for timely closure. A brief summary of the 28 ES&H assessments conducted during CY 2000 are listed in the attached table.

As requested by Michael Oldham's memorandum of January 31, 2001, Dr. Chuan Wu of my staff has provided an electronic copy of this summary report to you by e-mail. We appreciate your guidance in the preparation of this summary report and other matters related to the implementation of DNFSB Recommendation 2000-2. If you have any questions, please contact Dr. Wu at (505)234-7552.

  
Dr. Inés R. Triay  
Manager

Attachment

cc:  
Thomas Evans, DOE/EM  
Lynne Wade, DOE/EM  
Bruce Lilly, CBFO  
Chuan Wu, CBFO  
Hank Herrera, WTS  
Candice Jierree, WTS

United States Government

Department of Energy

# memorandum

Carlsbad Field Office  
Carlsbad, New Mexico 88221**DATE:** February 20, 2001**REPLY TO**  
**ATTN OF:** CBFO:OOM:CW:KJB:01-0013:UFC 1100.00**SUBJECT:** Supplement to WIPP ES&H Assessment Summary Report**TO:** Mr. William Boyce, DOE/EM-5

This memorandum is to provide supplemental information to the WIPP Environment, Safety and Health (ES&H) Assessment Summary Report, dated February 9, 2001.

## 1. Assessment of vital safety systems (VSSs)

WIPP personnel check the operability of VSSs on a routine basis. A system engineer is assigned to each VSS. The system engineer is responsible for:

- conducting periodic system walk downs (at a minimum annually and some daily),
- taking actions to correct problems associated with the system,
- making needed changes to the system through a controlled engineering change order process, and
- planning and reviewing of all maintenance to the system.

Periodic functional inspections and operability tests are performed on the following defense-in-depth systems:

- Waste Hoist – inspection per shift;
- Waste Handling Building – inspection weekly to verify operability of the Tornado Doors and structure integrity;
- Waste Handling Building HVAC System – inspection each shift, operability verification once a month;
- Underground Ventilation and Filtration System – inspection each shift, operability test once a month;
- Waste Handling Equipment – Pre-operational check before each shift involving waste handling activities;
- Central Monitoring System – inspection each shift, operability test each quarter; and
- Radiation Monitoring System – daily operability check on at least one alpha continuous air monitor (CAM) at the disposal room exit, quarterly operability test of CAMs for automatic shift to filtration.

The Fire Protection System has several components that undergo periodic operability testing as required by NFPA standards. The WIPP Facility Operations Roving Watch rounds and the Central Monitoring Room operator turnovers also review, assess and verify the conditions of systems with each shift.

All those assessments are basic to daily operations at WIPP and are performed in accordance with standard operating procedures. Therefore, many of the formal ES&H assessments focus on procedural compliance and safety, which ensures operational activities are conducted appropriately—thus ensuring the reliability of VSSs. Among the 28 ES&H assessments of CY-2000, four were directly related to VSSs:

- Assessment # SAS-00-01, conducted during January 15 to February 29, evaluated the effectiveness of the WIPP Lockout/Tagout Program;
- Assessment # MA-00-03, conducted during May 1 to June 19, assessed the adequacy and implementation of WIPP procedures;
- Assessment # CI-00-05, conducted during May 23 to June 8, evaluated the conduct of operations in key areas including facility inspections; and
- Assessment # 100-11, conducted in September, assessed the WIPP Airborne Particulate Sampling Program that includes Continuous Air Monitoring systems.

All findings from these assessments have been closed. The WIPP has initiated and will complete Phase I Operability Assessment of VSSs, as defined in the DOE Implementation Plan of DNFSB Recommendation 2000-2, by May 1, 2001.

## 2. Identification and resolution of significant issues

No significant issues related to VSSs were identified in CY-2000. The CBFO did not request assistance on findings related to VSSs. The CBFO received assistance from DOE/EM and DOE/SO on findings identified in the May 2000 DOE/OA review of the WIPP Emergency Management Program. All five findings of that review have been closed.

Your guidance on the implementation of DNFSB Recommendation 2000-2 is appreciated. For any matters related to WIPP authorization basis and safety, please contact Dr. Chuan Wu of my staff.

Dr. Inés R. Triay  
Manager

William Boyce

-3-

cc:

Thomas Evans, DOE/EM

Lynne Wade, DOE/EM

Bruce Lilly, CBFO

Chuan Wu, CBFO

Candice Jierree, WTS

CBFO:OOM:CW:KJB:01-0013:UFC 1100.00

<b>WIPP ES&amp;H ASSESSMENTS - CY 2000</b>						
	<b>ASSESSMENT #</b>	<b>ASSESSMENT TITLE</b>	<b>ORGANIZATION CONDUCTING ASSESSMENT</b>	<b>DATE</b>	<b>SCOPE</b>	<b>FINDINGS &amp; STATUS</b>
1.	100-03	Metrology Program	WID Quality Assurance	January 2000	Evaluation of the Metrology Program and related radiological monitoring equipment and Quality Assurance Program requirements.	11 findings.  Status: This assessment and related actions are closed.
2.	SAS-00-01	WID Lockout/Tagout Program	WID Quality Assurance	01/15/00-02/29/00	To determine the effectiveness of implementation of the applicable procedures.	No Findings
3.	MA 2000-02	WID Emergency Management Program	WID Quality Assurance	02/10/00-02/25/00	Evaluation included the activities associated with program administration, hazards survey and assessment, emergency readiness assurance planning, drills & exercises, the Emergency Operations Center, the Joint Information Center, emergency response, emergency medical support, personnel training, procedures and document control, corrective actions and records.	14 Corrective Action Requests (CARs).  Status: This assessment and related actions are closed.
4.	SAS-00-02	WID Hazardous Material Handling Program	WID Quality Assurance Program	02/14/00-03/16/00	Focused on the processes and activities associated with hazardous material handling to determine the effectiveness of implementation of site-specific procedures in meeting compliance expectations.	No findings.
5.		40 CFR 191, Subpart A	CAO Informal Surveillance	02/14/00-02/15/00	Compliance with 40 CFR 191, Subpart A.	No findings.
6.	ECA00-002	VOC Monitoring Program	WID Environmental Compliance Assessment Program (ECAP)	02/23/00-02/28/00	Evaluation of the implementation of the RCRA Permit, Module 4 and Attachment N in the Volatile Organic Compound Monitoring Program.	No findings.

7.		Integrated Safety Management	WID ES&H (subcontract)	March 2000	Annual review of the implementation and effectiveness of the Integrated Safety Management System.	11 Areas for improvement were identified.  Status: This assessment and the related actions are closed.
8.	ECA00-003	Groundwater Monitoring Program	WID ECAP	03/09/00-03/13/00	Evaluation of the implementation of the RCRA Permit, Module 5 and Attachment L in the Groundwater Monitoring Program/Detection Monitor Program.	1 finding.  Status: This assessment and the related actions are closed.
9.	S-00-03	WWIS Quality Assurance Program	CAO	03/13/00-03/15/00	Evaluate the functional and operational requirements of the WWIS data management system and those QA related functions needed to evaluate the integrity and validity of the WWIS data. The surveillance evaluated a sample of production and test software baselines including software modules and supporting documentation baselines.	2 CARs.  Status: This assessment and the related actions are closed.
10.	100-02	Radiation Access Control	WID QA	April 2000	Evaluation of Radiation Access Control in compliance with site-specific procedures.	3 CARs.  Status: One CAR is closed and the other two are on schedule for completion.
11.	100-05	ALARA Program	WID QA	April 2000	Evaluation of the compliance and implementation of requirements of the Dosimetry program and the As Low As Reasonably Achievable (ALARA) Program.	7 findings.  Status: This assessment and related actions are closed.
12.	SAS-00-03	WID Occupational Health Program	WID QA	04/03/00-04/07/00	Evaluation of the Worker Protection Policy implementation portions of Occupational Health Program, including occupational health plan, emergency treatment, pharmaceutical services, facilities, equipment, and qualified personnel.	No findings.

13.	SAS-00-06	WID Underground Operations	WID QA	04/04/00- 04/25/00	Review of planning and implementation of the programmatic requirements contained in the appropriate CFRs and other upper tier requirements involving the programmatic administration of Underground Operations, such as Escape and Evacuation Plan, the Hazardous Waste Permit, Control of Operator Aids, Document Distribution, and Records requirements.	No findings.
14.	DOE HQ OA- 30	WIPP Emergency Management Program	DOE HQ OA	05/01/00- 05/11/00	To Assess selected emergency management system elements that focus on WIPP's readiness to protect site personnel and the public from consequences of onsite events; and to evaluate the site's ability to provide appropriate information or assistance to local responders following an offsite event.	5 findings.
15.	100-07	WIPP Laboratories	WID QA	May 2000	Evaluation of the Radiochemistry Quality Assurance Plan in compliance with requirements and WID Quality Assurance Program.	5 findings.  Status: This assessment and related actions are closed.
16.	MA-00-03	WID Procedure Compliance	WID QA	05/01/00- 06/19/00	Assess the effectiveness of the document review process, determine the adequacy of WID procedures, evaluate the level of procedure compliance, and enhance awareness of management expectations associated with procedure compliance. Special activities included identification and correction of procedural inaccuracies, communication of expectations, and procedure use as it relates to employee safety.	Findings were all corrected during the course of the assessment.  Status: This assessment and all related actions are closed.



17.	ECA00-004	WIPP Laboratory	WID QA ECAP	05/22/00-05/30/00	Evaluation of the implementation of Radiation Lab Requirements in compliance with Title 10 CFR, Part 835; DOE O 435.1-1; ANSI N13.30; and site-specific procedures.	5 findings.  Status: This assessment and all related actions are closed.
18.	CI-00-05	Conduct of Operations	WID QA	05/23/00-06/08/00	Evaluation of the processes and activities associated with the conduct of operations as implemented in operations department drill programs, internal training evolutions, and facility inspections.	2 CARs.  Status: This assessment and related actions are closed.
19.	S-00-05	WID Industrial Hygiene Program	CAO	05/30/00-06/08/00	Evaluate the adequacy, implementation, and effectiveness of the IS&H and OH programs. Special emphasis was placed on those area in which deficiencies were noted during Management Assessment 98IS03, conducted from July 20-24, 1998, and Surveillance S-97023, conducted in June 1997.	2 CARs.  Status: This assessment and related actions are closed.
20.	CI-00-08	Satellite Accumulation Area Management	WID QA	06/21/00-06/30/00	Evaluation of the processes and activities associated with the management of the hazardous waste in the Satellite Accumulation Areas and the compliance with procedures as implemented in those activities.	2 findings.  Status: This assessment and related actions are closed.
21.	MA-00-05	WID Occupational Health Program	WID QA	07/27/00-08/03/00	Evaluate the effectiveness of the current occupational health program processes in meeting customer service expectations. This included a survey for trending purposes and an analysis of patient satisfaction, for preparation for American Association of Ambulatory Health Care accreditation.	No findings.
22.	A-00-14	WID QA Program	CAO	08/07/00-08/08/00	To Evaluate the adequacy, implementation, and effectiveness of selected elements of the WID QA Program.	No findings.

23.	S-00-07	Emergency Management Programs	CAO	08/21/00-08/24/00	To assess the adequacy and effectiveness of the emergency management program at the WIPP and to ensure compliance with applicable DOE standards, requirements, policies, and procedures.	No findings.
24.	100-09	Environmental Management System	WID QA	August 2000	Evaluation of the effectiveness of the WID Environmental Management System implementation in accordance with the WID Quality Assurance Program.	No findings.
25.	100-10	Volatile Organic Compound (VOC) Monitoring, ES&H	WID QA	August 2000	Evaluation of the implementation of the Quality Assurance Project Plan for Confirmatory VOC Monitoring.	2 findings. Status: This assessment and related actions are closed.
26.	ECA00-005	Environmental Compliance and Hazardous Waste Operations	WID QA ECAP	09/07/00-09/12/00	Evaluation of the implementation of Waste Characterization/Minimization Requirements in compliance with the applicable portions of Title 40 CFR, Parts 261,262, and 268; DOE O 5400.1; and Executive Order 13101.	1 finding. Status: This assessment and related actions are closed.
27.	100-11	ES&H Environmental Monitoring	WID QA	Sept. 2000	Evaluation of the Airborne Particulate Sampling program.	No findings.
28.		Voluntary Protection Program	WID ES&H Subcontract	November 2000	Review of the WID Safety and Health Program and effectiveness in meeting the requirements and expectations of a DOE VPP STAR site.	8 recommendations. Status: Corrective actions are currently in development and will be tracked through the site's commitment tracking system.

**DNFSB Recommendation 2000-2  
Implementation Plan Commitment:**

**Summary of Environmental,  
Safety Health and Quality  
Assurance (ESH&QA)  
Assessments for Calendar  
Year 2000**

**Bechtel Jacobs Company LLC  
February 2001**

**DNFSB Recommendation 2000-2, Implementation Plan Commitment No. 20:  
Summary of Environmental, Safety and Health (ES&H) Assessments for CY 2000**

**I. Assessment Program**

Bechtel Jacobs Company LLC is the management and integration contractor for the U. S. Department of Energy's Oak Ridge Operations Office, located in Oak Ridge, Tennessee. The company is responsible for environmental cleanup, waste management, and management of depleted uranium hexafluoride cylinders in Oak Ridge; Paducah, Kentucky; and Portsmouth, Ohio. Bechtel Jacobs also supports DOE in a reindustrialization program to find commercial uses for many Oak Ridge facilities that no longer have a mission.

A system of internal assessment and oversight is implemented to provide additional assurance that management systems are implemented and that BJC commitments and objectives are met. The system uses a graded approach that considers industry standards and the values, priorities and relative risks of projects, facilities, and activities. Assessments are documented, including a summary of the scope of the assessment and the evaluation criteria, and the results are tracked and trended, as appropriate. As significant issues, improvements, or noncompliances are identified, the issues management process is employed to identify issues, review for potential PAAA or occurrence reportability, and request commitment for resolution on a specified schedule. In addition, improvements identified from assessment activities are communicated through assessment reporting activities and through use of the lessons learned program.

External oversight comes from, but is not limited to, DOE, the Defense Nuclear Facilities Safety Board, the U. S. Environmental Protection Agency and the states of Kentucky, Ohio, and Tennessee.

This report focuses on assessments that addressed the East Tennessee Technology Park (ETTP) Radiation/Criticality Accident Alarm System and the Oak Ridge National Laboratory (ORNL) Building 3019B, Radiochemical Development Facility. The report includes assessments of safety management systems that help ensure the operability and reliability of safety systems (preservation programs) and assessments that directly address some aspect of safety system operability or reliability.

**II. Summary of Bechtel Jacobs Company LLC Assessments**

**A. Assessments of Preservation Programs**

BJC and DOE performed an ISMS Phase I/II verification during the spring of 2000. BJC corrective actions were completed in accordance with the plan provided to DOE in June 2000. During the verification process in September 2000, the DOE-ORO team identified several emerging issues with the BJC Nuclear Criticality Safety Program. BJC undertook additional corrective actions, including: compensatory measures to increase the rigor of controls over fissile operations; annual assessments of the content and implementation of Nuclear Criticality Safety Approvals (NCSAs); steps to reconcile uncertainties in fissile material inventory and identify characterization deficiencies; augmenting the core staff with a senior NCS engineer; procuring outside expert services to conduct an independent review of the BJC Nuclear Criticality Safety Program.

DOE-EH conducted an independent investigation of the ETTP from April through October 2000. This was the last of three investigations of gaseous diffusion plants that EH conducted over the past year at the direction of the Secretary of Energy, who instructed EH to examine concerns about past operations and work practices, and the current management of legacy materials at the

**DNFSB Recommendation 2000-2, Implementation Plan Commitment No. 20:  
Summary of Environmental, Safety and Health (ES&H) Assessments for CY 2000**

three gaseous diffusion plants (Paducah, Portsmouth, and the ORGDP). Investigations were conducted at each site to: (1) determine whether past environment, safety, and health (ES&H) activities and controls associated with uranium enrichment, supporting operations, and environmental restoration activities were in accordance with the knowledge, standards, and requirements applicable at the time; (2) identify any additional ES&H concerns that had not been documented; and (3) determine whether current work practices for DOE-controlled areas of the site adequately protect workers, the public, and the environment. DOE-EH cited 13 issues. DOE ORO provided a comprehensive corrective action plan on January 10, 2001.

BJC performed a comprehensive self assessment of its nuclear criticality safety program that led to identification of 74 findings and 40 observations. The majority of the findings were management related such as improper resource allocation; policies not adequately defined, disseminated, or enforced; inadequate administrative control; and defective or inadequate procedures.

As part of the DOE Nuclear Criticality Safety Improvement Initiative, DOE-EH conducted a field review in August 2000 that included the BJC nuclear criticality safety program. The oversight team identified two additional issues as follows: failure to correct longstanding criticality safety deficiencies at ETTP; and failure of the BJC self assessment to identify program weaknesses regarding qualification of nuclear criticality safety staff, field verifications, fissile material inventory control, deficiency reporting, and USQD process. BJC provided a Nuclear Criticality Safety Improvement Plan in December.

BJC performed 6 audits of safety management systems that potentially impact the RCAAS. No significant issues were identified.

BJC hired a third party to perform an independent review of fire protection and emergency response at the ETTP in August 2000. The review identified one significant concern in that the level of staffing of the ETTP Fire Department was insufficient. BJC initiated actions to acquire additional staffing.

**B. East Tennessee Technology Park (ETTP) Radiation/Criticality Accident Alarm System (RCAAS) – Note: RCAAS responsibility is shared with BJC responsible for K-25 and K-27, and BNFL responsible for K-29, K-31, and K-33**

Two BJC management assessments of subcontractor RCAAS performance were conducted. The assessment of subcontract compliance in November 2000 identified the lack of a project-specific QA Plan and incomplete specification of requirements in work packages. Remaining corrective actions include approval of a project-specific QA Plan. BJC has determined that the system remains operable and reliable, while these deficiencies are being tracked under the PAAA Noncompliance Tracking System. A management assessment of RCAAS training was conducted in December 2000 and identified no significant findings.

Subcontractor self assessments included 16 ES&H inspections, daily safety walkdowns, biweekly assessments, 3 quality audits and 84 management assessments. There were no significant findings associated with these assessments.

**C. Oak Ridge National Laboratory (ORNL) Building 3019B, Radiochemical Development Facility Assessments**

Only limited activities were conducted in CY 2000. BJC performed weekly inspections of the ventilation system, fire protection inspections were conducted quarterly and annually, and two management assessments. No significant issues were identified.

United States Government

Department of Energy  
Office of River Protection

# memorandum

DATE: FEB 23 2001

REPLY TO  
ATTN OF: SHD:YGN 01-SHD-020

SUBJECT: RIVER PROTECTION PROJECT ENVIRONMENT, SAFETY, AND HEALTH (ES&H)  
ASSESSMENT SUMMARY

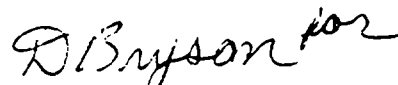
TO: William G. Boyce  
Office of Safety, Health and Security  
EM-5, HQ

This memorandum transmits the "River Protection Project Calendar Year 2000 Annual Environment, Safety, and Health Assessment Summary Report." The attached Report was prepared in response to Commitment 20 of the Implementation Plan for the Defense Nuclear Facilities Safety Board Recommendation 2000-2.

The attached Report summarizes the U.S. Department of Energy, Office of River Protection Calendar Year 2000 ES&H oversight assessments, surveillances, walkthroughs, inspections, and quality assurance audits performed on both the Tank Farms and the Waste Treatment Plant contractors. In addition, the Report includes a summary of self-assessments conducted by the Tank Farms Contractor, CH2M HILL Hanford Group, Inc.

If you have any questions, please contact Russ Harwood, of my staff, (509) 376-2348.

Sincerely,



Ami B. Sidpara, Assistant Manager  
for Operations

Attachment

cc w/attach:  
M. J. Oldham, EM-5  
T. P. Wright, EM-44

# Office of River Protection

## RIVER PROTECTION PROJECT CALENDAR YEAR 2000 ANNUAL ENVIRONMENT, SAFETY, AND HEALTH ASSESSMENT REPORT



February 2000

U.S. Department of Energy  
Office of River Protection  
Richland, Washington



## EXECUTIVE SUMMARY

Commitment No. 20 for the Implementation Plan of the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2 requires submittal of an annual summary of Environment Safety and Health (ES&H) assessments performed during the previous calendar year by the Lead Program Secretarial Offices (LPSOs) to the Secretary of Energy each February.

The U.S. Department of Energy (DOE), Office of River Protection (ORP), is the responsible LPSO for the River Protection Project (RPP). The RPP includes both the Hanford high-level waste Tank Farms and the Waste Treatment and Immobilization Plant (WTP). The management of the Tank Farms is currently contracted to the CH2M HILL Hanford Group, Inc. (CHG), whereas design and construction of the WTP is currently contracted to Bechtel National, Inc. The WTP design and construction was previously under a privatization contract with BNFL Inc.

The ORP Facility Representative Program is established to monitor and assess the performance of the RPP contractors and its facilities with respect to the ES&H regulations and other requirements. In addition, the ORP Office of Assistant Manager for Environment, Safety, Health, and Quality (AMSQ) and the ORP Office of Safety Regulation (OSR) provide programmatic oversight for the implementation of the ES&H requirements.

- The ORP Facility Representatives ensure that work is done safely in the facilities and according to requirements. They also provide feedback to the respective ORP program management elements. The Facility Representatives evaluate the contractors' implementation of Integrated Safety Management (ISM) and perform operational startup readiness reviews.
- The ORP AMSQ maintains programmatic oversight of the RPP nuclear safety (Tank Farms only), worker safety and health, radiation protection, environmental, and quality assurance programs. The AMSQ conducts annual reviews of the Authorization Basis documents (Tank Farms only), environmental regulatory compliance assessments and inspections, worker health and safety surveillances, radiation protection program oversight, criticality prevention program review (Tank Farms only), and quality assurance of contractor safety systems.
- The ORP OSR maintains oversight of the WTP project with respect to radiological, nuclear, and process safety, and ISM.
- The DOE Headquarters conducts periodic oversight review of ES&H related activities.
- The RPP contractors maintain a self-assessment program to ensure compliance with ES&H requirements.

This report summarizes the RPP's calendar year 2000 ES&H related assessments, surveillances, walkthroughs, inspections, and quality audits conducted by ORP on the Tank Farms and WTP, and self-assessments conducted by the Tank Farms contractor, CHG.

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ATTACHMENT 1: FACILITY REPRESENTATIVE FIELD ASSESSMENTS

ATTACHMENT 2: TANK FARMS NUCLEAR SAFETY PROGRAM ASSESSMENTS

ATTACHMENT 3: ENVIRONMENTAL PROGRAMS ASSESSMENTS

ATTACHMENT 4: RADIATION PROTECTION PROGRAM ASSESSMENTS

ATTACHMENT 5: NUCLEAR CRITICALITY SAFETY PROGRAM ASSESSMENTS

ATTACHMENT 6: SAFETY AND HEALTH ASSESSMENTS

ATTACHMENT 7: QUALITY ASSURANCE ASSESSMENTS

ATTACHMENT 8: WASTE TREATMENT PLANT ASSESSMENTS

ATTACHMENT 9: INDEPENDENT ORGANIZATION ASSESSMENTS

ATTACHMENT 10: TANK FARMS CONTRACTOR SELF-ASSESSMENTS

## LIST OF TERMS

AB	Authorization Basis
AC	Administrative Control
AMO	Office of Assistant Manager for Operations
AMSQ	Office of Assistant Manager for Environment, Safety, Health, and Quality
ALARACT	As Low As Reasonably Achievable Controlled Technologies
CAM	continuous air monitor
CHG	CH2M HILL Hanford Group, Incorporated
CAA	Clean Air Act
CWA	Clean Water Act
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U. S. Department of Energy
EH	DOE Headquarters Office of Oversight, Environment, Safety, and Health
dP	differential pressure
ES&H	Environment Safety and Health
EPA	U.S. Environmental Protection Agency
FSAR	Final Safety Analysis Report
HPT	Health Physics Technician
HRA	high radiation area
HQ	DOE-Headquarters
ISM	Integrated Safety Management
ISMS	Integrated Safety Management Systems
HEPA	high efficiency particulate air
HLW	high-level waste
LAW	low-activity waste
LCO	Limiting Condition for Operation
LPSO	Lead Program Secretarial Office
NCS	Nuclear Criticality Safety
NOC	Notice of Construction
ORP	DOE Office of River Protection
OSR	Office of Safety Regulation
PPE	Personal Protective Equipment
POC	point of contact
POD	plan of the day
PQA	product quality assurance
PTRAEU	portable temporary radioactive airborne emissions units
QA	quality assurance
RCRA	Resource Conservation and Recovery Act
RPP	River Protection Project
SAR	Safety Analysis Report
SER	Safety Evaluation Report
SSC	safety structures, systems, and component
TOD	Tank Farms Oversight Division
TLV	threshold limit values

TPA	Tri-Party Agreement
TSR	Technical Safety Requirement
USQ	Unreviewed Safety Question
WAC	Washington State Administrative Code
WD&DP	Waste Processing and Disposal Project
WTP	Waste Treatment and Immobilization Plant
WDOE	Washington State Department of Ecology
WDOH	Washington State Department of Health

# **RIVER PROTECTION PROJECT CALENDAR YEAR 2000 ANNUAL ENVIRONMENT, SAFETY, AND HEALTH ASSESSMENTS REPORT**

## **1.0 Introduction**

Commitment No. 20 of the Implementation Plan for Defense Nuclear Safety Board (DNFSB) Recommendation 2000-2 requires submittal of an annual summary of Environment Safety and Health (ES&H) assessments performed during the previous calendar year by Lead Program Secretarial Offices (LPSOs) to the Secretary of Energy each February.

The U.S. Department of Energy (DOE), Office of River Protection (ORP) is the responsible LPSO for the River Protection Project (RPP). The RPP includes both the Hanford High-Level Tank Farms and the Waste Treatment and Immobilization Plant (WTP). The management of the Tank Farms is currently contracted to the CH2M HILL Hanford Group, Inc. (CHG), and design and construction of the WTP is currently contracted to the Bechtel National, Inc. The WTP design and construction was previously under a privatization contract with BNFL Inc.

The ORP Facility Representative Program is established to monitor and assess the performance of the RPP contractors and its facilities with respect to the ES&H regulations and other requirements. In addition, the ORP Office of Assistant Manager for Environment, Safety, Health, and Quality (AMSQ) and the ORP Office of Safety Regulation (OSR) provide programmatic oversight for the implementation of the ES&H requirements.

The ORP implements an extensive program to monitor and assess the ES&H related performance of its contractors and its facilities. The program is primarily implemented through the ORP Facility Representative Program, which ensures that work is done safely and according to regulatory and ORP requirements, and provides feedback to ORP program management. The Facility Representatives also evaluate the contractors' implementation of Integrated Safety Management (ISM) and operational startup readiness reviews. The AMSQ maintains programmatic oversight of the RPP nuclear safety (Tank Farms only), worker safety and health, radiation protection, environmental, and quality assurance (QA) programs. The AMSQ elements conduct annual reviews of the Authorization Basis (AB) documents (Tank Farms only), environmental regulatory compliance assessments and inspections, worker health and safety surveillances, radiation protection program oversight, criticality prevention program reviews, and quality assurance of contractor safety systems. The ORP Office of Safety Regulation (OSR) maintains oversight of the WTP project with respect to radiological, nuclear, and process safety, and ISM. Additionally, DOE Headquarters conducts periodic oversight review of ES&H related activities. CHG maintains a self-assessment program to ensure compliance with ES&H requirements in the Tank Farms.

This report summarizes the RPP's calendar year 2000 ES&H related assessments, surveillances, walkthroughs, inspections, and quality audits conducted by ORP, on both the Tank Farms and WTP, and self-assessments conducted by the Tank Farms contractor, CHG.

## 2.0 Facility Representative Field Assessments

The ORP Facilities Representatives perform routine evaluations (surveillances) of Tank Farms Contractor, CHG, RPP facilities. Although focused primarily on operational concerns, the Facility Representatives also evaluate AB compliance and quality assurance issues. During the surveillances, the Facility Representatives work with Contractor staff from the specific program organizations. The Facility Representative monthly report tracks the status of audit findings and observations.

Attachment 1 contains a discussion of the key assessments performed by the Facility Representatives during the calendar year 2000 and a summary of the monthly surveillance reports. A corrective action plan has been generated by CHG, unless otherwise stated, to correct the surveillance findings and observations for all these items.

## 3.0 Tank Farms Authorization Basis Program Assessments

The ORP AMSQ is responsible for maintaining AB program oversight and includes review of the safety analysis and recommending approval of the Safety Analysis Reports (SARs).

The Tank Farms AB was transitioned to the Final Safety Analysis Report (FSAR), (HNF-SD-WM-SAR-07, "Tank Farms Final Safety Analysis Report") in October 1999 with over 300 DOE Safety Evaluation Report (SER) directed actions required to be completed in three phases. ORP initiated a management assessment to track the phased implementation of the FSAR. The AMSQ AB Management Group conducts weekly oversight/interface meetings with the Tank Farms (CHG) Nuclear Safety and Licensing Group to assess closure of the DOE Safety Evaluation Report (SER) including tracking of the closure of Tank Farms safety issues, development of the AB amendments, resolution of Unreviewed Safety Questions (USQs), and closure of technical issues. The Attachment 2 presents a listing of AB related actions items tracked or closed in calendar year 2000.

Assessment of compliance with Technical Safety Requirements (TSRs) and other controls, particularly at the operations level, is checked by the ORP Facility Representatives as described in Attachment 1.

## 4.0 Environmental Program Assessments

The ORP AMSQ is responsible for establishing environmental programmatic policies as well as performing regulatory compliance assessments and surveillances on the RPP Contractors. Those assessments and surveillances are performed to ensure Contractor's compliance with both Federal and State environmental regulations. The AMSQ also participates with Washington State Department of Health (WDOH), Washington State Department of Ecology (WDOE), and U.S. Environmental Protection Agency (EPA) in environmental inspections and assessments.

The primary focus for inspections and assessments for calendar year 2000 was compliance with the requirements of Clean Air Act (CAA), Clean Water Act (CWA), and Resource Conservation, and Recovery Act (RCRA) compliance. The details concerning all environmental program compliance-related assessments conducted in year 2000 are summarized in Attachment 3.

## 5.0 Radiation Program

The ORP AMSQ is responsible for the programmatic oversight of the contractor's radiation protection program. As part of oversight activities, AMSQ performed verification assessments of the CHG Radiation Protection Program implementation. Attachment 4 includes the verification assessment performed October 30 through November 17, 2000. Attachment 4 also contains summaries of periodic Tank Farms facility walkthroughs by ORP radiation protection experts from July to December 2000.

## 6.0 Nuclear Criticality Safety Program Assessments

The nuclear criticality safety (NCS) Program for the RPP facilities is audited annually as part of ORP oversight by the AMSQ AB Management Group. The audit verifies that the program is functioning properly and compliant with DOE requirements. The audit is performed by a team consisting of two external independent criticality experts and the ORP criticality program manager. The last annual audit of the Tank Farms was completed in June 2000.

The June 2000 audit identified no findings requiring corrective actions. The audit for the NCS Program for Tank Farms indicates that it is adequate for the storage mission. Two observations were made regarding the training and awareness for nuclear criticality safety, and overall quality of technical evaluations with respect to documentation. Attachment 5 contains a copy of the ORP audit performed in June 2000.

CHG conducted a semi-annual criticality safety inspection of its program in December 1999. This inspection was conducted by a CHG staff member. Three observations requiring corrective actions for clarification and updating of documentation were identified. These items have been included in an action tracking system and are scheduled for completion in calendar year 2001. In March 2000, CHG had an independent review performed of its NCS Program by an external criticality safety specialist. This independent review was comprehensive and did not identify any safety issues, but recommended numerous improvements to the NCS Program. These recommendations have also been incorporated into the action tracking system. The independent review identified weaknesses in the area of documentation consistency, the peer review process, and specific implementation deficiencies.

## 7.0 Safety and Health Assessments

The ORP AMSQ is responsible for programmatic oversight of the RPP facilities worker safety and health. AMSQ performs periodic assessments of the RPP worker safety and health programs in conjunction with the ORP Facility Representatives. Integral to the health and safety programs is the Integrated Safety Management Systems (ISMS) program. AMSQ also performs periodic verification assessments to ensure implementation of the ISMS program.

Two assessments were completed during the calendar year 2000 for the health and safety programs:

- SHD-00-09-01, "Oversight of the CH2M HILL Hanford Group, Inc. Tank Farms Heat Stress Control Program Assessment Report," October 24, 2000.

This report provides the results of the ORP oversight of the CHG tank farms heat stress control program. The CHG heat stress program meets the minimum requirements and complies with American Conference of Governmental Industrial Hygienists Threshold Limit Values (TLV) for "Chemical Substances and Physical Agents and Biological Exposure Indices guidelines." The CHG program is in accordance with DOE O 440.1A, "Worker Protection Management for DOE Federal and Contractor Employees."

The assessment found that CHG had satisfactorily implemented the heat stress control program in the tank farms. There was clear evidence that a defined process is in place for continuous improvement on this program through the individual Employee Job Task Analysis process and implementation of the site ISMS program.

- DOE/ORP-2000-17, Revision 0, "Management Assessment Report of CH2M HILL Hanford Group, Inc., Integrated Safety Management System Implementation," May 16-25, 2000.

The ORP performed a management assessment of CHG in two areas:

- Implementation of the ISMS at the institutional, facility, and activity levels.
- Compliance with Department of Energy Acquisition Regulations (DEAR) 970.5204-2, Integration of Environmental, Safety, and Health into Work Planning and Execution, and 970.5204-78, Laws, Regulations, and DOE Directives.

The management assessment team was composed of staff from ORP, Richland Operations Office, DOE Headquarters (HQ), DOE support contractors, and representatives of the Confederated Tribes of the Umatilla Indian Reservation and the Hanford Atomic Metal trades Council.

The team evaluated implementation of the CHG ISMS Description, supporting procedures and processes, closure of corrective actions, and plans for continuous



improvement according to the guiding principles and core functions as defined in DOE P 450.4, Safety Management System Policy, and DEAR 970.5204-2.

The assessment identified strengths, noteworthy practices, issues, and concerns. The assessment concluded that the ISMS as described by CHG is considered to be implemented. However, concerns were identified that require senior management attention to support ISMS maintenance and continuous improvement:

- Focus on the integration and institutionalization of feedback and continuous improvement processes.
- Formalize and execute a company-level continuous improvement plan with identified roles, responsibilities, expectations, and indicators to evaluate ISMS performance at the institutional, facility, and activity levels.

These reports are included in Attachment 6.

## 8.0 Quality Assurance Assessments

The ORP AMSQ is responsible for maintaining quality assurance oversight on the RPP facilities and contractors. The AMSQ Quality Assurance Group has implemented an extensive quality assurance program to ensure safe operations, working conditions, and to ensure the quality of Tank Farms safety structures, systems, and components (SSC). Calendar year 2000 assessments performed by ORP include the following:

- Quality Assurance

WP&DP-SRE-00-10, "United States Department of Energy Waste Processing and Disposal Project (WP&DP) Quality Assurance Surveillance Report No. WP&DP-SRE-00-01," May 2000.

The surveillance was conducted April 10-12, 2000, to evaluate CHG's Configuration Management Program as applied to the projects. Project W-519 was used for evaluation purposes. The initial scope of the surveillance included:

- CM assessments
- Roles and responsibilities
- Flow-down of configuration management and QA requirements
- Document control

Due to time constraints, the surveillance did not evaluate flow-down of requirements and document control. However, they will be evaluated in future surveillances or evaluated through ORP assessments of CHG activities (e.g., CHG assessments of subcontractors).

- PQA-YE-01-01, "United States Department of Energy Office of River Protection Product Quality Assurance (PQA), Contractor Yearly Evaluation," November 2000.

DOE quality assurance requirements require the performance of a yearly evaluation to determine the need to schedule additional audits. The yearly performance evaluation of the WTP contractor has been divided into four distinct areas based on several important events that occurred over the past year. The four areas are as follows:

- Results of Audits and Surveillances prior to BNFL termination
- High level waste feed deliverables
- Termination, transition, and resumption activities
- Current performance of interim design contractor

The resulting recommendations for future contractor oversight were primarily derived from the performance of the interim design contractor and activities that will be performed by the new WTP contractor. The above criteria are most relevant to future oversight activities.

The assessment reports are included in Attachment 7.

## 9.0 Waste Treatment Plant Assessments

The OSR is responsible for radiological, nuclear, and process safety, and ISM implementation of the WTP. The OSR also evaluates the effectiveness of the WTP contractor's authorization basis program. During the calendar year 2000, the OSR completed a diverse and detailed set of audits, assessments, and surveillances. These included:

- A series of detailed inspections of contractor processes and programs
- External assessment and self assessments
- A series of safety systems related contractor reviews and resulting detailed regulatory guidance documents
- Reviews of contractors design documentation

These, in part, are listed in Attachment 8 and can be found on the OSR web page (<http://www.Hanford.gov/osr/>).

## 10.0 Independent Organization Assessments

The DOE HQ Office of Oversight, Environment, Safety, and Health (EH) performed three independent reviews of the activities in the Tank Farms in calendar year 2000.

- In July 2000, an Enforcement Action 2000-09 was issued by EH in response to the review of the Noncompliance Tracking System report filed with respect to the circumstances surrounding quality problems with the procurement of safety class piping

for the W-314 Project. The piping had been procured and accepted for use by CHG. CHG developed a comprehensive corrective action plan to correct the deficiencies and prevent recurrence. EH evaluated and agreed with the adequacy of the corrective actions completed and implementation schedule. The issue was closed by a Consent Order in accordance with 10 CFR 820.23 (Quality Assurance Rule). The Consent Order levied a monetary fine on the CHG in lieu of further DOE investigations. Attachment 9 includes a copy of the "Consent Order Incorporating Agreement between U.S. Department of Energy and CH2M Hill Group, Inc."

- In August 2000, EH conducted an inspection of the proposed design modification to the Tank Farms ventilation systems for the installation of ventilation high-efficiency particulate air (HEPA) differential pressure (dP) interlock system in lieu of the continuous air monitor (CAM) interlock system. The inspection evaluated the proposed design modification with respect to the requirements of the current AB and safety envelope.

The EH inspection of the proposed dP interlock system did not result in any new safety issues. The EH team identified as positive attributes the approach taken by ORP and CHG's intent to improve the reliability of the CAM systems, such as upgrading to newer model CAMs and use of more reliable components. Additionally, the conservative approach taken by ORP in establishing a one-year trial period for assessing the reliability of the dP system was regarded as a positive attribute. The EH team noted the following three observations:

- The dP sensor controls ability to fulfill the safety function requirement has not been demonstrated under all credible accident conditions.
- The technical basis for the dP control setpoints has not been established.
- Potential failure modes of the CAMs have not been fully analyzed and addressed.

An "Inspection Report on the Modification of Hanford Tank Farm Ventilation Controls," was issued by EH. The Inspection report is included in Attachment 9.

- In addition to the EH review, the independent DOE Tanks Advisory Panel (TAP) performed an assessment. The successful remediation of the flammable gas issue for Tank 241-SY-101 was supported by the effort of the DOE TAP. This group of independent technical experts performed a detailed review of the stepwise remediation results and provided DOE with the feedback to strengthen the technical basis and issue resolution. The full TAP met at RPP on March 6-7, 2000, and an ad hoc team of TAP members provided support until the issue closure document was released. No meetings of the Chemical Reactions SubTap, part of the TAP that focused on closure of priority 1 safety issues, occurred during this time period.
- A part of TAP activity is carried out by the Health and Safety SubTap, which meets quarterly to assess both ORP and contractors' responsibilities and achievements in protecting worker health and safety. This independent review group assessed the following

- ORP roles and responsibilities (January 25-27, 2000)
- Contractor occupational radiation protection, chronic beryllium disease prevention, and support in establishing ESH&Q performance measures (March 27-28, 2000)
- Assess ORP ISM Program, site safety trends, and the CHG work control system (June 13-15, 2000)
- Continuing review of ISM program and work control system. Review management observation programs and CHG analysis of chemical risk (September 26-28, 2000)

The Health and Safety SubTap provides DOE-ORP with feedback on the health and safety system program weakness and potential options for improvements, and evaluations of effectiveness of protective measures.

#### 11.0 Tank Farms Contractor Self-Assessments

The Tank Farms contractor, CHG, maintains a self-assessment program that reviews ES&H compliance. The assessment performed by CHG in calendar year 2000 includes review of environmental emissions by equipment, health and safety of the work force, compliance with procedures, program assessments, and identifies areas for improvement. The CHG schedule and list of assessments is included in Attachment 10.

**ATTACHMENT 1**

**FACILITY REPRESENTATIVE FIELD ASSESSMENTS**

## FACILITY REPRESENTATIVE FIELD ASSESSMENTS

Attachment 1 presents a discussion of the key assessments performed by the U.S. Department of Energy (DOE), Office of River Protection (ORP) Facility Representatives during the calendar year 2000 on the Tank Farms facilities. The attachment also includes a summary of the monthly surveillance reports published by the Facility Representatives. For all items listed, a corrective action plan was, or is being, generated by CH2M HILL Hanford Group, Inc. (CHG) (unless otherwise stated) to correct the surveillance findings and observations.

### Walkthroughs

W-00-TOD-TANKFARM-001, "200W Tank Farms Walkthrough Report," Ben Harp, DOE ORP Facility Representative, October 20, 1999

A general walkthrough was conducted of U Tank Farm. The housekeeping of the farm needed attention. The biggest area of concern was the change trailer. Personal protective equipment (PPE) was left all over the floor following entry into the farm by a large group of saltwell workers and other 200 West Area operations personnel. This is despite a new sign that requests cleaning up of messes left in the trailer. This issue was resolved in an expedient manner by the saltwell pumping operations engineer in the 200 West Area shift office.

Other additional observations were made and documented, for information only; any corrective action taken because of these observations are at the discretion of the contractor.

### Key Surveillances

1. A-00-TOD-TANKFARM-003, "Review of Saltwell Pumping Startup Determinations," July 3-July 28, 2000.

An assessment of CHG process for approving the start of saltwell pumping activities was performed in July 2000. The reviewers concluded that the management self-assessment process used to start-up saltwell pumping activities contains the appropriate depth and breadth to ensure the safe start-up and operation of the pumping system. Evidence was found that each pump activity was individually evaluated for new hazards, areas for process improvements, and lesson learned were incorporated into the process. In addition, assessors found that Integrated Safety Management (ISM) Core Functions were demonstrated during Saltwell Pumping Startup Determinations.

2. A-00-TOD-TANKFARM-005, Assistant Manager for Operations Self-Assessment for FY 2000, September 13-September 22, 2000.

This report provides the results of the first self-assessment of ORP Office of the Assistant Manager for Operations (AMO). AMO provides ORP oversight and program direction of River Protection Project (RPP) operation activities. AMO has line management responsibility for operational safety, including Integrated Safety Management System (ISMS) implementation. The self-assessment consisted of document reviews and staff interviews.

This self-assessment resulted in the identification of three strengths and five issues which were documented. The assessment concluded that ORP and AMO are committed to successful implementation of ISM across the organization. They also exhibit improved management attention on the working processes in ORP and the development of an integrated corrective action management system.

3. A-01-TOD-TANKFARM-001, CHG Self-Assessment Program and Corrective Action Management Assessment, October 16-October 25, 2000.

This report provides the results of an assessment of CHG self-assessment and corrective action management programs. This assessment was performed from October 16 through October 24.

The assessment resulted in the identification of four strengths and eleven issues which were documented. The assessment found an active corrective action management program in place; however, several repeat findings from the original assessment (A-99-TOD-TANKFARM-001 of March 1999) were identified indicating that corrective actions taken thus far have not been fully effective.

The assessment also found that CHG's self-assessment program is neither robust nor rigorous, and just meets the minimum expectations per the definition of DOE P 450.5. This stems from a lack of definition of the program, a lack of integration of its various pieces, and until recently, a lack of the necessary management attention to make it rigorous and robust. Some assessments required by procedure are not being done, and a major portion of independent oversight as defined in the ISMS System Description is not being done. However, CHG has identified most of these deficiencies independently and is taking action to correct them.

4. A-01-TOD-TANKFARM-002, Integrated Safety Management System (ISMS) Verification/Management Assessment Corrective Action Review, October 31-November 7, 2000.

The ORP Tank Farms Oversight Division (TOD) conducted a review of the corrective actions status from the 1999 ISMS Phase II Verification and the 2000 ISMS Implementation Management Assessment. This review was conducted to fulfill a commitment to the External Independent Review Team.

The assessment reviewed the status of corrective actions from the ISMS Phase II Verification of August 1999, as well as corrective actions from the May 2000 ISMS Implementation Management Assessment. Since all of the corrective actions from the Phase II Verification findings are closed, documentation was reviewed to verify closure. A sampling of findings and concerns from the Management Assessment was reviewed to verify reasonableness of the finding, since only one finding was closed by that time.

5. A-01-TOD-TANKFARM-004, Management Assessment of the CHG Lessons Learned Program Assessment, November 13-November 20, 2000.

The CHG Lessons Learned Program is defined by procedure HNF-IP-0842, Volume II, Section 4.6.3, "Lessons Learned Procedure". The assessment concluded that CHG has a viable Lessons Learned Program. However, several areas of improvement were identified, and findings and observations were documented. The assessment noted that CHG conducted a self-assessment of the Lessons Learned Program early in 2000 via questionnaire distributed to employees. Unfortunately, only about 16% of CHG's workers chose to participate and consequently, the reliability of the information gained from the assessment is questionable.

6. A-01-TOD-TANKFARM-005, Assessment of the River Protection Project Unreviewed Safety Question Process. December 11-December 27, 2000.

This report provides the results of an assessment conducted by ORP on the Tank Farms Unreviewed Safety Question (USQ) process. The assessment was performed from December 11 through 27, 2000. The scope of the assessment was to evaluate the effectiveness of the contractor's implementation of the requirements of DOE Order 5480.21, "Unreviewed Safety Questions." The assessment determined that the overall implementation of the USQ process was rigorous and effective. However, some process issues were identified in the sample of screenings and determinations reviewed. One finding and nine observations are provided to document issues identified during this review. The USQ process was found to be effective and appropriately implemented. However, the issues identified during this assessment indicate the need for an effective in-process review and feedback system for USQ screenings and determinations. Specifically the rigor that was applied in performing the screenings and determinations varied widely. A more effective review and feedback process would ensure the performance of thorough screenings with consistently adequate justification provided in the basis for the answers to the screening questions. Other than the Tank Farms Plant



Review Committee directed biennial review of the USQ process, it was not clear that contractor management conducted routine reviews of negative USQ screenings for consistency and accuracy.

### **Monthly Surveillance Reports**

The ORP Facility Representative monthly reports track the status of audit findings and observations, and contractor responses. For those responses that are rejected, the contractor is directed to provide a more focused response to the issues raised by the Facility Representatives.

The following is a summary of the calendar year 2000 surveillances performed by the Facility Representatives on the Tank Farms facilities. The summary presents major issues identified including strengths and weakness observed during the surveillance. Surveillances are grouped according to the monthly reports in which they were published. For the rejected responses identified, a corrective action plan is being developed by CHG.

1. Letter 00-TOD-013; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy (DOE), Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During December 1999 through February 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).
  - a. Background: The ORP, Facility Representatives conducted eleven surveillances of contractor-managed RPP facilities during the months of December 1999 through February 2000, The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.
  - b. Results: The following is a synopsis of significant strengths and weaknesses identified from December 1999 through February 2000.

The following strengths were observed:

- Emergency preparation drills, conducted prior to the Tank 241-SY-101 transfer, displayed a high degree of management participation, realistic scenarios, well-simulated conditions, and critical self-evaluation.
- The Tank 241-SY-101 transfer simulations and drills were an effective means to train operations personnel, validate training effectiveness, and evaluate readiness.
- The Contractor demonstrated good conduct of operations during the Tank 241-SY-101 waste transfer and cross-site transfer, particularly in control room activities, communications, and procedure use.

The following weakness was observed:

- An AB Clarification request submitted on November 11, 1999, resulted in Technical Safety Requirement (TSR) non-compliance on February 7, 2000. Actions, Including

placing the facility in a safe condition, should have been completed upon identification of the issue.

c. Assessments/Surveillances Performed

- S-00-TOD-TANKFARM-006: Winterization (K. G. Wade, December 1999).
- S-00-TOD-TANKFARM-007: Emergency Preparedness (K. G. Wade, December 1999).
- S-00-TOD-TANKFARM-009: Conduct of Operations during SY-101 Transfer (K. G. Wade, December 1999).
- S-00-TOD-TANKFARM-010: Conduct of Operations during Cross-Site Transfer from Tank SY-102 to AP-104 (K. G. Wade and B. I. Williamson, January 2000).
- S-00-TOD-TANKFARM-011: Authorization Basis Clarifications (B. J. Harp, February 2000). Surveillance focused on the AB Clarification of Limiting Condition for Operation (LCO) 3.1.4 Ventilation Requirement prepared to address re-circulation mode operation of the 702-AZ Ventilation System.
- S-00-TOD-TANKFARM-012: Implementation of Standing Order TWO-00-001 (B. J. Harp, February 2000). This surveillance resulted in a finding because ventilation continuous air monitor (CAM) deficiencies that had been previously reported had not been corrected.
- S-00-TOD-TANKFARM-013: Confined Space Binder in East Shift Office is poorly maintained (B. I. Williamson, February 2000).
- S-00-TOD-TANKFARM-014: MSDS Control Program (S. K. Abderrezaq, February 2000). This surveillance identified two chemical storage containers that were not labeled with the material contents and one storage locker had an inaccurate inventory.
- S-00-TOD-TANKFARM-015: Personal Protective Equipment (G. D. Trenchard, February 2000). The surveillance identified that the seals were broken on the acid spill kit in building 241-A-701. In addition, the locker containing protective clothing contained degraded and split gloves.
- S-00-TOD-TANKFARM-016: Independent Verification per AC 5.12 (B. J. Harp, February 2000).
- S-00-TOD-TANKFARM-017: Cross-Site Transfer Conduct of Operations (K. G. Wade, February 2000). The surveillance identified that the initial startup of the cross-site transfer line was delayed because of poor communication of AB information between organizations.

2. Letter 00-TOD-021; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During April 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

- a. Background: The ORP Facility Representatives conducted five surveillances of contractor-managed RPP facilities during the month of April 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.

- b. Results: The following is a synopsis of significant strengths and weaknesses identified.

The following strengths were observed:

- A management team was chartered to investigate the water lance failure event at Tank 241-A-101. The team conducted a thorough investigation, identified the root cause and improvement opportunities, and recommended appropriate corrective actions.
- The housekeeping for recyclable collection points was well maintained.

The following weakness was observed:

- Two Lockouts/Tagouts did not have the "verified by" verification signatures recorded on the danger tags.
- Numerous hazardous material labeling deficiencies were noted during inspections of the hazardous material storage lockers.

- c. Assessments/Surveillances Performed

- S-00-TOD-TANKFARM-025: Implementation of Hazard Communication Program (S. K. Abderrezaq, April 24, 2000). The surveillance found labeling and inventory deficiencies.
- S-00-TOD-TANKFARM-026: Resource Conservation Recovery Act (RCRA) Recycling (B. I. Williamson, April 24, 2000). The surveillance found a number of recycling plan deficiencies. Including one related to recycling of fluorescent bulbs.
- S-00-TOD-TANKFARM-027: Paint Shop Safety Inspection (S. K. Abderrezaq, April 28, 2000).
- S-00-TOD-TANKFARM-028: Water Lance Failure Event Investigation (K. G. Wade, April 21, 2000).
- S-00-TOD-TANKFARM-030: Lockouts and Tagouts (G. D. Trenchard, April 27, 2000). The surveillance found incomplete signatures on Lockouts and Tagouts.

3. Letter 00-TOD-024; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During May 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

- a. Background: The ORP Facility Representatives conducted six surveillances of contractor-managed RPP facilities during the month of May 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.

- b. Results: The following is a synopsis of significant strengths and weaknesses identified.

The following strengths were observed:

- The requirements discussed in the Notice of Construction (NOC) and As Low As Reasonably Achievable Controlled Technologies (ALARACT) for Project W-314 and saltwell pumping were adequately incorporated into work instructions, implemented in the field, and were understood by the work package planners and the individuals responsible for ensuring environmental compliance in the work instructions.
- The contractor has established an effective safety inspection program.
- Deficiencies observed during inspections are entered immediately into a corrective action system that immediately alerts responsible individuals of deficiencies that need to be corrected.

The following weaknesses were observed:

- The facility round inspection sheets did not identify several tank annulus leak detector inspections as TSR related readings.
- The daily rounds procedure contained several editorial type errors.
- Primary Tank Leak Detection Systems (LCO 3.2.6) surveillance requirements did not include operability inspections required by the bases.
- There have been several recent missed notifications of operational events.

c. Assessments/Surveillances Performed

- S-00-TOD-TANKFARM-005: Emissions Monitoring (G. D. Trenchard, May 2000).
  - S-00-TOD-TANKFARM-029: Technical Safety Requirement LCO 3.2.1 (K. G. Wade, April 25, 2000). The Surveillance found that the TSR "Primary Leak Detection Systems," LCO 3.2.6, Surveillance Requirements implementing procedures did not include operability inspections required by the TSR bases. In addition, the facility daily round inspection sheets did not identify several tank annulus leak detector inspections as TSR related readings.
  - S-00-TOD-TANKFARM-031: Notifications (B. I. Williamson, May 2000). The surveillance found several missed notifications of operational events.
  - S-00-TOD-TANKFARM-032: Emissions Monitoring (B. J. Harp, May 5, 2000). The surveillance found that the saltwell pumping packages related to pit entries do not contain the requirements for a splashguard required by ALARACT.
  - S-00-TOD-TANKFARM-033: AY- 101-01A pit entry for crack repairs (B. I. Williamson, May 10, 2000).
  - S-00-TOD-TANKFARM-034: Field Survey of 272-AW West - Maintenance Shop (S. K. Abderrezaq, May 24, 2000). Deficiencies were noted during routine inspection of the maintenance shop located in West area.
4. **Letter 00-TOD-027**; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During June 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

- a. **Background:** The ORP Facility Representatives conducted seven surveillances of contractor-managed RPP facilities during the month of June 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.
- b. **Results:** The following is a synopsis of significant strengths and weaknesses identified.

The following strengths were observed:

- The contamination and exposure controls for AZ-101 grab sampling were well planned and implemented.
- Eleven of the thirteen deficiencies noted during the Chemical Safety Surveillance were readily corrected.

The following weaknesses were observed:

- Corrective action to label an unmarked drum in U Farm resulted in incorrect labeling.
- A hazardous waste drum in U Farm was not properly labeled.
- The 200 West Area Tank Farms Change Trailers routinely had the access doors blocked open.
- There were various deficiencies with chemical storage and the associated records.

c. **Assessments/Surveillances Performed**

- S-00-TOD-TANKFARM-035: RadCon Barriers and Postings (G. D. Trenchard, log entries June 5 and 6, 2000).
- S-00-TOD-TANKFARM-036: Radiological Work Practices (K. G. Wade, June 12, 2000). The surveillance found that the effective corrective measures were not implemented to prevent garb sample bottle caps from dislodging during AZ-101 grab sampling.
- S-00-TOD-TANKFARM-037: Chemical Storage & Chemical Vulnerability (S. K. Abderrezaq, June 12, 2000). The surveillance found one chemical storage locker in the maintenance shop (200W) was located in a populated area and constituted a hazard. In addition, chemical storage locker inventories were not up to date and some chemicals were mislabeled.
- S-00-TOD-TANKFARM-038: Waste Storage (M. C. Brown/B. A. Harkins, June 16, 2000). The surveillance found that the corrective action to label an unmarked drum in U Farm resulted in incorrect labeling.
- S-00-TOD-TANKFARM-039: General Housekeeping, Security (M. C. Brown/B. A. Harkins, June 21, 2000). The surveillance found the 200 West Area Tank Farms Change Trailers routinely had the access doors blocked open.
- S-00-TOD-TANKFARM-040: Industrial Hygiene Monitoring (B. I. Williamson, log entries June 26 and 27, 2000).
- S-00-TOD-TANKFARM-042: Technical Safety Requirement, LCO 3.3.1 (K. G. Wade, July 5, 2000).

5. **Letter 00-TOD-031**; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During July 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

- a. **Background:** The ORP Facility Representatives conducted one assessment and five surveillances of contractor-managed RPP facilities during the month of July 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.
- b. **Results:** The following is a synopsis of significant strengths and weaknesses identified.

The following strengths were observed:

- During a TSR surveillance, the instrument technicians displayed good procedure compliance and communications during the functional checks of tank pressure detectors in 241-AP farm.
- During a review of Surveillance Requirements embedded in procedures it was noted that the waste transfer procedures reviewed provided a very thorough list of applicable surveillance requirements that must be performed with a format that is easy to use and facilitates Shift Manager review.
- Effective use of a wide array of engineered controls to protect against heat stress was employed for Project W314 work within the AY-101 Central Pump Pit Containment Tent and SN633/635 pipe installation.

The following weakness was observed:

- An unlabeled fifty gallons drum was discovered in the outside storage area of 2703E containing unknown material. Similar issues were identified in the June 2000 report.

c. **Assessments/Surveillances Performed**

- A-00-TOD-TANKFARM-003: Review of Saltwell Pumping Startup Determinations (B. J. Harp, B. A. Harkins, July 2000).
- S-00-TOD-TANKFARM-041: Routine Surveillance - 241-TX Farm (S. K. Abderrezaq, July 5, 2000). Deficiencies were noted during a routine inspection of the 241-TX Tank Farm.
- S-00-TOD-TANKFARM-043: Safety Inspection of 2703E - 200 East (S. K. Abderrezaq, July 19, 2000). The surveillance found a drum containing unknown contents located outside the drum storage area of the shop (2703-E) was not labeled. Two other drums in the same location were also not properly labeled.
- S-00-TOD-TANKFARM-044: Heat Stress (B. I. Williamson, July 19, 2000). The surveillance found that the effective use of the wide array of engineered controls to protect against heat stress was employed for Project W-314 work within the AY-101 Central Pump pit containment Tent and SN633/635 pipe installation.

- S-00-TOD-TANKFARM-045: TSR Surveillance Program (S. H. Pfaff, July 20, 2000).
- S-00-TOD-TANKFARM-046: Procedure Content and Use (G. D. Trenchard, July 26, 2000). The surveillance found that the Tank Farm Maintenance Procedure 6-PCD-508, Calibrate Pressure Switches, Rev. B-4 was out of date.

d. Rejected Response

The following response was received from the contractor, evaluated by the ORP Facility Representative, and rejected for the reason indicated. A Facility Representative point of contact (POC) is provided for the rejected response.

- S-00-TOD-TANKFARM-029-FO2: Primary Tank Leak Detection Systems (LCO 3.2.6) surveillance requirements did not include operability inspections required by the bases.

The closure of the rejected contractor response is tracked in the action tracking system

6. Letter 00-TOD-035; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During August 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

- a. Background: The ORP Facility Representatives conducted seven surveillances of contractor-managed RPP facilities during the month of August 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.
- b. Results: The following is a synopsis of significant strengths and weaknesses identified.

The following strength was observed:

- The process of conducting waste compatibility analysis has been improved by assembling all of the waste acceptance criteria documents into one document (HNF-SD-WM-OCD-015).

The following weaknesses were observed:

- Facility operations procedures were inadequate in defining the responsibilities and process for correction of deficiencies identified with low level waste bags prior to removal from the tank farms.
- Cover block operability verifications were not performed per Administrative Control (AC) 5.20 for cover blocks outside the tank farms fence boundary.

## c. Assessments/Surveillances Performed

- S-00-TOD-TANKFARM-047: Satellite Accumulation Areas (M. C. Brown, August 3, 2000). The surveillance found that the facilities operations procedures were inadequate in defining the responsibilities and process for correction of deficiencies identified with low-level waste bags prior to their removal from tank farms. In addition, radiological deficiencies were noted with the Satellite Accumulation Area Drums.
- S-00-TOD-TANKFARM-048: Chemical Safety (B. J. Harp, August 10, 2000).
- S-00-TOD-TANKFARM-049: Staging and Storage of Components (B. I. Williamson, August 8, 2000).
- S-00-TOD-TANKFARM-050: Post Hanford Fire HEPA Filter dP Review (K. G. Wade, August 10, 2000).
- S-00-TOD-TANKFARM-051: Verification of Authorization Basis Documentation, AC 5.20 (K. G. Wade, August 25, 2000). The surveillance found that the cover block operability verifications were not performed per AC 5.20 for cover blocks outside the tank farm fence boundary. Also, the administrative lock program logbooks contained numerous administrative type errors.
- S-00-TOD-TANKFARM-052: Waste Compatibility (S. K. Abderrezaq, August 29, 2000). The surveillance found that no definite procedure exists that could be utilized to assess or analyze the waste compatibility of a transfer.
- S-00-TOD-TANKFARM-053: Radiological Work Practices (K. G. Wade, August 2000).

7. Letter 00-TOD-042; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During September 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

a. Background: The ORP Facility Representatives conducted six surveillances of contractor-managed RPP facilities during the month of September 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.

b. Results: The following is a synopsis of significant weaknesses identified.

The following weaknesses were observed:

- A Tank Farm change trailer on-duty operator/attendant was observed reading inappropriate written material.
- An individual was observed in the AY-2 change trailer Radioactive Material Area lying down with their eyes closed on top of personnel contamination clothing laundry bags.
- The propane-heated hot water system installed at the 302-C Tank near the 242-S Evaporator did not receive an adequate USQ screening.



- The encasement seal loop administrative controls (AC 5.13) did not include the replacement cross-site transfer system in the applicability statement
- The encasement drain path for the replacement cross-site transfer system did not meet safety function requirements defined in the safety analysis report.
- The USQ determination for the cross-site transfer did not include the drain back volumes for the 6-inch encasement.
- Several deficiencies were identified with the management of compressed gas cylinders.

**c. Assessments/Surveillances Performed**

- S-00-TOD-TANKFARM-054: Shift Routines and Operating Practices (M. C. Brown, September 12, 2000). The surveillance identified inappropriate work practices.
  - S-00-TOD-TANKFARM-055: Work Package review of Flammable Gas Monitoring Controls for installing Saltwell Pump in Tank S-109 (B. J. Harp, September 19, 2000).
  - S-00-TOD-TANKFARM-056: Facility Waste Tracking Records and Recording (B. J. Harp, WMS 16.2, September 19, 2000).
  - S-00-TOD-TANKFARM-057: Verification of Authorization Basis Documentation, AC 5.12 and 5.13 (K. G. Wade, September, 2000). The surveillance found the encasement seal loop administrative controls (AC 5.13) did not include the replacement cross-site transfer system in the applicability statement. Also, the encasement drain path for the replacement cross-site transfer system did not meet safety function requirements defined in the safety analysis report. The USQ determination for the cross-site transfer did not include drain back volumes for the 6-inch encasement.
  - S-00-TOD-TANKFARM-058: Compressed Gases (S. K. Abderrezaq, September, 2000). The surveillance found compressed gases stored outside the 272WA/200W were not protected by guard posts or any other barriers and had no MSDS available. They were also not in the inventory list.
  - S-00-TOD-TANKFARM-059: Conduct of Critiques (B. I. Williamson, September 25, 2000).
8. Letter 00-TOD-047; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During October 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).
- a. **Background:** The ORP Facility Representatives conducted one assessment and four surveillances of contractor-managed RPP facilities during the month of October 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews. The results of the assessment conducted in October 2000 will be published under separate cover letter.
  - b. **Results:** The following is a synopsis of significant weaknesses identified.

The following weakness was observed:

- TSR Ignition Source Controls were not adequately applied for the Ex-tank Intrusive Region during salt well pumping activities.

c. Assessments/Surveillances Performed

- S-01-TOD-TANKFARM-001: Radioactive Material Packaging and Transportation (K. G. Wade, October 4, 2000).
- S-01-TOD-TANKFARM-002: Implementation of AC 5.10 Ignition Controls (B. A. Harkins/M. C. Brown, October 6, 2000). The surveillance found the TSR Ignition Source Controls were not adequately applied for Ex-Tank Intrusive Region during saltwell pumping activities.
- S-01 -TOD- TANKFARM-003: Validation of Completion for Office of River Protection Performance Incentive (PI) ORP3.1.3 (B. J. Harp, October 18, 2000).
- S-01-TOD-TANKFARM-004: Inspection of Compressed Gas Storage (S. K. Abderrezaq, October 30, 2000). The surveillance found the integrity of several gas containers was not protected and one cylinder was missing a valve cap.
- A-01-TOD-TANKFARM-001: CHG Self Assessment Program and Corrective Action Management Assessment (R. C. Sorensen/B. I. Williamson, October 25, 2000) (report to be issued separately).

d. Rejected Contractor Responses: The following response was received from the contractor, evaluated by the ORP Facility Representative, and rejected for the reason indicated in the Monthly Report. A Facility Representative POC is provided for the rejected response.

- S-00-TOD-TANKFARM-039-FOI: The 200 West Area Tank Farms Change Trailers routinely had the access doors blocked open.

The closure of the rejected contractor response is tracked in the action tracking system.

9. Letter 01-TOD-002; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During November 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

a. Background: The ORP Facility Representatives conducted three assessments and two surveillances of contractor-managed RPP facilities during, the month of November 2000. The performance-based assessments and surveillances documented in this report consisted of direct observation, interviews, and document reviews.

b. Results: The following is a synopsis of significant strengths and weaknesses identified.

The following strength was observed.

- CHG Training regularly used Lessons Learned information for training operators.

The following weakness was observed.

- Required responses to Red Alerts/Action Notices were lacking.

c. Assessments/Surveillances Performed

- A-01-TOD-TANKFARM-002: Integrated Safety Management System (ISMS) Verification/Management Assessment Corrective Action Review (Sorensen, November 7, 2000).
- A-01-TOD-TANKFARM-003: Verification Assessment of Implementation of CH2M Hill Hanford Group, Inc., Radiation Protection Program (Report transmitted by separate ORP letter, 00-AMSQ-044)
- A-01-TOD-TANKFARM-004: Assessment of the CHG Lessons Learned Program (Sorensen, November 20, 2000). The surveillance found that the required responses to Red Alerts/Action Notices were lacking. In addition, no new subject matter experts/POCs have been assigned since CHG restructured their reorganization in September 2000. Not everyone in CHG received Lessons Learned information that was pertinent to him/her.
- S-01-TOD-TANKFARM-005: Life Safety (M. Brown, November 15, 2000).
- S-01-TOD-TANKFARM-006: Evaluation of the Compressed Gas Cylinder Safety Course -- #020049 (S. K. Abderrezaq, November 30, 2000.) The surveillance found the compressed Gas Cylinder course referenced an old version of a Compressed Gas Association pamphlet.

10. Letter 01-TOD-003; Contract Number DE-AC06-99RL14047 – U. S. Department of Energy, Office of River Protection (ORP) Evaluation Report of River Protection Project (RPP) Operations During December 2000, letter from Ami B. Sidpara (ORP) to M. P. Delozier (CHG).

- a. Background: The ORP Facility Representatives conducted five surveillances of contractor managed RPP facilities during the month of December 2000. The performance-based surveillances documented in this report consisted of direct observation, interviews, and document reviews.
- b. Results: The following is a synopsis of significant strengths and weaknesses identified.

The following strengths were observed:

- Tank 241-AW-104 transfer pump replacement was well planned and executed.
- Tank dome load controls were effectively implemented.

The following weaknesses were observed:

- Winterization Program procedure requirements were not completed or implemented.
- Operator aids were not maintained per administrative requirements.
- Tank Farms facility orientation training was not up-to-date.

c. Assessments/Surveillances Performed

- S-01-TOD-TANKFARM-007: Operator Aids (G. D. Trenchard). Deficiencies were identified in the administration of the Operator Aid Program.
- S-0-TOD-TANKFARM-008: Tank Farm Winterization (B. A. Harkins). The surveillance found that the facility failed to conduct winterization walk downs. No facility weather protection Person in Charge has been assigned.
- S-01-TOD-TANKFARM-009: Tank Farms Facility Orientation Refresher Training (S. H. Pfaff). The surveillance found that the Tank Farms Facility Orientation Refresher Course contained errors and had out-of-date information.
- S-01-TOD-TANKFARM-010: Tank 241 -AW- 104 Transfer Pump Replacement (S. H. Pfaff). The surveillance found that the minor radiological work practices deficiencies during Tank 241-AW-104 transfer pump replacement increased the risk of personnel contamination.
- S-01-TOD-TANKFARM-011: Dome Loading (B. A. Harkins)

**ATTACHMENT 2**

**TANK FARMS AUTHORIZATION BASIS PROGRAM ASSESSMENTS**

**TANK FARMS AUTHORIZATION BASIS PROGRAM ASSESSMENTS**

Attachment 2 includes the Tank Farms Authorization Basis (AB) Action Tracking List. This List identifies all AB-related actions items tracked or closed in calendar year 2000.

## **ATTACHMENT 3**

### **ENVIRONMENTAL PROGRAMS ASSESSMENTS**

## ENVIRONMENTAL PROGRAMS ASSESSMENTS

Attachment 3 summarizes the environmental program compliance-related assessments performed during calendar year 2000. The primary focus for these inspections and assessments was compliance with the requirements of Clean Air Act (CAA), Clean Water Act (CWA), and Resource Conservation, and Recovery Act (RCRA) compliance.

### Summary of Environmental Compliance Inspections and Assessments

- Several informal surveillances were performed throughout the year on the permits listed in HNF-4474, "RPP Environmental Permits and Related Documents," Revision 7, CH2M HILL Hanford Group, Inc., Richland, Washington. The referenced document lists the environmental permits that apply to the Tank Farms operations. No significant findings were discovered and all concerns were immediately addressed.
- The U.S. Department of Energy, Office of River Protection (ORP) ES&H and Quality Program Office (AMSQ) participated in Washington State Department of Health (WDOH) Hanford site-wide Emergency Preparedness Program inspection that started on January 26, 2000, and continued throughout the year. This series of inspections was intended to verify that the Emergency Preparedness Program at Hanford is adequate to meet State and Federal Requirements.
- Portable Temporary Radioactive Airborne Emissions Units (PTRAEUs) are used at Tank Farms. These units exhaust air through high-efficiency particulate air (HEPA) filters to protect the environment during small jobs in potentially radioactive areas. Surveillance was conducted on April 24, 2000 to verify that these units were within their calibration.
- U.S. Environmental Protection Agency (EPA) Level II Inspections are mandatory yearly inspections of major stacks under the Clear Air Act (Radioactive Stacks). At Hanford, WDOH performs these inspections for EPA. ORP AMSQ participated in the Following EPA Level II Inspections of Tank Farms Major Stacks.

February 28, 2000 – Stack 296-A-19 in SX Farms

March 2, 2000 – Stack 296-A-21

March 22, 2000 – Stack 244-T-18 located in the 241-TX Tank Farm

May 2, 2000 – Stack 296-A-22 located at the A Evaporator Building

May 31, 2000 – Stack 296-B-28 located at the 244-BX Tank Farm

June 21, 2000 – Stack 296-P-16 located at the C Tank Farm

August 9, 2000 – Stacks 296-A-42, 296-A-25 and 296-P-36 which are with portable exhausters

October 11, 2000 – Stack 296-S-22 at the SX Tank Farm

December 21, 2000 – Stack 296-U-11 at the U Farm



No significant issues were identified in any of the above listed Level II inspections.

- ORP AMSQ participated in Washington State Department of Ecology (WDOE) inspections throughout the year. The main inspection in calendar year 2000 was RCRA inspection of single-shell tanks. The inspection focused on leak detection, leak prevention, and structural integrity. This inspection was performed over several months with several field assessments. The typical inspections that WDOE performs deal with various environmental laws and regulations but do not have any definite schedule, frequency, depth of inspection, or subject matter.
- Periodic RCRA compliance inspections of River Protection Project (RPP) facilities are performed by ORP AMSQ personnel in conjunction with ORP operations because of the broad crosscutting nature of these requirements. In calendar year 2000, AMSQ conducted an extensive waste storage assessment of RPP facilities for compliance with Washington State Administrative Code (WAC) 173-303, Federal RCRA standards, the Hanford Facility RCRA Permit, and Hanford Federal Facility Compliance Agreement [Tri-Party Agreement (TPA)] requirements. The waste storage assessment for calendar year 2000 has not been finalized as of the date of this report. However, areas of concern include the handling of reusable equipment, and waste storage compliance related to RPP miscellaneous facilities, tanks, and components. RPP facility storage assessments will continue on an annual basis.
- A specific assessment of RPP mixed waste storage was done in June 2000. The purpose of this assessment was to document mixed waste storage practices and to determine if the activities are performed in accordance with environmental regulations and requirements. The assessment was in response to the requirements detailed in a WDOE Determination dated March 29, 2000. This assessment concluded that the RPP's mixed waste storage practices are performed in accordance with the reviewed environmental regulations and requirements.

No major findings were made in the inspections and surveillances completed in calendar year 2000. A summary of the observations made is as follows:

- Minor procedural compliance issues were noted.
- Elements of quality control tracking needed improvement.
- Work Order repair timeliness was identified to be slow but showed improvement during the year.
- Records management needed attention and improved significantly during the year.
- The contractor's procedure for document peer reviews was found inadequate and peer reviews performed were not consistently of good quality.

# **ATTACHMENT 4**

## **RADIATION PROTECTION PROGRAM ASSESSMENTS**

## RADIATION PROTECTION PROGRAM ASSESSMENTS

Attachment 4 summarizes the Radiation Protection Program oversight assessment and periodic management walkthroughs performed during calendar year 2000 on the Tank Farms facility. The walkthroughs are performed by a combination of U.S. Department of Energy, Office of River Protection (ORP), ES&H and Quality Program Office (AMSQ) staff accompanied by ORP Facilities Representatives.

### Summary of Periodic Management Walkthroughs in Tank Farms Facilities (July to December 2000)

#### 1. Walkthrough Report of 200 East Area, July 12, 2000.

Items of concern identified:

- Numerous hand tools were observed lying in the work areas, apparently unattended, throughout the East Tank Farms. Evidence of "hot tool program" (central issue and return point for known contaminated tools) was not seen.
- One CH2M HILL Hanford Group, Inc. (CHG) Health Physics Technician (HPT) was observed surveying equipment improperly out of the A Tank Farm. The Technician was standing outside the radiological posted area, taking large area smears, and direct contamination readings on items transported over the fence by a crane. The survey time, however, was much faster than the generally accepted 1-2 in. per second – it approached 6 in., per second.

#### 2. Walkthrough Report of 200 West Area, July 20, 2000.

Item of concern identified:

- Tall, thin marker posts are erected to designate predetermined survey points in the West Tank Farm. However, at least one marker post was found lying on the ground, near the Tank 241-SY-101.

#### 3. Walkthrough Report of 200 East Areas, July 27, 2000.

The focus of the walkthrough was the construction projects Plan of the Day (POD) meeting and subsequent Pre-Job Briefing, both in MO-272, for 314 Project. In addition, 200 East Area Tank Farms were toured, including Project W-314 in A complex, pipe installation in Trenches 633 & 635, drain plug work above pit, and "dog house" removal over an old ventilation line [a posted High Radiation Area (HRA)]. Examined HRA log book and interviewed HPT covering "dog house" job. Inspected installed misters over trenches in

which preparations for pipe welding work was being made. Many contractor strengths as well as a single, deficiency (corrected when pointed out) were identified and documented.

4. Walkthrough Report of 200 West Area, August 03, 2000.

The focus of the walkthrough was the construction projects POD meeting in MO-281, tour of the West Tank Farms area, including the S, SX, and SY Tank Farms. The content of the POD meeting was very good and the Shift Manager conducted an organized briefing. No radiological deficiencies were identified. Radiological control posting was correctly established. No pre-determined survey point markers were found lying on the ground, an observation from a walkthrough taken two weeks earlier. The ORP Facility Representatives did discover an area of frayed asbestos on a ventilation structure, a problem that they reported to the Shift Manager. Apparently this problem had been had been previously reported.

5. Walkthrough Report of 200 East Area, August 10, 2000.

The walkthrough focused on a tour of AP Tank Farm, with an emphasis on exhauster continuous air monitors (CAMs) and other air sampling equipment associated with environmental reporting requirements. The tour focused on primary and annulus CAMs and fixed air samplers, daily equipment checks, and the role of CHG Radiation Control and Operations regarding identified problems. The CHG Radiation Control is responsible for performing periodic checks to determine proper air sampler function. One CAM in the AP Farm was displaying a "low beta flow" alarm, the problem that had been previously reported. No radiological control deficiencies were identified. Housekeeping was found to be immaculate in this Tank Farm and proper labeling of all the major components was evident. Note that the AP farm is posted as a Radioactive Material Area, with no protective clothing or personnel contamination monitoring requirements.

6. Walkthrough Report of 200 East Areas, October 10, 2000.

Following the initial recovery actions from the 105-ER pit contamination problems, ORP staff toured the 244-A (200 East) Area to examine the spread of the contamination, postings, and to evaluate radiological controls in general. The newly discovered contamination appeared to be in the path of predominant wind flow toward the northeast. All barriers were securely established, and the signage was appropriate for the areas posted (mostly Contamination Areas). Work was suspended above the 105-ER Pit.

7. Walkthrough Report of 200 East Area, December 21, 2000.

The walkthrough had two objectives: (1) to observe a pre-job briefing involving CHG Radiological Controls to ensure consistency in pre-job briefing rigor, and (2) to watch a radiological job in progress. The W-311 Project POD meeting was attended. The POD was concise, covered all the necessary information, and led to follow-on pre-job briefings. This job involved Fluor Federal Services employees, who were to use radar and RF units to determine the location of underground piping and other structures, prior to future pipeline

work. They started at the location of the CONEX boxes near 241-AR and proceeded in roughly a northeast direction for about 150 feet, all inside a posted Contamination Area. In the field, no poor radiological control practices were identified, and all radiological control postings were correctly established.

**Verification Assessment**

Attachment 4 includes a copy of "Verification Assessment of Implementation of CH2M HILL Hanford Group, Inc., Radiation Protection Program," A-01-TOD-TANKFARM-003, October 30-November 9, 2000.

## **ATTACHMENT 5**

# **NUCLEAR CRITICALITY SAFETY PROGRAM ASSESSMENTS**

## **NUCLEAR CRITICALITY SAFETY PROGRAM ASSESSMENTS**

Attachment 5 includes a copy of the annual "Audit Report of the Hanford High-Level Waste Tank Farms Nuclear Criticality Safety Program, "DOE/ORP-2000-22, Revision 0, dated June 2000.

# **ATTACHMENT 6**

## **SAFETY AND HEALTH**



## **SAFETY AND HEALTH**

Attachment 6 includes the following documents:

- SHD-00-09-01, "Oversight of the CH2M HILL Hanford Group, Inc. Tank Farms Heat Stress Control Program Assessment Report," October 24, 2000.
- DOE/ORP-2000-17, Revision 0, Management Assessment Report of CH2M HILL Hanford Group, Inc., Integrated Safety Management System Implementation, May 16-25, 2000.

## **ATTACHMENT 7**

# **QUALITY ASSURANCE ASSESSMENTS**

## QUALITY ASSURANCE ASSESSMENTS

Attachment 7 includes the following documents:

- WP&DP-SRE-00-10, "United States Department of Energy Waste Processing and Disposal Project (WP&DP) Quality Assurance Surveillance Report No. WP&DP-SRE-00-01," May 2000.
- PQA-YE-01-01, "United States Department of Energy Office of River Protection Product Quality Assurance (PQA), Contractor Yearly Evaluation," November 2000.

# **ATTACHMENT 8**

## **WASTE TREATMENT PLANT ASSESSMENTS**

## WASTE TREATMENT PLANT ASSESSMENTS

Attachment 8 provides a summary of calendar year 2000 oversight assessments and inspections conducted by the U.S. Department of Energy, Office of River Protection (ORP), Office of Safety and Regulation (OSR) on the Waste Treatment Plant (WTP) contractors (i.e., Bechtel National, Inc., and BNFL).

### OSR Inspection Reports

The OSR published a number of inspection reports assessing compliance of the WTP contractor (with respect to their responsibilities as related to radiological, nuclear, and process safety, and ISM). The Contractor must, as part of its activities comply with the 10 CFR 800 series of nuclear requirements including those in 10 CFR 830 "Nuclear Safety Management. A series of six separate inspections were made and referenced below.

1. IR-00-001, "Design Process Assessment Inspection Report," January 10-14, 2000.
2. IR-00-002, "Employee Concerns Program Assessment Report," February 07, 2000.
3. IR-00-003, "Personnel Training and Qualification Report," March 26, 2000.
4. IR-00-004, "Self Assessment and Corrective Action Inspection Report," April 24-May 1, 2000.
5. IR-00-005, "Assessment of the Independence of the QA Organization Inspection Report," April 20-May 4, 2000.
6. IR-00-006, "Inspection Follow-Up Item Review," December 18, 2000 - January 18, 2001.

Changes in disposal contractor and the ensuing transition process interrupted the planned inspections for the remainder of the calendar year.

### External Assessment and OSR Self Assessment Reports

A number of self-evaluations and external assessments occurred during the calendar year 2000. A list of these assessments is provided below:

- 00-RU-0005, "Report of an Assessment of the Regulatory Unit for the River Protection Process Privatization Contract," September 14, 1999.
- 00-RU-0295, "Implementation of ISM for the TWRS-P Contractor," April 5, 2000.

- RL/REG-2000-11, "Regulatory Unit Self-Assessment," Revision 0, Office of Safety Regulation of the TWRS-P Contractor, May 5, 2000.

#### OSR Safety Systems Related Documents and Reviews

The OSR performed a variety of contractor safety associated document reviews and provided the disposal contractor with detailed guidance on regulatory and safety issues. A list of the most relevant to Defense Nuclear Facilities Safety Board (DNFSB) 2000-2 issues is provided below:

- RL/REG-2000-26, "Evaluation of CH2M Hill Hanford Group (CHG) Capability to Safely Change the PPP-TWP Authorization Basis," Revision 0, U.S. Department of Energy, Richland Operations Office, October 17, 2000.
- RL/REG-2000-16, "Radiation Protection Program (RPP) Planning Handbook," Office of Safety Regulation of the TWRS-P Contractor," November 17, 2000.
- RL/REG-99-11, "Regulatory Unit Position on Regulation of the Contractor's Industrial Hygiene and Safety Program," Revision 3, June 30, 2000.
- RL/REG 2000-25, "Implementation of DOE M 450.3-1, The DOE Closure Process for Necessary and Sufficient Set of Standards for the RPP-WTP Design, Construction and Commissioning Contract," Revision 0, October 2000.
- RL/REG-97-05, "Corrective Action Implementation Program," Revision 1, September 28, 2000
- RL/REG-2000-21, "RU Assessment of the Non-Radiological Worker Safety and Health Plan," Revision 0, U.S. Department of Energy, Richland Operations Office.
- RL/REG-2000-20, "Regulatory Unit Position on Important to Safety Work Authorization for the RPP-WTP Interim Design Period," Revision 0, U.S. Department of Energy, Richland Operations Office, July 3, 2000.
- RL/REG-00-01, "Regulatory Unit Evaluation of the BNFL Inc. Radiation Protection Program for Design." Revision 2, DOE Office of Safety Regulation of the TWRS-P Contractor, October 18, 1999.
- RL/REG-2000-05, "DOE Regulatory Unit Evaluation Report of BNFL Inc.'s Quality Assurance Program and Implementation Plan," Revision 0, DOE Office of Safety Regulation of the TWRS-P Contractor. January 7, 2000.

- RL/REG-2000-07, "Regulatory Unit Position on Acceptability of the TWRS Privatization Dose Standards for Unlikely and Extremely Unlikely Events," Revision 0, DOE Office of Safety Regulation of the TWRS-P Contractor, February 23, 2000.
- RL/REG-2000-13, "DOE Regulatory Unit Assessment Report of BNFL Inc.'s Integrated Safety Management Plan (ISMP) Implementation, Revision 0, Office of Safety Regulation of the TWRS-P, " May 23, 2000.
- RL/REG-2000-18, "Regulatory Unit Assessment on the Use of the TWRS FSAR to Estimate Risk," Revision 0, Office of Safety Regulation of the RPP-WTP Contractor, July 14, 2000.
- RL/REG-2000-21, "Regulatory Unit Assessment of the Non-Radiological Worker Safety and Health Plan," Revision 0, Office of Safety Regulation of the RPP-WTP Contractor August 24, 2000.
- RL/REG-2000-23, "Regulatory Unit Evaluation of the Quality Assurance Program Revision 5A," Revision 0, Office of Safety Regulation of the RPP-WTP Contractor, September 29, 2000.
- RU/REG-2000-25, "Implementation of DOE M 450.3-1, The Department of Energy Closure Process for Necessary and Sufficient Sets of Standards, for the River Protection Project Waste Treatment Plant (RPP-WTP) Design, Construction and Commissioning Contract," Revision 0, Office of Safety Regulation of the RPP-WTP Contractor, October 6, 2000.

Design Reviews (BNFL and CH2M HILL Hanford Group, Inc. (CHG) Transition Team)

The OSR observed a large number of BNFL and CHG Transition Team design reviews and documented their observations in the series of four reports listed below. At the time of these reviews, the design of the disposal facility was only partially completed (e.g., 13-30%). The reports cover a wide variety of design specifics associated with aspects of both the high-level waste (HLW) and low-activity waste (LAW) facilities. Both pretreatment flow sheets and melter associated design items were part of the process. Comparable Reviews were also held in 1999.

- R. A. Gilbert. US Department of Energy Regulatory Unit "Design Review Report: December 1999 Design Reviews." dated January 14, 2000, Item Number: REG:RAG/00-RU-0166.
- R. A. Gilbert. US Department of Energy Regulatory Unit "Design Review Report: January 2000 Design Reviews." dated February 24, 2000, Item Number: REG:RAG/00-RU-0237.
- R. A. Gilbert. US Department of Energy Regulatory Unit "Design Review Report: April - June 2000 Design Reviews," dated August 4, 2000, Item Number: REG:RAG/00-RU-0511.

- R. A. Gilbert, US Department of Energy Regulatory Unit "Design Review Report: October - December 2000 Design Reviews," dated August 4, 2000, Item Number: REG:RAG/01-OSR-0016.



## **ATTACHMENT 9**

### **INDEPENDENT ORGANIZATION ASSESSMENTS**

## INDEPENDENT ORGANIZATION ASSESSMENTS

Attachment 9 includes the U.S. Department of Energy (DOE) Headquarters (HQ) Office of Oversight, Environment, Safety, and Health (EH) assessments reports performed in calendar year 2000. The following items are included:

1. Letter from R. Keith Christopher, Director Office of Enforcement and Investigation, to M. P. DeLozier, CHG, "Consent Order Incorporating Agreement Between U.S. Department of Energy and CH2M Hill Hanford Group, Inc.," dated July 25, 2000.
2. Office of Oversight, Environment, Safety, and Health, "Inspection Report on the Modification of Hanford Tank Farm Ventilation System Controls," dated December 2000.

## **ATTACHMENT 10**

### **TANK FARMS CONTRACTOR SELF-ASSESSMENTS**

## **TANK FARMS CONTRACTOR SELF-ASSESSMENTS**

Attachment 10 includes the assessments performed in 2000 concerning environment, safety, and health issues identified. The assessments reviewed equipment for potential environmental emissions, health and safety of the work force, areas for improvement, compliance with procedures, and assessments of programs. This information was provided by CH2M HILL Hanford Group, Inc. (CHG). The scope and summary of findings are available from CHG on request.

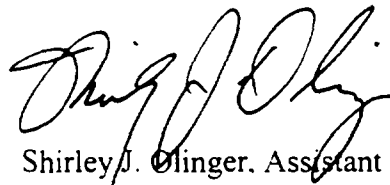
United States Government

Department of Energy  
Richland Operations Office

# memorandum

DATE: **FEB 27 2001**  
REPLY TO  
ATTN OF: ESD:BEH/01-ESD-057  
SUBJECT: DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 2000-2  
IMPLEMENTATION PLAN COMMITMENT NO. 20, ANNUAL REVIEW OF  
ENVIRONMENTAL SAFETY AND HEALTH (ES&H) ASSESSMENTS  
TO: William G. Boyce  
Office of Safety, Health and Security  
EM-5, HQ

This memo is in response to commitment No. 20 in DOE's implementation plan for 2000-2. Attached is the Richland Operations Office first annual summary of ES&H assessments by RL mission elements, mission support and support services organizations, and their prime contractors. If you have any questions, please contact Burt Hill, Engineering, Safety and Standards Division, on (509) 376-6863.



Shirley J. Olinger, Assistant Manager  
for Safety and Engineering

Attachment

cc: M. W. Frei, EM-40  
L. L. Piper, OPE  
M. T. Sautman, DNFSB

**Analysis and Evaluation Division (A&E)**  
**Accomplishments For FY 2000**  
**Summary Report**  
**October 1999 – September 2000**

Developed the environmental compliance assessment program and started the assessments on the 16 mixed waste treatment, storage and disposal units as a result of Ecology's "Final Determination" of DOE's compliance to the TPA. Assessment's of 600-A Purge Water Storage Facility and the 305-B Storage Facility were completed.

Audit of Bechtel Hanford, Inc. (BHI) Transportation and Shipping of Radioactive Material; PAD-AUD-99-025.

Federal Employee Occupational Safety and Health (FEOSH) surveillance of office spaces. A team conducted an office safety walk down of all spaces occupied by DOE staff; A&E-99-AUD-031.

FEOSH program annual assessment; A&E-99-ASMT-033.

Environmental Restoration Contract (ERC) contractor Lockout/Tagout (LO/TO) program audit. A&E-00-AUD-02. A team audited the contractor LO/TO programs.

Assessment of ERC Heat Stress Program; A&E-ASMT-00-033.

Assessment of Project Hanford Management Contract (PHMC) Heat Stress Program; A&E-ASMT-00-067.

Hanford Environmental Health Foundation (HEHF) safety culture assessment – three separate "Employee Concerns" were addressed by an assessment of the safety culture at HEHF.

Audit of PHMC Lock and Tag; A&E-00-SURV-050.

Conducted audit of PHMC and RPP welding quality assurance. This was in response to a Defense Nuclear Facilities Safety Board (DNFSB) concern, and our work will be used as a model by other sites in responding to the DNFSB.

Led site-wide assessment of readiness review process in response to Deputy Secretary/DNFSB concern.

Major participant in development of the DOE complex assessment guide – DOE G 414.1-1, "Assessment Guide for QA."

Assessment team member for Spent Nuclear Fuel testing.

HEPA Filter Vulnerability assessment. A&E leading a site-wide effort to determine the vulnerabilities of filters in place which serve a safety function in case of a design basis accident.

Participated in performance FRAM Audit Report.

Participated in audit of the British Nuclear Fuel Limited, Inc. High-Level Waste Quality Assurance (QA).

Participated in PAD verification of Regulatory Unit corrective actions.

Participated in initial training and field tours in support of the A&E lead for the upcoming SNF Phase III RA.

Surveillance on building 306-E radiation generating device used by COGEMA Engineering Corporation.

Surveillance of PHMC/ERC voltage rated hand tools.

QA Surveillance of training records, WP&DP – SRO-00-01A.

Surveillance of Pacific Northwest National Laboratory Transportation and Shipping Program.

Surveillance of PHMC Transportation and Shipping Program.

Review of noncompliance tracking system reports for closure of Price Anderson Amendment Act.

Participated in initial training and field tours in support of the A&E lead for the upcoming SNF Phase III RA.

Completion and Improvement of the Computerized Accident/Incident Reporting System reports.

Assisting ESD in reviewing safety plans, conducting assistance trips, and completion of the FEOSH and Health and Safety Reporting Crosscuts.

Supported HQ Construction Safety Committee by reviewing and commenting on ANSI Standards.

Surveillance of BHI self-assessment activity (asbestos); A&E-SURV-00-066.

Participated in surveillance of BHI Respiratory Protection Program.

Surveillance of Infrastructure Site Fabrication Services; A&E-SURV-00-0057.

Surveillance of Infrastructure Crane and Rigging/Transportation; A&E-SURV-00-058.

Surveillance of Infrastructure Vehicle Maintenance; A&E-SURV-00-059.

Surveillance of Infrastructure Electrical Utilities; A&E-SURV-00-060.

Surveillance of Infrastructure Water Utilities; A&E-SURV-00-061.

Surveillance of Infrastructure of Recycling Center/PCB Storage; A&E-SURV-00-062.

Surveillance of Infrastructure of Maintenance Services; A&E-SURV-00-063.

Surveillance of signage at Fluor Hanford, Inc.

Conducted evaluation and root cause analysis of plutonium management problem at the Plutonium Finishing Plant (PFP).

Lead employee concern investigation of BHI environmental compliance. This was a significant issue.

Lead investigation of BHI Employee Concern 200014.01, unfavorable conditions for injured workers.

Employee concern of BHI safety culture.

Employee concern of HEHF safety culture; A&E-99-AUD-035.

Participated in field assessment of the Protection Technology Hanford application for recognition under the DOE voluntary Protection program.

Assisting in the RL efforts to address the closeout of the three "opportunities for improvement" to meet the Secretary's deadline of September 30, 2000 for ISMS.

Audit of HEHF Emergency Preparedness Program; A&E-00-AUD-055.

Completed Operational Readiness Review (ORR) for PFP magnesium hydroxide process startup. ORR team lead and three other team members were from A&E.

Coordinated Business Management Reviews and conducted independent evaluations regarding PI completion/partial completions on monitored projects.

Conducted Earned Value Management System Review to evaluate contractor's effective use of their project control management systems.



Developed monthly Project Review status table which effectively communicated results and status to internal DOE RL management, DOE HQ, and contractor management.

Developed procedures for Fee and Baseline independent evaluation, and RL/Contractor internal audit interface.

Coordinated RL's self-assessment of business management functions.

Evaluation Report of WM, partial completion of Performance Incentive CP-1, provide WM services, IC #242A evaporator campaigns completed.

Evaluation Report of WM partial completion of Performance Incentive CP-3, retrieve and ship TRU offsite, 2a. Complete draft TRU PMP.

Human Resources Management Accountability Program (HRMAP) Annual Evaluation.

NE-40 evaluation of FFTF.

Hanford Fire Type B Accident Investigation Team.

Development of the RIMS crosscutting procedures.

Facility Evaluation Boards ISM Validation Review.

ISMV team member/subteam lead for all verifications conducted at RL.

Annual Federal Managers Financial Integrity Act Assurance Memorandum – to C. Huntoon from K. Klein.

Semi-annual Department Audit Joint Tracking System status Report on Open Audit Findings.

Price Anderson Amendment Act (PAAA) Notice of Violation for an unposted Airborne Radioactivity Area.

Preparation for Spent Nuclear Fuel Operation Readiness Review.

PAAA Consent Order for Fluor Federal Services.

Closed 3 of 55 Hanford Site Legacy Issues.

Establishment of management of corrective actions on EH-22 Legacy data, and HQ driven Field Office assessments into the HQ Correspondence Action Tracking System (CATS) in support of DNFSB Recommendation 98-1.

Verified closure of Review Comment Record items for Spent Nuclear Fuels Project Safety analysis recall system. .

Reviewed and signed off on Safety Evaluation Reports (SARs) or Spent Nuclear Fuel Project SARs.

All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS
			CLOSED DATE
DOE-/RL-2000-30 Performed: 4/27/2000	FLUOR HANFORD, INC (FHI) INTEGRATED SAFETY MANAGEMENT SYSTEM PHASE I VERIFICATION REPORT	SHOOP, DS	IN PROGRESS
DOE-/RL-2000-47 Performed: 6/30/2000	INTEGRATED SAFETY MANAGEMENT SYSTEM PHASE II VERIFICATION	SHOOP, DS	IN PROGRESS
DOE-/RL-2000-77 Performed: 12/15/2000	24 COMMAND FIRE IMPROVEMENT ACTION PROGRAM PLAN	SPRACKLEN, JL	IN PROGRESS
DOE-/RL-99-96 Performed: 1/26/2000	INTEGRATED SAFETY MANAGEMENT (ISMS) PHASE 1 VERIFICATION FOR THE PLUTONIUM FINISHING PLANT (PFP)	RICHINS, CR	CLOSED 9/18/2000

Number of Open ASSMT: 4

TOTAL NUMBER OF OPEN DOCUMENTS: 4

All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
HQ -00 -FFTF-001 Performed: 6/22/2000	EVALUATION OF FAST FLUX TEST FACILITY (FFTF) BY NE-40	ALMQUIST, RA KLEIN, KA	DELINQUENT
A&E-00 -WELD-001 Performed: 3/31/2000	ASSESSMENT OF HANFORD SITE WELDING	BROWN, DH PIPER, LL	CLOSED 9/20/2000
SFO-A 0001 Performed: 2/04/2000	MANAGEMENT ASSESSMENT REVIEW OF SPENT NUCLEAR FUEL PROJECT'S TEST CONTROL PROGRAM REQUIREMENTS IMPLEMENTATION	SMOOT, WL LISCOE, PG	DELINQUENT
A&E-00 ASS-068 Performed: 8/24/2000	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) A&E ASSESSMENT	ROHA, DW PUTHOFF, RO	PEND VERIF
A&E-00 ASS-069 Performed: 9/31/2000	305-B STORAGE FACILITY ENVIRONMENTAL COMPLIANCE ASSESSMENT	CHALK, SE PIPER, LL	CLOSED 11/02/2000
A&E-00 ASS-073 Performed: 11/06/2000	242-A EVAPORATOR FACILITY ENVIRONMENTAL COMPLIANCE ASSESSMENT	CHALK, SE PIPER, LL	CLOSED 1/17/2001
Number of Open ASSMT: 6			
A&E-AUD-00-002 Performed: 2/07/2000	AUDIT OF ENVIRONMENTAL RESTORATION CONTRACT LOCKOUT/TAGOUT PROGRAMS	BIZAGUIRRE, J PUTHOFF, RO	CLOSED 1/06/2001
A&E-AUD-00-003 Performed: 4/13/2000	AUDIT OF HANFORD ENVIRONMENTAL HEALTH FOUNDATION EMERGENCY PREPAREDNESS PROGRAM	ROHA, DW PIPER, LL	CLOSED 2/13/2001
Number of Open AUDIT: 2			
CCD-00-FFTF-001 Performed: 1/05/2000	PARTIAL CONDUCT OF OPERATIONS ASSESSMENT FOR THE FAST FLUX TEST FACILITY (FFTF)	DAVIES, TH/HASTINGS, R PIPER, LL	CLOSED 1/18/2000
Number of Open PART: 1			

All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
A&E-SUR-00-050 Performed: 3/02/2000	LOCKOUT/TAGOUT (LO/TO) ACTIVITIES AT CSB, K-BASINS, AND WSCF	EIZAGUIRRE, J PIPER, LL	CLOSED 3/15/2000
A&E-CAM-00-051 Performed: 3/09/2000	SAFETY LEADERSHIP TRAINING COURSE #004105	MEYERS, CA PIPER, LL	CLOSED 3/22/2000
A&E-SUR-00-052 Performed: 5/25/2000	COGEMA USE OF RADIATION GENERATING DEVICES (RGDs) IN THE 306-E FACILITY	ROHA, DW BELL, GM	CLOSED 6/20/2000
A&E-SUR-00-054 Performed: 4/23/2000	PNNL TRANSPORTATION AND SHIPPING	ROHA, DW PIPER, LL	CLOSED 5/23/2000
A&E-SUR-00-055 Performed: 4/05/2000	DOE TRAINING AND MEDICAL NO-SHOW CHARGES	MEYERS, CA PIPER, LL	CLOSED 5/18/2000
A&E-SUR-00-056 Performed: 5/25/2000	PHMC TRANSPORTATION AND SHIPPING	ROHA, DW PIPER, LL	CLOSED 6/15/2000
A&E-SUR-00-057 Performed: 5/11/2000	OSHA SURVEILLANCE OF 272-W MACHINE SHOP, 277-W FABRICATION SHOP, 2728-W QC AREA, 2707-W CHANGE AREA, 273-W STAGING AREA, AND BUILDING 328 MACHINE SHOP	POTTER, SK PIPER, LL	CLOSED 10/10/2000
A&E-SUR-00-058 Performed: 5/11/2000	OSHA SURVEILLANCE OF 6290-E RIGGING LOFT/FAB SHOP, 3718-N SHOP AREA, 3707-H CHANGE AREA, 3701 CLASSIFIED SHREDDER & 4643 SOLID WASTE DISPOSAL	POTTER, SK PIPER, LL	CLOSED 10/10/2000
A&E-SUR-00-059 Performed: 5/22/2000	OSHA SURVEILLANCE OF 2711 PRIMARY FLEET MAINTENANCE, 2711 HEA REGULATED EQUIPMENT SHOP, 2711-EB HEAVY MOBIL EQUIPMENT, 273-E SATELLITE MAINTENANCE & AUTO BODY REPAIR, AND 2715-EC PAINT SHOP	POTTER, SK PIPER, LL	CLOSED 7/11/2000
A&E-SUR-00-060 Performed: 6/06/2000	OSHA SURVEILLANCE OF 251-W, 351-A, 351-B, 352-E, 352-F AND 2101-M EU SHOPS	POTTER, SK PIPER, LL	CLOSED 7/11/2000
A&E-SUR-00-061 Performed: 5/16/2000	OSHA SURVEILLANCE OF 315, 315-A, 315-B FILTER PLANT & ANCILLARY BUILDINGS, 3621-D & B/C EMERGENCY GENERATORS, 382 PUMP HOUSE, 312 RIVER PUMPING STATION, 382-B STANDBY EMERGENCY FIREWATER PUMP FACILITY, 1906 A&B LIFT STATIONS, 292-E PUMP HOUSE & RESER	POTTER, SK PIPER, LL	CLOSED 7/11/2000

All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
A&E-SUR-00-062 Performed: 5/23/2000	OSHA SURVEILLANCE OF 4734-B CONSOLIDATED CENTRALIZED RECYCLING CENTER/PCB STORAGE	POTTER, SK PIPER, LL	CLOSED 7/11/2000
A&E-SUR-00-063 Performed: 6/06/2000	OSHA SURVEILLANCE OF 275-W, 275-E, 2101-M, 3717, 3717-B, 3713, AND 3709 MAINTENANCE SHOPS	POTTER, SK PIPER, LL	CLOSED 10/10/2000
A&E-SUR-00-065 Performed: 5/25/2000	ANNUAL REVIEW OF G-1 FLIGHT OPERATIONS	BELL, GM PIPER, LL	CLOSED 6/30/2000
A&E-SUR-00-076 Performed: 11/29/2000	AIRBORNE ASBESTOS SURVEY OF OFFICE AREAS AT 825 JADWIN AVENUE	EIZAGUIRRE, J BELL, GM	CLOSED 12/21/2000
A&E-SUR-OSHA-001 Performed: 6/06/2000	USAGE OF SIGNS IN INFRASTRUCTURE FACILITIES	POTTER, SK PIPER, LL	CLOSED 10/10/2000
COD-00 -PNNL-001 Performed: 4/17/2000	REVIEW OF LOW ACTIVITY WASTE (LAW) GLASS PREPARATION ACTIVITIES	CARLSON, JL PIPER, LL	CLOSED 5/22/2000
COD-01 -PNNL-001 Performed: 10/26/2000	PACKAGING AND PREPARATION FOR SHIPMENT (PTS 13.2)	MCDUFFIE, SM	CLOSED 10/30/2000
COD-00 -PNNL-002 Performed: 4/20/2000	REVIEW OF HVAC EQUIPMENT TESTING RECORDS	MCDUFFIE, SM PIPER, LL	CLOSED 5/22/2000
COD-01 -PNNL-002 Performed: 10/25/2000	REVIEW OF PREPARATIONS TO RECEIVE SECTIONED TRITIUM PRODUCING BURNABLE ABSORBER RODS (INTEGRATED SAFETY MANAGEMENT SYSTEM (ISMS) IDENTIFICATION OF HAZARDS)	CARLSON, JL	DELINQUENT
COD-00 -PNNL-003 Performed: 4/20/2000	EVENT CLASSIFICATION AND REPORTING	MCDUFFIE, SM PIPER, LL	CLOSED 5/22/2000
COD-01 -PNNL-003 Performed: 11/06/2000	MARINE SCIENCES LABORATORY OPERATIONS AND PROCEDURE USE (OPS 9.16)	MCDUFFIE, SM	DELINQUENT
COD-00 -PNNL-004 Performed: 5/08/2000	SHIFT ROUTINES AND OPERATING PRACTICES IN THE SHIELDED ANALYTICAL FACILITY (SAL (OPS 9.2))	CARLSON, JL	DELINQUENT
COD-01 -PNNL-004 Performed: 11/30/2000	SAFETY SHOWER AND EYEWASH PREVENTIVE MAINTENANCE	MCDUFFIE, SM	CLOSED 11/30/2000
COD-00 -PNNL-005 Performed: 5/10/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	CARLSON, JL	CLOSED 5/14/2000
COD-01 -PNNL-005 Performed: 12/21/2000	UNREVIEWED SAFETY QUESTIONS (NSS 16.4)	CARLSON, JL PIPER, LL	OPEN

## All Assessment Documents (Appraisals, Audits &amp; Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
OOD-00 -PNNL-006 Performed: 5/17/2000	MAINTENANCE ACTIVITIES (MAS 10.1)	CARLSON, JL	DELINQUENT
OOD-01 -PNNL-006 Performed: 12/20/2000	EMISSIONS MONITORING (ERS 14.2)	MCDUFFIE, SM PIPER, LL	CLOSED 12/20/2000
OOD-00 -PNNL-007 Performed: 4/20/2000	REVIEW OF RADIOLOGICAL BARRIERS AND POSTINGS (RPS 11.4)	CALLAHAN, VL	DELINQUENT
OOD-00 -PNNL-008 Performed: 5/04/2000	REVIEW OF EMSL CHEMICAL PROCESS PERMITS AND IDENTIFICATION AND USE OF OSHA REGULATED CHEMICALS, COMPOUNDS, AND CARCINOGENS	CALLAHAN, VL	DELINQUENT
OOD-00 -PNNL-012 Performed: 6/06/2000	RESPONSE TO POWER UPSET AT 15:49 ON MAY 6, 2000	MCDUFFIE, SM	CLOSED 11/06/2000
OOD-00 -PNNL-014 Performed: 6/21/2000	VENTILATION OUTAGE ON MAY 31, 2000	MCDUFFIE, SM	CLOSED 11/06/2000
OOD-00 -PNNL-015 Performed: 7/25/2000	REVIEW OF FACILITY POWER OPERATOR NARRATIVE LOGKEEPING (PS 9.11)	CARLSON, JL	DELINQUENT
OOD-00 -PNNL-016 Performed: 7/11/2000	HAZARDOUS WASTE HANDLING	MCDUFFIE, SM	CLOSED 11/06/2000
OOD-00 -PNNL-017 Performed: 8/23/2000	REVIEW OF OCCURRENCE REPORTING CLASSIFICATION DETERMINATION FOR A RADIOLOGICAL WORK PERMIT (RWP) NON-COMPLIANCE (PS 9.7)	CARLSON, JL	DELINQUENT
OOD-00 -PNNL-018 Performed: 7/24/2000	FOLLOW-UP ON CORRECTIVE ACTIONS FROM PNNLBOPER-2000-0006	MCDUFFIE, SM	CLOSED 7/24/2000
OOD-00 -PNNL-019 Performed: 8/21/2000	INDUSTRIAL HYGIENE (ISS 19.9)	MCDUFFIE, SM	CLOSED 8/21/2000
OOD-00 -PNNL-020 Performed: 8/25/2000	REVIEW OF POWER OPERATOR TURNOVER (OPS 9.12)	CARLSON, JL	DELINQUENT
OOD-00 -PNNL-021 Performed: 8/30/2000	CHEMICAL SAFETY (CSS 19.12)	MCDUFFIE, SM	DELINQUENT

## All Assessment Documents (Appraisals, Audits &amp; Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
OOD-00 -PNNL-022 Performed: 9/28/2000	REVIEW OF CRITICALITY ALARM SYSTEM PREVENTIVE MAINTENANCE PROCEDURE (MAS 10.1, OPS 9.16)	CARLSON, JL	DELINQUENT
OOD-00 -PNNL-024 Performed: 9/14/2000	ANNUAL HEPA FILTER TESTING	MCDUFFIE, SM	DELINQUENT
OOD-00 -PNNL-025 Performed: 8/31/2000	RADIOLOGICAL MONITORING AND SURVEYS (RPS 11.5)	TREVINO, JE	DELINQUENT
OOD-00 -PNNL-027 Performed: 9/14/2000	INVESTIGATION AND FOLLOW-UP OF POTENTIAL LEAD EXPOSURE EMPLOYEE CONCERN	TREVINO, JE	DELINQUENT
OOD-00 -PNNL-029 Performed: 10/10/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8) AND INDEPENDENT VERIFICATION (OPS 9.10)	MCDUFFIE, SM	DELINQUENT
OOD-00 -PNNL-030 Performed: 10/11/2000	REVIEW OF TIMELY ORDERS TO OPERATORS (OPS 9.15)	CARLSON, JL	DELINQUENT
OOD-01-200ADP-001 Performed: 12/31/2000	SEASONAL PREPARATION (MAS 10.3) AND NOTIFICATIONS (OPS 9.7)	RUHLMAN, WA PIPER, LL	CLOSED 1/31/2001
OOD-00-200ADP-003 Performed: 4/11/2000	CORRECTIVE ACTION MANAGEMENT (MSS 1.1)	RUHLMAN, WA PIPER, LL	CLOSED 9/22/2000
OOD-00-200ADP-004 Performed: 8/16/2000	LOGKEEPING AND BUILDINGS HAZARDS POSTINGS (OPS 9.11, OSS 19.1)	RUHLMAN, WA PIPER, LL	CLOSED 6/27/2000
OOD-00-200ADP-005 Performed: 6/27/2000	VERIFICATION OF AUTHORIZATION BASIS DOCUMENTATION (MSS 19.3)	RUHLMAN, WA PIPER, LL	CLOSED 5/02/2000
OOD-00-200ADP-006 Performed: 9/08/2000	CLEAN-UP ACTIVITIES AT 242 B/BL AND THE PUREX TUNNELS AND RESPONSES TO EMERGENCY PREPAREDNESS QUESTIONS (EMS 21.1)	RUHLMAN, WA PIPER, LL	CLOSED 10/02/2000
OOD-00-200ADP-007 Performed: 9/14/2000	CLEAN-UP ACTIVITIES AT 231-Z, INSTALLATION OF BACKFLOW PREVENTERS & CORRECTIVE ACTION VERIFICATION (RPS 11.5, OSS 19.1, OPS 9.9, MSS 1.1)	RUHLMAN, WA PIPER, LL	CLOSED 10/30/2000
OOD-00-200LWP-001 Performed: 1/06/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	QUINTERO, RA	CLOSED 1/06/2000



All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
OOD-00-200LWP-002 Performed: 1/20/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	QUINTERO, RA	CLOSED 1/20/2000
OOD-00-200LWP-003 Performed: 2/17/2000	UNREVIEWED SAFETY QUESTIONS (NSS 18.4)	QUINTERO, RA	CLOSED 10/02/2000
OOD-00-200LWP-004 Performed: 4/28/2000	PROCEDURE CONTENT AND USE (OPS 9.16)	QUINTERO, RA PIPER, LL	CLOSED 5/22/2000
OOD-00-200LWP-005 Performed: 4/28/2000	BARRIERS AND POSTINGS (SS 19.10)	QUINTERO, RA PIPER, LL	CLOSED 5/22/2000
OOD-00-200LWP-006 Performed: 5/05/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	QUINTERO, RA PIPER, LL	IN PROGRESS
OOD-00-200LWP-007 Performed: 8/03/2000	OPERATIONS ORGANIZATION AND ADMINISTRATION (OPS 9.1)	QUINTERO, RA PIPER, LL	CLOSED 10/02/2000
OOD-00-200LWP-008 Performed: 9/27/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	QUINTERO, RA	DELINQUENT
OOD-00-233S-002 Performed: 5/31/2000	FIRE PROTECTION AND PREVENTION (FPS 12.2)	BIRO, BA PIPER, LL	PEND VERIF
OOD-00-233S-003 Performed: 5/30/2000	PROCEDURE CONTENT AND USE (OPS 9.16)	BIRO, BA PIPER, LL	DELINQUENT
OOD-00-233S-004 Performed: 5/08/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	BIRO, BA	CLOSED 5/08/2000
OOD-00-233S-005 Performed: 6/16/2000	EMERGENCY PREPAREDNESS (EMS 21.1)	BIRO, BA	CLOSED 6/16/2000
OOD-00-233S-006 Performed: 7/27/2000	RADIOLOGICAL CONTROL BARRIERS AND POSTINGS (RPS 11.4)	BIRO, BA PIPER, LL	CLOSED 9/05/2000
OOD-00-233S-007 Performed: 7/27/2000	RADIOLOGICAL WORK PRACTICES (RPS 11.2)	BIRO, BA PIPER, LL	CLOSED 9/05/2000

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OOD-00-233S-008 Performed: 7/27/2000	HEAT STRESS (OSS 19.8)	BIRO, BA PIPER, LL	CLOSED 9/05/2000
OOD-00-233S-009 Performed: 8/15/2000	CORRECTIVE ACTION MANAGEMENT AND CONTINUOUS IMPROVEMENT (MSS 1.1)	BIRO, BA	CLOSED 1/23/2001
OOD-00-233S-010 Performed: 8/28/2000	SHIFT ROUTINES AND OPERATING PRACTICES (OPS 9.2)	BIRO, BA	CLOSED 11/15/2000
OOD-00-233S-011 Performed: 9/15/2000	RADIOLOGICAL WORK PERMITS (RPS 11.3)	BIRO, BA PIPER, LL	IN PROGRESS
OOD-00-300ADP-001 Performed: 8/16/2000	URANIUM TRIOXIDE (UO3) T-HOPPERS: FIXATIVE APPLICATION, SHIPMENTS OFF-SITE, STORAGE PAD CLEANUP AND RESPONSES TO EMERGENCY PREPAREDNESS QUESTIONS (EMS 21.1)	RUHLMAN, WA PIPER, LL	CLOSED 10/02/2000
OOD-01-300ADP-001 Performed: 10/12/2000	URANIUM TRIOXIDE (UO3) T-HOPPERS: SHIPMENTS OFF-SITE AND BIENNIAL INVENTORY; 300 AREA FUEL AND URANIUM BILLET BIENNIAL INVENTORY	RUHLMAN, WA AUGUSTENBORG, JM	CLOSED 10/30/2000
OOD-00-300LEF-001 Performed: 9/05/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	QUINTERO, RA PIPER, LL	CLOSED 9/02/2000
OOD-01-324FAC-001 Performed: 10/30/2000	HOISTING AND RIGGINS (OPS 8.1)	HASTINGS, RG	CLOSED 1/04/2001
OOD-00-327-001 Performed: 7/20/2000	FIRE PROTECTION AND PREVENTION (FPS 12.2)	GORDON, RM	CLOSED 9/28/2000
OOD-00-327-002 Performed: 9/08/2000	VERIFICATION OF AUTHORIZATION BASIS DOCUMENTATION (NSS 13.3)	GORDON, RM PIPER, LL	CLOSED 10/30/2000
OOD-00-327-003 Performed: 9/28/2000	SATELLITE ACCUMULATION AREAS (ERS 14.1)	GORDON, RM PIPER, LL	CLOSED 10/30/2000
OOD-01-ANALLAB-001 Performed: 10/19/2000	IMPLEMENTATION OF INTEGRATED SAFETY MANAGEMENT SYSTEM (ISMS) PROCESS IN MAINTENANCE ACTIVITIES (MAS 10.1)	MACALISTER, ED	CLOSED 12/21/2000
OOD-00-ANALLAB-009 Performed: 1/04/2000	CONTROL OF PROCEDURES AND OPERATOR AIDS (OPS 9.17)	WILLIAMS, DJ	CLOSED 1/04/2000

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OOD-00-ANALLAB-010 Performed: 1/05/2000	LOGKEEPING (OPS 9.11)	WILLIAMS, DJ	CLOSED 1/05/2000
OOD-00-ANALLAB-011 Performed: 1/06/2000	LIFE SAFETY (FPS 12.1)	WILLIAMS, DJ	CLOSED 1/06/2000
OOD-00-ANALLAB-012 Performed: 1/28/2000	INVESTIGATION OF ABNORMAL EVENTS (OPS 9.6)	WILLIAMS, DJ	CLOSED 1/28/2000
OOD-00-ANALLAB-013 Performed: 2/07/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	WILLIAMS, DJ	CLOSED 2/07/2000
OOD-00-ANALLAB-014 Performed: 2/14/2000	SHIFT ROUTINES AND OPERATING PRACTICES (OPS 9.2)	WILLIAMS, DJ	CLOSED 2/14/2000
OOD-00-ANALLAB-015 Performed: 3/22/2000	VERIFICATION OF AUTHORIZATION BASIS DOCUMENTATION (NSS 16.3)	WILLIAMS, DJ	CLOSED 3/22/2000
OOD-00-ANALLAB-016 Performed: 5/11/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	WILLIAMS, DJ	CLOSED 5/11/2000
OOD-00-ANALLAB-017 Performed: 9/22/2000	INDUSTRIAL HYGIENE (LASER SAFETY PROGRAM) (OSS 19.9)	WILLIAMS, DJ PIPER, LL	DELINQUENT
OOD-00-BPLANT-001 Performed: 1/24/2000	B-PLANT CANYON EXHAUST SYSTEM: REMOVAL OF DAMAGED DUCTWORK (RPS 11.4, OPS 9.9, OSS 19.2)	RUHLMAN, WA	CLOSED 1/24/2000
OOD-00-BPLANT-002 Performed: 1/27/2000	B-PLANT CANYON EXHAUST SYSTEM: AIR CLEANUP TRAIN 2 (ACT-102) FILTER REMOVAL AND REPLACEMENT	RUHLMAN, WA PIPER, LL	CLOSED 4/13/2000
OOD-00-BPLANT-003 Performed: 2/15/2000	B-PLANT CANYON EXHAUST SYSTEM: INSTALLATION & TESTING OF NEW DUCTWORK, SYSTEM RE-START, CRACKS IN DUCTWORK & REMOVAL & REPLACEMENT OF AIR CLEANUP TRAIN 1 FILTERS (CAS 2.2, OPS 9.7, OPS 9.9, OPS 9.15, RPS 11.2, RPS 11.3, RPS 11.4, RPS 11.5, OSS 19.1, 19.2)	RUHLMAN, WA PIPER, LL	CLOSED 4/13/2000
OOD-00-BPLANT-004 Performed: 4/18/2000	FIRST ANNUAL TEST OF THE PASSIVE VENT SYSTEM (PVS) FOR THE RETIRED B-PLANT CANYON EXHAUST SYSTEM FILTER VAULTS & B-PLANT CANYON EXHAUST SYSTEM (W-059 SYSTEM): AEROSOL TESTING OF HEPA FILTERS & TESTING TO DETERMINE CAUSES(S)	RUHLMAN, WA	CLOSED 6/20/2000

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	OF W-059 DUCT CRACKS		
OOD-00-BPLANT-005 Performed: 6/01/2000	REPAIR OF B-PLANT VENTILATION SYSTEM (W-059) DUCT CRACKS	RUHLMAN, WA	CLOSED 8/30/2000
OOD-00-BPLANT-006 Performed: 7/28/2000	AEROSOL TESTING OF AIR CLEANUP TRAIN (ACT) 001 HIGH EFFICIENCY PARTICULATE AIR (HEPA) FILTERS	RUHLMAN, WA PIPER, LL	CLOSED 9/05/2000
OOD-00-D&D-001 Performed: 6/26/2000	DECONTAMINATION AND DECOMMISSIONING (D&D) PROJECT RADIOLOGICAL WORK PRACTICES (RPS 11.2)	PECK, MS	CLOSED 7/25/2000
OOD-00-D&D-002 Performed: 6/26/2000	DECONTAMINATION AND DECOMMISSIONING (D&D) PROJECT RADIOLOGICAL CONTROL BARRIERS AND POSTINGS (RPS 11.4)	PECK, MS	CLOSED 7/25/2000
OOD-00-D&D-003 Performed: 7/17/2000	DECONTAMINATION AND DECOMMISSIONING (D&D) PROJECT INDUSTRIAL HYGIENE (CSS 19.9)	PECK, MS	CLOSED 7/25/2000
OOD-00-ERC-001 Performed: 6/07/2000	INVESTIGATION INTO ABNORMAL EVENTS (OPS 9.6)	ASHLEY, CA PIPER, LL	DELINQUENT
OOD-01-FFTF-001 Performed: 11/16/2000	CLASSROOM TRAINING (TQS 4.1)	BURTON, BF	CLOSED 11/16/2000
OOD-00-FFTF-003 Performed: 4/28/2000	CONFIGURATION MANAGEMENT IMPLEMENTATION (MS 3.1)	DAVIES, TR/HASTINGS, R	CLOSED 4/28/2000
OOD-00-FFTF-004 Performed: 6/28/2000	VERIFICATION OF AUTHORIZATION BASIS DOCUMENTATION (NSS 19.3)	HASTINGS, RG	CLOSED 6/12/2000
OOD-00-FFTF-005 Performed: 6/26/2000	PERSONAL PROTECTIVE EQUIPMENT (CSS 19.01)	DAVIES, TR	CLOSED 6/27/2000
OOD-00-FFTF-006 Performed: 6/22/2000	OPERATOR AID POSTINGS (OPS 9.17)	HASTINGS, RG	CLOSED 8/02/2000
OOD-01-GENERAL-001 Performed: 11/14/2000	ALARA PROGRAMS (RPS 11.1)	ASHLEY, CA	CLOSED 11/14/2000

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COD-01-GENERAL-002 Performed:11/14/2000	RADIOLOGICAL WORK PRACTICES (RPS 11.2)	ASHLEY, CA	DELINQUENT
COD-01-GENERAL-003 Performed:11/14/2000	RADIOLOGICAL MONITORING AND SURVEYS (RPS 11.5)	ASHLEY, CA	CLOSED 11/14/2000
JOD-00-GW-001 Performed: 5/05/2000	GROUNDWATER PROJECT - SHIFT ROUTINES AND OPERATING PRACTICES (OPS 9.2)	PECK, MS PIPER, LL	CLOSED 6/01/2000
JOD-00-GW-002 Performed: 5/05/2000	GROUNDWATER PROJECT - CONTROL AREA ACTIVITIES	PECK, MS PIPER, LL	CLOSED 6/01/2000
JOD-00-PFP-001 Performed: 4/13/2000	PROCEDURE CONTENT AND USE (OPS 9.16) AND UNREVIEWED SAFETY QUESTIONS (NSS 18.4)	BURTON, BF	CLOSED 4/13/2000
COD-01-PFP-001 Performed:11/02/2000	CONTROL AREA ACTIVITIES (OPS 9.3)	WARING, JJ PIPER, LL	CLOSED 11/02/2000
JOD-00-PFP-002 Performed: 4/14/2000	TIMELY ORDERS TO OPERATORS (OPS 9.15)	BURTON, BF	CLOSED 4/14/2000
COD-01-PFP-002 Performed:11/14/2000	SATELLITE ACCUMULATION AREA	WARING, JJ PIPER, LL	CLOSED 11/14/2000
COD-00-PFP-003 Performed: 4/24/2000	LOGKEEPING (OPS 9.11)	WARING, JJ PIPER, LL	CLOSED 12/12/2000
COD-01-PFP-003 Performed:11/16/2000	CLASSROOM TRAINING (OPS 4.1)	BURTON, BF	CLOSED 11/16/2000
COD-00-PFP-004 Performed: 5/30/2000	CORRECTIVE ACTION MANAGEMENT (MSS 1.1)	WARING, JJ	CLOSED 1/30/2001
COD-01-PFP-004 Performed:11/14/2000	PROCEDURE CONTENT AND USE (OPS 9.16)	WARING, JJ PIPER, LL	OPEN
COD-00-PFP-005 Performed: 5/11/2000	DRILL PROGRAM (MS 21.2)	BURTON, BF	CLOSED 5/11/2000
COD-00-PFP-006 Performed: 5/09/2000	BREATHING AIR BOTTLE CARTS - WORKER PROTECTION (OSS 19.13)	BURTON, BF	DELINQUENT
OOD-00-PFP-007 Performed: 7/07/2000	FIRE PROTECTION AND PREVENTION (FPS 12.2)	TODD, JW	IN PROGRESS

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OOD-00-PFP-008 Performed: 7/31/2000	RADIOLOGICAL MONITORING AND SURVEYS (RPS 11.5)	WARING, JJ PIPER, LL	DELINQUENT
OOD-00-PFP-009 Performed: 8/03/2000	RADIOLOGICAL WORK PRACTICES (RPS 11.2)	WARING, JJ PIPER, LL	CLOSED 1/30/2001
OOD-00-PFP-010 Performed: 9/14/2000	RADIOLOGICAL CONTROL BARRIERS AND POSTINGS (RPS 11.4)	WARING, JJ PIPER, LL	CLOSED 12/12/2000
OOD-00-PFP-011 Performed: 8/04/2000	LOGKEEPING (OPS 9.11), RECORD OF ACTIVITIES, CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	BURTON, BF PIPER, LL	CLOSED 11/13/2000
OOD-00-PHMC-001 Performed: 3/02/2000	CORRECTIVE ACTION/ISSUE MANAGEMENT (MSS 1.1)	SCHIERMAN, KM PIPER, LL	CLOSED 10/04/2000
OOD-00-REMACT-001 Performed: 9/28/2000	COMMUNICATIONS (OPS 9.4)	ASHLEY, CA	CLOSED 9/28/2000
OOD-00-SM&T-001 Performed: 3/10/2000	MAINTENANCE ACTIVITIES (MAS 10.1)	BIRO, BA PIPER, LL	PEND VERIF
OOD-00-SM&T-002 Performed: 3/15/2000	SHIFT ROUTINES AND OPERATING PRACTICES (OPS 9.2)	BIRO, BA PIPER, LL	CLOSED 4/17/2000
OOD-00-SM&T-003 Performed: 3/27/2000	HOISTING AND RIGGING (OPS 9.1)	BIRO, BA PIPER, LL	CLOSED 4/17/2000
OOD-00-SM&T-004 Performed: 3/30/2000	INVESTIGATION OF ABNORMAL EVENTS (OPS 9.5)	BIRO, BA PIPER, LL	DELINQUENT
OOD-00-SM&T-005 Performed: 4/06/2000	NOTIFICATIONS (OPS 9.7)	BIRO, BA PIPER, LL	PEND VERIF
OOD-00-SM&T-008 Performed: 7/11/2000	ELECTRICAL SAFETY/NATIONAL ELECTRICAL CODE (NEC) COMPLIANCE (OSS 19.2)	ASHLEY, CA PIPER, LL	DELINQUENT
OOD-00-SM&T-009 Performed: 8/31/2000	CORRECTIVE ACTION MANAGEMENT AND CONTINUOUS IMPROVEMENT (MSS 1.1)	ASHLEY, CA	CLOSED 12/11/2000

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OOD-01-SNF-001 Performed:10/10/2000	EQUIPMENT AND PIPING LABELING (OPS 9.18)	HIGGINS, GV	CLOSED 1/30/2001
OOD-01-SNF-002 Performed:10/04/2000	UNREVIEWED SAFETY QUESTIONS (USQ) - NUCLEAR SAFETY SURVEILLANCE (NSS 18.4)	SCHIERMAN, KM LOSCOE, PG	CLOSED 10/20/2000
OOD-01-SNF-003 Performed:10/10/2000	TECHNICAL SAFETY REQUIREMENTS NUCLEAR SAFETY SURVEILLANCE (NSS 18.2)	SCHIERMAN, KM	DELINQUENT
OOD-01-SNF-004 Performed:10/09/2000	EMERGENCY PREPAREDNESS (EMS 21.1)	EARLEY, LD	CLOSED 10/09/2000
OOD-01-SNF-005 Performed:10/11/2000	VERIFICATION OF SYSTEM CONFIGURATION AND OPERATIONS (CMS 3.3)	HIGGINS, GV	DELINQUENT
OOD-01-SNF-006 Performed:10/12/2000	VERIFICATION OF AUTHORIZATION BASIS DOCUMENTATION, NUCLEAR SAFETY SURVEILLANCE (NSS 18.2)	EARLEY, LD	CLOSED 12/05/2000
OOD-01-SNF-007 Performed:10/20/2000	QUALITY ASSURANCE RECORDS - QUALITY ASSURANCE SURVEILLANCE (QAS 2.6)	SCHIERMAN, KM	CLOSED 11/30/2000
OOD-01-SNF-008 Performed:10/17/2000	CORRECTIVE ACTION/ISSUE MANAGEMENT, MANAGEMENT SYSTEMS SURVEILLANCE (MSS 1.1)	EARLEY, LD	CLOSED 12/05/2000
OOD-01-SNF-009 Performed:10/19/2000	QUALITY ASSURANCE SURVEILLANCE - INSPECTION AND ACCEPTANCE TESTING (QAS 2.3)	HIGGINS, GV	DELINQUENT
OOD-01-SNF-010 Performed:10/30/2000	TECHNICAL SAFETY REQUIREMENTS NUCLEAR SAFETY SURVEILLANCE (NSS 18.2)	HIGGINS, GV	DELINQUENT
OOD-01-SNF-011 Performed:10/31/2000	UNREVIEWED SAFETY QUESTION NUCLEAR SAFETY SURVEILLANCE (NSS 18.4)	HIGGINS, GV	DELINQUENT
OOD-01-SNF-012 Performed:11/09/2000	INVESTIGATION OF ABNORMAL EVENTS (OPS 9.6)	SCHIERMAN, KM	DELINQUENT
OOD-01-SNF-013 Performed:11/15/2000	INTEGRATED SAFETY MANAGEMENT SYSTEM (ISMS)/MAINTENANCE ACTIVITIES (MAS 10.1)	SCHIERMAN, KM	CLOSED 11/15/2000

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OOD-01-SNF-014 Performed: 11/14/2000	VERIFICATION OF AUTHORIZATION BASIS DOCUMENTATION (NSS 18.3)	HIGGINS, GV	DELINQUENT
OOD-01-SNF-015 Performed: 11/17/2000	PROCEDURE CONTENT AND USE (OPS 9.16)	SCHIERMAN, KM	CLOSED 1/29/2001
OOD-01-SNF-016 Performed: 11/21/2000	SEASONAL PREPARATION (MAS 10.3)	SCHIERMAN, KM	DELINQUENT
OOD-01-SNF-017 Performed: 11/29/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	SCHIERMAN, KM	CLOSED 11/29/2000
OOD-01-SNF-018 Performed: 11/27/2000	OPERATIONS ORGANIZATION AND ADMINISTRATION (OPS 9.1)	GUNION, CH	DELINQUENT
OOD-01-SNF-019 Performed: 12/20/2000	LIFE SAFETY (FPS 12.1)	GUNION, CH PIPER, LL	OPEN
OOD-01-SNF-020 Performed: 12/20/2000	MULTI-CANISTER OVERPACK (MCO) HANDLING AND PROCESSING CONTINUOUS OVERSIGHT BY DOE-RL	HIGGINS, GV/SCHIERMAN/ PIPER, LL	OPEN
OOD-01-SNF-021 Performed: 12/27/2000	OPERATIONS ASPECTS OF FACILITY CHEMISTRY AND UNIQUE PROCESSES (OPS 9.13)	SCHIERMAN, KM PIPER, LL	CLOSED 12/27/2000
OOD-00-SNF-053 Performed: 9/12/2000	RADIOLOGICAL WORK PRACTICES (RPS 11.2)	SCHIERMAN, KM PIPER, LL	CLOSED 11/28/2000
OOD-00-SNF-055 Performed: 9/21/2000	INTEGRATED SAFETY MANAGEMENT SYSTEM/MAINTENANCE ACTIVITIES MAS 10.1	SCHIERMAN, KM PIPER, LL	CLOSED 10/30/2000
OOD-00-SNF-056 Performed: 9/25/2000	TIMELY ORDERS TO OPERATORS (OPS 9.15)	HIGGINS, GV PIPER, LL	CLOSED 10/30/2000
OOD-00-SNF-057 Performed: 9/28/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	SCHIERMAN, KM PIPER, LL	CLOSED 11/28/2000
OOD-00-SNF-058 Performed: 9/26/2000	OPERATIONS PROCEDURES (OPS 9.16)	EARLEY, LD PIPER, LL	CLOSED 12/05/2000



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OOD-00-SNF-059 Performed: 9/27/2000	LOGKEEPING (OPS 9.11)	EARLEY, LD PIPER, LL	CLOSED 10/30/2000
OOD-00-SNF-060 Performed: 9/27/2000	OPERATIONS TURNOVER (OPS 9.12)	EARLEY, LD PIPER, LL	CLOSED 10/30/2000
OOD-00-SNFP-013 Performed: 1/14/2000	QUALITY ASSURANCE RECORDS (QAS 2.6)	EARLEY, LD/HIGGINS, GV PIPER, LL	CLOSED 9/26/2000
OOD-00-SNFP-014 Performed: 2/29/2000	RADIOLOGICAL CONTROL BARRIERS AND POSTINGS (RPS 11.4)	SCHIERMAN, KM	CLOSED 2/29/2000
OOD-00-SNFP-015 Performed: 2/17/2000	UNREVIEWED SAFETY QUESTIONS (USQ) (NSS 18.4)	SCHIERMAN, KM/TRINE, S PIPER, LL	CLOSED 6/21/2000
OOD-00-SNFP-016 Performed: 1/12/2000	CONFIGURATION MANAGEMENT IMPLEMENTATION (CMS 3.1)	SCHIERMAN, KM PIPER, LL	CLOSED 4/21/2000
OOD-00-SNFP-017 Performed: 3/03/2000	QUALITY ASSURANCE RECORDS (QAS 2.6)	EARLEY, LD/HIGGINS, GV PIPER, LL	PEND VERIF
OOD-00-SNFP-018 Performed: 3/21/2000	CLASSROOM TRAINING (TCS 4.1)	TRINE, SL	CLOSED 3/21/2000
OOD-00-SNFP-019 Performed: 4/20/2000	INVESTIGATION OF ABNORMAL EVENTS (OPS 9.6)	TRINE, SL PIPER, LL	CLOSED 10/11/2000
OOD-00-SNFP-020 Performed: 3/02/2000	WORKER PROTECTION (OSS 19.13)	SCHIERMAN, KM PIPER, LL	CLOSED 6/21/2000
OOD-00-SNFP-021 Performed: 3/10/2000	WORKER PROTECTION (OSS 19.13)	SCHIERMAN, KM PIPER, LL	CLOSED 6/21/2000
OOD-00-SNFP-022 Performed: 7/27/2000	LOGKEEPING (OPS 9.11)	HIGGINS, GV	CLOSED 7/28/2000
OOD-00-SNFP-023 Performed: 3/08/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	EARLEY, LD/HIGGINS, GV PIPER, LL	CLOSED 9/15/2000

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OOD-00-SNFP-024 Performed: 3/17/2000	CONFIGURATION MANAGEMENT IMPLEMENTATION (CMS 3.1)	SCHIERMAN, KM PIPER, LL	CLOSED 6/21/2000
OOD-00-SNFP-025 Performed: 4/03/2000	OPERATIONS TURNOVER (OPS 9.12)	SCHIERMAN, KM	CLOSED 4/03/2000
OOD-00-SNFP-026 Performed: 4/03/2000	PRESSURE SAFETY (OSS 19.4)	EARLEY, LD PIPER, LL	CLOSED 6/21/2000
OOD-00-SNFP-027 Performed: 4/06/2000	QUALITY ASSURANCE RECORDS (QAS 2.6)	HIGGINS, GV PIPER, LL	PEND VERIF
OOD-00-SNFP-028 Performed: 4/17/2000	CONTROL OF MEASURING AND TEST EQUIPMENT (MAS 10.2)	HIGGINS, GV PIPER, LL	CLOSED 9/06/2000
OOD-00-SNFP-029 Performed: 4/27/2000	HOISTING AND RIGGING (CPS 8.1)	SCHIERMAN, KM PIPER, LL	CLOSED 8/31/2000
OOD-00-SNFP-030 Performed: 7/13/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	EARLEY, LD	CLOSED 9/15/2000
OOD-00-SNFP-031 Performed: 5/24/2000	HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (OSS 19.5)	SCHIERMAN, KM PIPER, LL	CLOSED 9/06/2000
OOD-00-SNFP-032 Performed: 4/21/2000	ELECTRICAL SAFETY (OSS 19.2)	SCHIERMAN, KM PIPER, LL	CLOSED 8/02/2000
OOD-00-SNFP-033 Performed: 7/15/2000	EQUIPMENT AND PIPING LABELING (OPS 9.18)	SCHIERMAN, KM	DELINQUENT
OOD-00-SNFP-034 Performed: 5/18/2000	IMPLEMENTATION OF THE INTEGRATED SAFETY MANAGEMENT SYSTEM PROCESS IN MAINTENANCE ACTIVITIES (MAS 10.1)	SCHIERMAN, KM PIPER, LL	CLOSED 8/02/2000
OOD-00-SNFP-035 Performed: 6/08/2000	NONCONFORMING CONDITIONS (QAS 2.1)	HIGGINS, GV PIPER, LL	CLOSED 9/06/2000
OOD-00-SNFP-036 Performed: 7/28/2000	OPERATIONS ORGANIZATION AND ADMINISTRATION (OPS 9.1)	SCHIERMAN, KM	CLOSED 7/28/2000

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OOD-00-SNFP-037 Performed: 6/23/2000	TIMELY ORDERS TO OPERATORS (OPS 9.15)	SCHIERMAN, KM PIPER, LL	CLOSED 8/02/2000
OOD-00-SNFP-038 Performed: 6/30/2000	LOGKEEPING (OPS 9.11)	SCHIERMAN, KM PIPER, LL	CLOSED 8/02/2000
OOD-00-SNFP-039 Performed: 6/27/2000	REQUIRED READING (OPS 9.14)	SCHIERMAN, KM PIPER, LL	CLOSED 10/27/2000
OOD-00-SNFP-040 Performed: 6/31/2000	CRITICALITY SAFETY (NSS 18.1)	SCHIERMAN, KM PIPER, LL	CLOSED 10/02/2000
OOD-00-SNFP-041 Performed: 7/06/2000	LOCKOUTS AND TAGOUTS (OPS 9.9)	SCHIERMAN, KM PIPER, LL	CLOSED 1/29/2001
OOD-00-SNFP-042 Performed: 6/28/2000	INDEPENDENT VERIFICATION (OPS 9.10)	SCHIERMAN, KM PIPER, LL	CLOSED 8/02/2000
OOD-00-SNFP-043 Performed: 7/06/2000	OPERATOR AID POSTINGS (OPS 9.17)	SCHIERMAN, KM PIPER, LL	CLOSED 8/02/2000
OOD-00-SNFP-044 Performed: 7/14/2000	NOTIFICATIONS (OPS 9.7)	SCHIERMAN, KM	CLOSED 9/14/2000
OOD-00-SNFP-045 Performed: 8/03/2000	REQUIRED READING (OPS 9.14)	HIGGINS, GV	CLOSED 10/30/2000
OOD-00-SNFP-046 Performed: 9/22/2000	SHIFT ROUTINES AND OPERATING PRACTICES (OPS 9.2)	SCHIERMAN, KM PIPER, LL	DELINQUENT
OOD-00-SNFP-047 Performed: 7/25/2000	REQUIRED READING (OPS 9.14)	EARLEY, LD	CLOSED 10/19/2000
OOD-00-SNFP-048 Performed: 7/31/2000	TIMELY ORDERS TO OPERATORS (OPS 9.15)	EARLEY, LD	CLOSED 10/09/2000
OOD-00-SNFP-049 Performed: 7/25/2000	OPERATOR AID POSTINGS (OPS 9.17)	EARLEY, LD	CLOSED 7/28/2000

## All Assessment Documents (Appraisals, Audits &amp; Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
OOD-00-SNFP-050 Performed: 8/10/2000	OPERATIONS PROCEDURES (OPS 9.16)	SCHIERMAN, KM PIPER, LL	CLOSED 9/14/2000
OOD-00-SNFP-051 Performed: 8/08/2000	VERIFICATION OF SYSTEM CONFIGURATION AND OPERATIONS (CMS 3.3)	EARLEY, LD PIPER, LL	DELINQUENT
OOD-00-SNFP-052 Performed: 8/10/2000	EQUIPMENT AND PIPING LABELING (OPS 9.18)	EARLEY, LD PIPER, LL	DELINQUENT
OOD-00-SNFP-054 Performed: 8/14/2000	PROCUREMENT (CAS 2.3) AND VERIFICATION OF SYSTEM CONFIGURATION AND OPERATIONS (CMS 3.3)	HIGGINS, GV PIPER, LL	DELINQUENT
WOD-00-SWDO-001 Performed: 2/15/2000	NOTIFICATIONS (OPS 9.07)	HIGGINS, RL PIPER, LL	CLOSED 12/07/2000
WOD-00-SWDO-002 Performed: 2/15/2000	INVESTIGATION OF ABNORMAL EVENTS (OPS 9.06)	HIGGINS, RL PIPER, LL	DELINQUENT
OOD-00-SWDO-003 Performed: 4/05/2000	NOTIFICATIONS (OPS 9.07)	HIGGINS, RL PIPER, LL	CLOSED 12/07/2000
OOD-01-SWSD-001 Performed: 10/05/2000	NOTIFICATIONS (OPS 9.07)	HIGGINS, RL	CLOSED 12/07/2000
OOD-00-SWSD-004 Performed: 5/08/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.08)	HIGGINS, RL	CLOSED 5/08/2000
OOD-00-SWSD-005 Performed: 6/13/2000	NOTIFICATIONS (OPS 9.07)	HIGGINS, RL PIPER, LL	CLOSED 12/07/2000
OOD-00-SWSD-006 Performed: 8/24/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.08)	HIGGINS, RL PIPER, LL	CLOSED 12/07/2000
OOD-00-SWSD-007 Performed: 8/31/2000	PROCEDURE CONTENT AND USE (OPS 9.16)	HIGGINS, RL	CLOSED 10/02/2000
OOD-01-TPLANT-001 Performed: 11/07/2000	RADIOLOGICAL CONTROL POSTINGS (RPS 11.4)	TRINE, SL	DELINQUENT

All Assessment Documents Appraisals, Audits & Surveillances

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS
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SOD-00-TPLANT-002 Performed: 7/21/2000	CRASH PHONE RESPONSE AT THE SOLID WASTE TREATMENT PROJECT EMS 21.1.	TRINE, SL PIPER, LL	CLOSED 10/02/2000
SOD-00-UTIL-001 Performed: 2/01/2000	REVIEW OF LOCK & TAG FOR 283-E/W FILTER PLANTS AND 182- B/D FACILITIES. REVIEW OF SWITCHING ORDERS FOR ELECTRICAL UTILITIES, AND PAST CORRECTIVE ACTIONS	GORDON, RM PIPER, LL	CLOSED 3/16/2000
SOD-01-UTIL-001 Performed: 11/01/2000	INSTRUMENT CALIBRATION (QAS 2.4)	GORDON, RM	CLOSED 11/01/2000
SOD-00-UTIL-002 Performed: 3/16/2000	CORRECTIVE ACTION/ISSUE MANAGEMENT (MSS 1.1)	GORDON, RM PIPER, LL	CLOSED 3/12/2000
SOD-01-UTIL-002 Performed: 12/01/2000	CONTROL AREA ACTIVITIES (OPS 9.3)	GORDON, RM PIPER, LL	CLOSED 12/01/2000
SOD-00-UTIL-003 Performed: 8/02/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8)	GORDON, RM PIPER, LL	CLOSED 8/02/2000
SOD-00-UTIL-004 Performed: 7/10/2000	LOGKEEPING (OPS 9.11)	GORDON, RM	CLOSED 7/12/2000
SOD-00-UTIL-005 Performed: 1/10/2001	NONCONFORMING CONDITIONS (QAS 2.1)	GORDON, RM PIPER, LL	CLOSED 1/10/2001
SOD-00-UTIL-006 Performed: 9/26/2000	SHIFT ROUTINES AND OPERATING PRACTICES (OPS 9.2)	GORDON, RM PIPER, LL	CLOSED 10/30/2000
OOD-01-WESF-001 Performed: 10/06/2000	CORRECTIVE ACTION PROCESS AND COMPLETED CORRECTIVE ACTIONS (MSS 1.1)	RUHLMAN, WA	CLOSED 10/06/2000
OOD-01-WESF-002 Performed: 10/26/2000	BACKSHIFT AND WEEKEND TOURS	RUHLMAN, WA	DELINQUENT
OOD-01-WESF-003 Performed: 11/30/2000	SHIFT ROUTINES FOR STEAM HEATING (OPS 9.2), CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.8), AND CORRECTIVE ACTION VERIFICATION (MSS 1.1)	RUHLMAN, WA	DELINQUENT
OOD-01-WESF-004 Performed: 12/14/2000	DIESEL FUEL STORAGE TANKS (ERS 14.4)	RUHLMAN, WA PIPER, LL	OPEN
OOD-00-WESF-005 Performed: 2/03/2000	SELECTED ASPECTS OF CONDUCT OF OPERATIONS (MAINTENANCE & RADIOLOGICAL PROTECTION PROGRAMS (OPS 9.2, OPS 9.4, OPS	RUHLMAN, WA PIPER, LL	CLOSED 4/24/2000

All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
	9.13, OPS 9.15, OPS 9.16, MAS 10.1, RPS 11.2, RPS 11.3)		
COD-00-WESF-006 Performed: 4/25/2000	QUALITY ASSURANCE RECORDS (QAS 2.6) AND CORRECTIVE ACTION VERIFICATION (MSS 1.1)	RUHLMAN, WA PIPER, LL	CLOSED 12/11/2000
COD-00-WESF-007 Performed: 6/13/2000	REVIEW OF COMPUTER BASED CONTROL SYSTEM, DESIGN CONTROL, CONFIGURATION MANAGEMENT, MONITORING OF MANIPULATOR REMOVAL AND REPLACEMENT & CANYON CLEANUP WORK ACTIVITIES QAS 2.5, CMS 3.1.	RUHLMAN, WA PIPER, LL	IN PROGRESS
COD-00-WESF-008 Performed: 6/30/2000	RESPONSE TO RANGE FIRE AND OPERATIONS ORGANIZATION ROLES AND RESPONSIBILITIES OPS 9.11	RUHLMAN, WA PIPER, LL	CLOSED 12/11/2000
COD-00-WESF-009 Performed: 7/25/2000	OBSERVATION OF SWING SHIFT WORK ACTIVITIES, TIMELY ORDERS, REQUIRED READING, AND RESPONSES TO EMERGENCY PREPAREDNESS QUESTIONS OPS 9.14, OPS 9.15, EMS 21.1.	RUHLMAN, WA	CLOSED 12/11/2000
COD-00-WESF-010 Performed: 9/29/2000	VERIFICATION OF CORRECTIVE ACTIONS MSS 1.1	RUHLMAN, WA	CLOSED 9/29/2000
COD-00-WESF-011 Performed: 9/22/2000	LOCK-OUT/TAG-OUT PROGRAM AND SWING SHIFT TOUR OPS 9.9	RUHLMAN, WA	CLOSED 1/24/2001
COD-01-WRAP-001 Performed: 10/17/2000	EMERGENCY PREPAREDNESS EMA 01.1	HIGGINS, RL	CLOSED 10/17/2000
COD-01-WRAP-002 Performed: 10/17/2000	SHIFT ROUTINES AND OPERATING PRACTICES OPS 9.12	HIGGINS, RL	CLOSED 10/17/2000
COD-00-WRAP-003 Performed: 1/25/2000	COMMUNICATIONS OPS 9.14	HIGGINS, RL PIPER, LL	DELINQUENT
COD-00-WRAP-004 Performed: 2/24/2000	SECURITY	HIGGINS, RL PIPER, LL	CLOSED 3/21/2000
COD-00-WRAP-005 Performed: 1. 19. 2000	LOCKOUTS AND TAGOUTS (OPS 9.09)	HIGGINS, RL PIPER, LL	CLOSED 8/17/2000
COD-00-WRAP-006 Performed: 5/30/2000	LOCKOUTS AND TAGOUTS (OPS 9.09)	HIGGINS, RL PIPER, LL	DELINQUENT

All Assessment Documents (Appraisals, Audits & Surveillances)

February 21, 2001

REPORT NUMBER	DESCRIPTION	RESPONSIBLE RL	CURRENT STATUS CLOSED DATE
OOD-00-WRAP-007 Performed: 5/08/2000	CONTROL OF EQUIPMENT AND SYSTEM STATUS (OPS 9.08)	HIGGINS, RL	CLOSED 5/08/2000
OOD-00-WRAP-008 Performed: 5/18/2000	SECURITY	HIGGINS, RL PIPER, LL	CLOSED 10/03/2000
OOD-00-WRAP-009 Performed: 8/24/2000	PROCEDURE CONTENT AND USE (OPS 9.16)	HIGGINS, RL PIPER, LL	CLOSED 10/02/2000
OOD-00-WRAP-010 Performed: 8/28/2000	RADIOLOGICAL WORK PRACTICES (RFS 11.2)	HIGGINS, RL PIPER, LL	CLOSED 10/03/2000
OOD-00-WRAP-011 Performed: 9/27/2000	HOISTING AND RIGGING (OPS 8.1)	HIGGINS, RL PIPER, LL	CLOSED 10/30/2000
OOD-00-WRAP-012 Performed: 9/27/2000	COMMUNICATIONS (OPS 9.4)	HIGGINS, RL PIPER, LL	CLOSED 10/30/2000
OOD-00-WS-001 Performed: 4/05/2000	NOTIFICATIONS (OPS 9.17)	TRINE, SL PIPER, LL	CLOSED 1/22/2001
Number of Open SURV 141			
A&E-SUR-10-166 Performed: 7/10/2000	A&E OVERSIGHT OF BHI SELF-ASSESSMENT ACTIVITY SURVEILLANCE (OP-00-S-10, ASBESTOS)	EIZAGUIRRE, J PIPER, LL	CLOSED 8/02/2000

Number of Open SURV\* 1

TOTAL NUMBER OF OPEN DOCUMENTS 181

## Rushman, Sheryl L

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**From:** Lichfield, Robert D (Bob)  
**Sent:** Wednesday, February 21, 2001 1:21 PM  
**To:** Rushman, Sheryl L  
**Subject:** FW: ASSESSMENTS CONDUCTED IN CY 2000

**Importance:** High

Sheryl,

Some more!

Thanks, Bob L.

—Original Message—

**From:** Shea, Keith R  
**Sent:** Wednesday, February 21, 2001 12:55 PM  
**To:** Lichfield, Robert D (Bob)  
**Cc:** Shea, Keith R; Hellier, Charles L; Coleman, Sheldon R; Gergely, Dale E  
**Subject:** FW: ASSESSMENTS CONDUCTED IN CY 2000  
**Importance:** High

Bob, got this message from Dale and figured you would need the stuff I did for the IH. Not to sure the level of detail you needed but below is a list of the assessments by month, assessment number and the procedures/work instructions assessed, all for Industrial Hygiene. Let me know if more is needed.

January  
IH-00-01-01 BHI-SH-05, 3.16 "Use of the VWR Digital Hygrometer"

February  
IH-00-02-01 BHI-SH-05, 5.3 "Maintenance of HP-4 Series Breathing Air Compressors"

March  
IH-00-03-01 BHI-QA-03,6.2 "Industrial Hygiene Field Services Quality Assurance Program Plan"  
BHI-SH-05, 1.15 "Documenting Industrial Hygiene Records and Measurements"  
BHI-SH-05, 1.16 "Managing Industrial Hygiene Field Records" BHI-SH-05, 1.17 "Control of Equipment"

April  
IH-00-04-01 BHI-SH-05, 3.5 "Operation of the Industrial Scientific TMX412 Multi-Gas Monitor"

May  
IH-00-05-01 BHI-SH-05, 3.7 "Quest Model 1700 Sound Level Meter and Model OB-100 Octave Band Filter"

August  
IH-00-08-01 BHI-SH-05, 2.1 "Air Sampling Pump Setup and Operation"  
OJT-15 (Course #105273) "Testing Flow Compensation Function for SKC Sample Pumps"  
OJT-16 (Course #105308) "Air Sampling Pump Setup and Operation"  
IH-00-08-02 BHI-MA-02, 1.3 "Internal Review of Documents"  
BHI-SH-02, Vol. 3, 4.3.3 Rev. 2 "Operation of Powered Air-Purifying Respirators"

September  
IH-00-09-01 BHI-SH-05, 2.9 "Time-Integrated Air Sampling"  
OJT-16 (Course #105308) "Air Sampling Pump Setup and Operation"

November  
IH-00-11-01 BHI-QA-03, 6.2, "Industrial Hygiene Field Services Quality Program Plan"  
BHI-SH-01, 10.4, "Industrial Hygiene"  
BHI-SH-05, 1.7, "Chain-of-Custody Record keeping"  
BHI-SH-05, 1.14, "Training and Qualifications"  
BHI-SH-05, 1.15, "Documenting Industrial Hygiene Records and Measurements"  
BHI-SH-05, 1.16, "Managing Industrial Hygiene Field Records"  
BHI-SH-05, 1.17, "Control of Equipment"



**ENVIRONMENTAL RESTORATION CONTRACTOR (ERC)  
COMPLIANCE AND QUALITY PROGRAMS (CQP)  
INDEPENDENT ASSESSMENTS CY 2000**

Month Scheduled	Independent Assessment Number	Focused Assessment Number	Lead Assessor	Status	Assessment Title
January 2000	CQP-00-02		Stacey	Complete	WMH 222-S Lab
		CQP-00-S-02	Ferguson	Complete	S&H Respiratory Protection Program (Annual)
February 2000	CQP-00-03	CQP-00-S-01	Collins	Complete	HEPA Vacuums/PTRAEU's S/M&T
			Stacey	Complete	IH Facility
			Fugitt	Complete	Nuclear Safety (Criticality)
		CQP-00-S-03	Handy	Complete	HEPA Vacuums/PTRAEU's D&D
		CQP-00-S-04	Ferguson	Complete	Excavation Activity (Subcontractor)
March 2000	CQP-00-05		Stacey	Complete	ERC Field Screening & Sampling, Analytical Field Services
			Bentley	Complete	Emergency Management
		CQP-00-S-05	Collins	Complete	PTRAEU's & HEPA
		CQP-00-S-06	Fugitt	Complete	BHI-QA-01, Quality Systems Requirement 7.0 "Procurement"
April 2000	CQP-00-07		Stacey	Complete	Severn Trent/St. Louis, Mo.
			Stacey	Complete	Severn Trent/Knoxville, Tenn.
		CQP-00-S-11	Cochrane	Complete	Integrated Team Assessments
			Handy	Complete	TBP Commitment Implementation Verification
		CQP-00-S-08	Fugitt	Complete	Corrective Action Management System
		CQP-00-S-07	Ferguson	Complete	Forklift Safety
May 2000	CQP-00-09		Stacey	Complete	RECRA, Lionville, PA
		CQP-00-S-17	Gilmore	Complete	HFD, Insp. Of ignitable/reactive waste storage areas
		CQP-00-S-18	Gilmore	Complete	Designations - RCRA/CERCLA/IDW
		CQP-00-S-19	Handy	Complete	Sample Analysis Plans
		CQP-00-S-09	Collins	Complete	Container Management 90 day pads
		CQP-00-S-12	Fugitt	Complete	Criticality Assessment Observation
		CQP-00-S-20	Collins	Complete	Waste Control Plans
		CQP-00-S-16	Gilmore	Complete	Container Management 90 & SAA
June 2000	CQP-00-11		Stacey	Complete	TRC/Richmond, CA
		CQP-00-S-13	Cochrane	Complete	Control of Subcontractors (Quality Assurance Requirements)
		CQP-00-S-21	Hans	Complete	PAPRI's
		CQP-00-S-22	Hans	Complete	FWEC Lack of Design Document Control
		CQP-00-S-15	Hans	Complete	Self Assessment
			Collins	Complete	TSD's
			Ferguson	Complete	Asbestos
July 2000		CQP-00-S-28	Hughes	Complete	Lessons Learned
		CQP-00-S-23	Ferguson	Complete	M&TE
		CQP-00-S-34	Handy	Complete	Outdoor R M A's
August 2000		CQP-00-S-26	Collins	Complete	Air Monitoring - B, C & D Plants
		CQP-00-S-27	Collins	Complete	Air Monitoring - F & H Plants
		CQP-00-S-14	Cochrane	Complete	Work Control - BHI-FS-01 Procedure 2.1
		CQP-00-S-25	Hans	Complete	Software
September 2000		CQP-00-S-33	Bentley	Complete	Records Management/Document Control
		CQP-00-S-29	Fugitt	Complete	NEC
		CQP-00-S-31	Fugitt	Complete	S&H Security - See Tim Quinn for firm date
		CQP-00-S-36	Ferguson	Complete	Asbestos
		CQP-00-S-32	Collins	Complete	SNF-ERDF Waste Disposal

Month Scheduled	Independent Assessment Number	Focused Assessment Number	Lead Assessor	Status	Assessment Title
October 2000	CQP-00-14		Handy	Complete	Investigation Derived Waste (IDW)/CERCLA (Groundwater/Pump and Treat)
		CQP-00-S-35	Fugitt	Complete	L-18 Contractor, Piping, Equipment, Vessel Dismantlement
		CQP-00-S-39	Gilmore	Complete	Treatment, Storage, Disposal Facilities (5)
	CQP-00-13		Stacey	Complete	DataChem Cincinnati, OH
November 2000		CQP-00-S-40	Gilmore	Complete	<90-Day Pads
		CQP-00-S-41	Gilmore	Complete	Satellite Accumulation Areas
		CQP-00-S-43	Fugitt	Complete	Remedial Action and Waste Disposal Project
		CQP-00-S-38	Ferguson	Complete	Freeze Protection
December 2000		CQP-00-S-45	Gilmore	Complete	PW Stephens, NTS Validation
		CQP-00-S-42	Handy	Complete	100-N Water Plant

**Integrated Evaluation Plan - Index (12/20/00 revision)**

**Index -**

**Notes -**

- Tab 1 - Surveillances/Assessments of Fluor Hanford Inc. (FHI) <sup>(a)</sup>
- Tab 2 - Surveillances/Assessments of Bechtel Hanford Inc. (BHI) <sup>(a)</sup>
- Tab 3 - Surveillances/Assessments of Battelle Memorial Institute (BMI) <sup>(a)</sup>
- Tab 4 - RL Self Assessments
- Tab 5 - Facility Representative (Fac Rep) Surveillances of FHI <sup>(b)</sup>
- Tab 6 - Fac Rep Surveillances of BHI <sup>(b)</sup>
- Tab 7 - Fac Rep Surveillances of BMI <sup>(b)</sup>
- Tab 8 - Point of Contact (POC) List
- Tab 9 - Requirements Listing

<sup>(a)</sup> Assessment/Surveillance Areas for FHI, BHI, and BMI under Tabs 1, 2, and 3 above.

- 01 Management Systems
- 02 Quality Assurance
- 03 Configuration Management
- 04 Qualification & Training
- 05 Emergency Management
  
- 06 Safeguards & Security
- 07 Engineering
- 08 Construction
  
- 09 Operations
- 10 Maintenance
- 11 Radiation Protection
- 12 Fire Protection
- 13 Packaging & Transportation
- 14 Environmental Protection
- 15 Integrated Safety Management (ISMS)
- 16 Waste Management
- 17 R&D and Experimental Activities
- 18 Nuclear Safety
- 19 Occupational Safety & Health (OSHA)
- 20 Readiness Reviews

1. See RL/A&E (Tim Corbett) for Contractor Internal Audits.
2. DOE Orders requiring DOE oversight are shown in parenthesis in the "Function / Facility" column on Tabs 1, 2, and 3.
3. Types - (A) Assessment; (S) Surveillance; (O) Other
4. Completed Assessments/Surveillances are noted by gray background with report number listed

<sup>(b)</sup> RL Facility Representative Program Surveillance Guides utilized as the basis for FHI, BHI, and BMI surveillances under Tabs 5, 6, and 7 above.

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| <ul style="list-style-type: none"> <li>MSS 1 1 - Corrective Action/Issue Mgmt.</li> <li>QAS 2.1 - Nonconforming Conditions</li> <li>QAS 2.1 - Nonconforming Conditions</li> <li>QAS 2.3 - Procurement</li> <li>QAS 2.4 - Instrument Calibration</li> <li>QAS 2.5 - Design Control</li> <br/> <li>QAS 2.6 - Quality Assurance Records</li> <li>CMS 3.1 - Configuration Management Implementation</li> <li>TQS 4.1 - Class Room Training</li> <br/> <li>TQS 4.1 - On-the-Job Training</li> <li>TQS 4.3 - Training Program Content</li> <li>ENS 7.1 - Definition of Design Requirements</li> <li>CPS 8.1 - Hoisting and Rigging</li> <li>CPS 8.2 - Trenching and Excavation</li> <li>OPS 9.1 - Operations Organization &amp; Admin</li> <li>OPS 9.1 - Operations Organization &amp; Admin</li> <li>OPS 9.3 - Control Area Activities</li> <li>OPS 9.4 - Communications</li> <li>OPS 9.5 - Control of On-Shift Training</li> <li>OPS 9.6 - Investigation of Abnormal Events</li> <li>OPS 9.7 - Notifications</li> <li>OPS 9.8 - Control of Equip &amp; Sys Status</li> <li>OPS 9.9 - Lockout &amp; Tagout</li> <li>OPS 9.10 - Independent Verification</li> <li>OPS 9.11 - Logkeeping</li> <br/> <li>OPS 9.12 - Operations Turnover</li> <li>OPS 9.13 - Facility Chemistry/Unique Process</li> <li>OPS 9.14 - Required Reading</li> <li>OPS 9.15 - Timely Orders to Operators</li> <li>OPS 9.16 - Procedure Content &amp; Use</li> </ul> | <ul style="list-style-type: none"> <li>MAS 10.3 - Seasonal Preparation</li> <li>RPS 11.1 - ALARA Programs</li> <li>RPS 11.2 - Radiological Work Practices</li> <li>RPS 11.3 - Radiological Work Permits</li> <li>RPS 11.4 - Rad Control Barriers &amp; Postings</li> <li>RPS 11.5 - Radiological Monitoring &amp; Surveys</li> <br/> <li>FPS 12.1 - Life Safety</li> <li>FPS 12.2 - Fire Protection and Prevention</li> <li>PTS 13.1 - Rad &amp; Haz Material Transportation</li> <br/> <li>PTS 13.2 - Packaging/Shipping Preparation</li> <li>ERS 14.1 - RCRA Compliance</li> <li>ERS 14.2 - Emissions Monitoring</li> <li>ERS 14.3 - Toxic Substances Control Act</li> <li>ERS 14.4 - Underground Storage Tanks</li> <li>WMS 16.1 - Waste Management Activities</li> <li>WMS 16.2 - Facility Waste Tracking Records</li> <li>NSS 18.1 - Criticality Safety</li> <li>NSS 18.2 - Technical Safety Requirements</li> <li>NSS 18.3 - Verification of Auth. Basis</li> <li>NSS 18.4 - Unreviewed Safety Questions</li> <li>OSS 19.1 - Personal Protective Equipment</li> <li>OSS 19.2 - Electrical Safety</li> <li>OSS 19.3 - Confined Space</li> <li>OSS 19.4 - Pressure Safety</li> <li>OSS 19.5 - Haz Waste Ops and Emer Response</li> <br/> <li>OSS 19.7 - Ergonomics</li> <li>OSS 19.8 - Heat Stress</li> <li>OSS 19.9 - Industrial Hygiene</li> <li>OSS 19.10 - Barriers and Postings</li> <li>OSS 19.11 - Injury &amp; Illness Record Keeping</li> </ul> |  |
|--|--|--|

OPS 9.17 - Control of Procedures/Op Aids  
OPS 9.18 - Equipment & Piping Labeling  
MAS 10.1 - ISMS/Maintenance Activities  
MAS 10.2 - Control of Measuring/Test Equip.

OSS 19.12 - Chemical Safety  
OSS 19.13 - Worker Protection  
EMS 21.1 - Emergency Prepare Interviews  
EMS 21.2 - Emergency Management Program

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of FHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org / Duration in Weeks	Function / Facility	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWS/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area
<b>01 Management Systems</b>																			
1	RL/A&E	2 (A&E)	Employee Concern Program Review	A															May-01
2	RL/RCA		Managing Regulatory Agency Issued Environmental Enforcement and Compliance Documents and Direction	A														Apr-01	
3	RL/OSS		Disposition of RL Personal Property	A														Jul-01	
4	RL/PRO		PRO Compliance Review	A															6/1-7/15/01
5	HQ-EM		FY2000 Year-End review	O															11/13-15/00
6	HQ-EM		FY2001 Mid-Year review	O															May-01
7	RL/A&E		FY2000 BMOP Review	A															2/5-20/01
8	RI/FIN		CFO/EM Review of Overhead Practices	A															3QFY01
9	RL/BUD	BUD/ 5FTE	Contractor Estimate Budget Validation (DOE Q 130.1)	A															Annually (Apr-July)
10	RL/A&E	Melling	Management Control & Financial Management System Review in accordance with FMFIA (DOE Q 413.1)	A															Annually Oct
11	RL/A&E		FY00 Fee Evaluation	A															1QFY01
12	L/FIN Deno	5 FIN	Financial System Adequacy Determination	A															Aug-01
<b>02 Quality Assurance</b>																			
1	RL/ESD	ESD-5	Adequacy of QAP and verify effective implementation of corrective actions on safety issues (DOE Q 414.1)	A															Apr-01
<b>Contractor Internal (Independent) Oversight of Performing Organizations</b>																			
1	TRU QA		WRAP (NDA, NDE, VE, and Container Control Calibration			Sep-00													
2	TRU QA		Management Assessment																Dec-00
3	TRU QA		TRU Site Office																Jan-00
4	TRU QA		Corrective Action Implementation																Feb-00
5	TRU QA		Operational Process																Mar-00
6	TRU QA		Acceptable Knowledge																Apr-00
7	TRU QA		Sample Control (labs)																May-00
8	TRU QA		Records Management																Jun-00
9	TRU QA		M&TE																Jul-00
10	TRU QA		Training																Aug-00
11	TRU QA		Laboratory (Analytical Process)																Sep-00
12	TRU QA		Transportation / Packaging																
13	TRU QA		WRAP			Nov-00													
14	TRU QA		Software QA																Dec-00
15	TRU QA		PFP for WIPP Readiness (unscheduled)																
16	Contractor																		
<b>03 Configuration Management</b>																			
<b>04 Qualification &amp; Training</b>																			
1	RL/OTS	OTS 1	Training & Drills at WMH Facilities	A		Jan-01													Jan-01
2	RL/OTS	OTS 1	Operations Oral Boards at SNF	A	2QFY01														
3	RL/OTS	OTS 1	FFTF Upgrades - Contingency Plans	A								4QFY01							
4	RL/OTS	OTS 1	Overall look at emergency response personnel for training to enter nuclear facilities	A															Mar-01

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of FHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org / Duration In Weeks	Function / Facility	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWSD/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area
<b>05 Emergency Management</b>																			
1	DOE/HQ		DOE Transportation Emerg Mgt	A												10/23-11/3/00			
2			Emergency Preparedness (DOE O.151.1)	A												Jun-01			Annually
<b>06 Safeguards &amp; Security</b>																			
1	RU/SES		Personal Security	A															Mar-01
2	RU/SES		MC&A	A															Apr-01
3	RU/SES		Firearms Special Survey (DOE O 440.1A)	A															May-01
4	RU/FFTF	Sites/1	Security	A								Jun-01							
<b>07 Engineering</b>																			
<b>08 Construction</b>																			
<b>09 Operations</b>																			
1	RU/FFTF	Chaplin/1	Operator Aid Postings	A								Aug-01							
2	RU/FFTF	Chaplin/1	Logkeeping	A								Sep-01							
3	RU/FFTF	Chaplin/1	Operations Turnover	A								Sep-01							
<b>Contractor Internal (Independent) Oversight of Performing Organizations</b>																			
1	FEB		River Corridor Project																Dec-00
2	FEB		Waste Management Project			Jan-01			Jan-01										
3	FEB		FFTF												Feb-01				
4	FEB		Analytical Services/WSCF				Apr-01												
5	FEB		Nuclear Materials Stabilization (PFP)					May-01											
6	FEB		Spent Nuclear Fuel		Jul-01														
<b>10 Maintenance</b>																			
<b>11 Radiation Protection</b>																			
<b>12 Fire Protection</b>																			
1	RL /ESD	1 (ESD)	Comprehensive of Program Elements (DOE O 420.1)	A															Jan-01
<b>13 Packaging &amp; Transportation</b>																			
1	RU/FFTF	Sites/1	Packaging and Shipping	A								Mar-01							
2	RU/OSS Claussen	6-8 (OSS) 1 week	Transportation Comprehensive Evaluation/ Assistance Review (DOE O 460.2)	A												May-01			
<b>14 Environmental Protection</b>																			
1	RU/A&E		T Plant Complex - LDR	A															
2	RU/A&E		242-A Evaporator - LDR	A															
3	RU/A&E		241-Z Treatment and Storage Tanks - LDR	A				Nov-00											
4	RU/A&E		B Plant Complex	A														Dec-00	
5	RU/A&E		222-S Laboratory Complex - LDR	A			Jan-01												

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of FHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org / Duration in Weeks	Function / Facility	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWSD/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area
6	RL/A&E		Waste Receiving and Processing Facility - LDR	A		Feb-01													
7	RL/A&E		Purex Storage Tunnels - Records Review only	A															Mar-01
8	RL/A&E		224-T TRU Waste Storage/Assay Facility - LDR	A											Mar-01				
9	RL/A&E		Central Waste Complex - LDR	A		Apr-01													
10	RL/A&E		Waste Encapsulation and Storage Facility - LDR	A				Apr-01											
11	RL/A&E		Low-Level Bunal Ground - LDR	A		May-01													
12	RL/A&E		325 HWTU	A															Jun-01
<b>15. Integrated Safety Management (ISMS)</b>																			
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>																			
1	FEB		DynCorp ISM Annual Appraisal																Jul-01
2	FEB		Protech Hanford ISM Annual Appraisal																Jul-01
3	FEB		Fluor Hanford Hanford ISM Annual Appraisal																Sep-01
<b>16. Waste Management</b>																			
1	Carlsbad AO		WIPP Certification Audit	A		Annually													
<b>17. R&amp;D and Experimental Activities</b>																			
<b>18. Nuclear Safety</b>																			
<b>19. Occupational Safety &amp; Health (OSHA)</b>																			
1	RL/A&E/ OSS		Site Fabrication Services	A															May-01
2	RL/A&E/ OSS		Crane & Rigging/Transportation	A															May-01
3	RL/A&E/ OSS		Vehicle Maintenance	A															May-01
4	RL/A&E/ OSS		Electrical Utilities	A															May-01
5	RL/A&E/ OSS		Water Utilities	A															May-01
6	RL/A&E/ OSS		Recycling Center/PCB Storage	A															May-01
7	RL/A&E/ OSS		Maintenance Services	A															May-01
8	RL/A&E Eizaguirre	A&E 3-4 / 2 field weeks	Construction Safety / General Industry Safety (OSHA 29 CFR 1926 and 1910 topical areas)	A															3QFY01
9	RL/A&E Eizaguirre	A&E 3 / 2 field weeks	Industrial Hygiene (OSHA 29 CFR 1926 and 1910 topical areas)	A															4QFY01
10	RL/ESD	ESD 3 / 1 week	Industrial Hygiene Program (DOE O 5480 10)	A															3QFY01
11	RI/FFTF	Slites/1	Lockouts and Tagouts	A									Jan-01						
12	RL/FFTF	Chaphr/1	Inspect 100% of normally accessible cells in RCB for general condition and maintenance	A									Jan-01						

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of FHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org / Duration in Weeks	Function / Facility	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWSD/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area
13	RL/FFTF	Chaplin/I	Chemical Inventory, Storage, Handling	A								Mar-01							
14	RL/FFTF	Chaplin/I	Inspect 100% of normally accessible cells in buildings contiguous to RCB for general condition/maintenance	A								Sep-01							
<b>20. Readiness Reviews</b>																			
1	RL		PFP Magnesium Hydroxide Precipitation (ORR)																
2	RL		PFP Dash 5 Bagless Transfer and Sample and Moisture Analysis Equipment					Sep-00											
3	RL		PFP (234-SZ) Bagless Transfer System Oxide Feed Shift					TBD											
4	RL		PFP Polycube Stabilization					Feb-01											
5	RL		PFP Plutonium Stabilization and Handling System (PuSH) Outer Can Welding and Leak Detector Equipment					Apr-01											
6	RL		PFP PuSH					Aug-01											
7	RL		324 Liquid Waste Handling System										TBD						
8	RL		200 Area ADP; 244T Characterization																TBD
9	RL		201 Area ADP, 231Z Characterization																TBD
10	RL		202 Area ADP, 209E Facility Work																TBD
11	RL		FSS-ADP, Relocation of approx 950MTU to the 200 Area																TBD
12	RL		T Plant Fuel Removal																Sep-01
13	RL		T Plant Dry Sludge Storage																TBD
14	RL		T Plant Wet Sludge Storage																TBD
15	RL		Fuel Retrieval - KW Basin to CBD		Oct-00														
16	RL		Fuel Retrieval - KE Basin to CBD		TBD														
17	RL		Sludge Retrieval from KE and KW		TBD														
18	RL		KW Basin Fuel Retrieval System and Integrated Water Treatment System - RA																
19	RL		SNF Project ORR - Part I																
20	RL		SNF Project ORR - Part II																
<b>Contractor Internal (Independent) Oversight of Performing Organizations</b>																			
1	Contractor		FFTF Solid Waste Cask (RA)									TBD							
2	Contractor		PFP Magnesium Hydroxide Precipitation (ORR)					Sep-00											
3	Contractor		PFP Dash 5 Bagless Transfer and Sample and Moisture Analysis Equipment					Sep-00											
4	Contractor		PFP (234-SZ) Bagless Transfer System Oxide Feed Shift					TBD											
5	Contractor		PFP Polycube Stabilization					Feb-01											
6	Contractor		PFP Plutonium Stabilization and Handling System (PuSH) Outer Can Welding and Leak Detector Equipment					Apr-01											
7	Contractor		PFP PuSH					Aug-01											
8	Contractor		324 Liquid Waste Handling System										TBD						
9	Contractor		200 Area ADP; 244T Characterization																FY01
10	Contractor		T Plant Fuel Removal																
11	Contractor		T Plant Dry Sludge Storage																
12	Contractor		T Plant Wet Sludge Storage																
13	Contractor		Fuel Retrieval - KW Basin to CBD		Sep-00														
14	Contractor		Sludge Retrieval from KE and KW		TBD														



**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of FHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org. / Duration in Weeks	Function / Facility	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWSD/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area	
15	Contractor		KW Basin Fuel Retrieval System and Integrated Water Treatment System		Sep-00															

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of BHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org./ Duration in Weeks	Function / Facility	Type	D&D / Interim Safe Storage Project (ISSP)	Remedial Action / Waste Disposal / ERDF	Ground-water Vadose Zone	Surveillance & Maintenance (S&M) / Transition	233-S	Other	BHI Program Area
<b>01 Management Systems</b>											
1	RL/A&E	2 (A&E)	Employee Concern Program Review	A							Mar-01
2	RL/A&E		FY2000 BMOP Review	A						1/18-30/01	
3	RL/ERD	2FTE/1Wk	Rebaselining ERC to Revised WBS/PBS	A						02/01/01	
4	RL/BUD	BUD/ 5FTE	Contractor's Estimate Budget Validation Reviews (DOE O 130.1)	A							Annually (Apr-July)
5	RL/A&E	Melling	Management Control & Financial Management System Review (DOE O 413.1)	A						Annually Oct	
6	RL/A&E		FY00 Fee Evaluation	A						1QFY01	
7	RL/FIN Kuon	5 FIN	Financial System Adequacy Determination	A						Aug-01	
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Obtaining Services from Other Site Contractors (BHI-MA-02, proc 3 3)	A							Oct-00
2	BHI/CQP		Control of Subcontractors	A							Feb-01
3	BHI/CQP		Work Control	A							Aug-01
4	BHI/CQP		Document and Information Services (BHI-MA-02, Section 1 0)	A							Sep-01
5	BHI/CQP		Procurement	A							Jul-01
<b>02 Quality Assurance</b>											
1	RL/ESD	ESD-5	Adequacy of QAP and verify effective implementation of corrective actions on safety issues (DOE O 5700.6C)	A							Apr-01
<b>Contractor Internal (Independent) Oversight of Performing Organizations</b>											
1	BHI/CQP		Control of Nonconforming Items (BHI-MA-01) Field Support.	A							Jan-01
2	BHI/CQP		Control of Material and Equipment	A							Dec-00
3	BHI/CQP		222-S/WSEF Laboratories	A							Jan-01
4	BHI/CQP		Software QA - (Configuration Management / Identification)	A		Jan-01					Jan-01
5	BHI/CQP		Data Package Processing (Receipt through Validation including Data Validator)	A	Mar-01						
6	BHI/CQP		Software QA - (Configuration Mgt /Design Control)	A							May-01
7	BHI/CQP		Software QA - (Configuration Mgt /Status Accountin	A							Jul-01
8	BHI/CQP		Software QA - (Configuration Mgt /Audits)	A							Sep-01
9	BHI/CQP		Suspect/Counterfeit Item Control	A							Jun-01
10	BHI/CQP		DataChem - Cincinnati, OH	A							
11	BHI/CQP		Severn Trent - Richland, WA	A							Feb-01
12	BHI/CQP		Severn Trent - St. Louis, MO	A							Apr-01
13	BHI/CQP		Recre :ab Met - Lionville, PA	A							May-01
14	BHI/CQP		Thermal Retec - Richmond, CA	A							Jun-01
<b>03 Configuration Management</b>											
<b>04 Qualification &amp; Training</b>											

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of BHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org. / Duration in Weeks	Function \ Facility	Type	D&D \ Interim Safe Storage Project (ISSP)	Remedial Action / Waste Disposal / ERDF	Ground-water Vadose Zone	Surveillance & Maintenance (S&M) / Transition	233-S	Other	BHI Program Area
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Training	A						Postponed	
<b>05 Emergency Management</b>											
1	RL/A&E		Emergency Preparedness (DOE Q 151.1)	A							Feb-01
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Emergency Management (BHI-SH-03)	A						Mar-01	
<b>06 Safeguards &amp; Security</b>											
<b>07 Engineering</b>											
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Engineering & Technology (Configuration Control / Design Control)	A						May-01	
<b>08 Construction</b>											
<b>09 Operations</b>											
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		233-S Pu Concentration Facility	A					Postponed		
2	BHI/CQP		Remedial Action and Waste Disposal Project	A							
3	BHI/CQP		Decommissioning Projects	A	Postponed						
4	BHI/CQP		Groundwater/Vadose Zone Integration Project	A			Jan-01				
5	BHI/CQP		Hanford Generating Plant	A		Feb-01					Feb-01
6	BHI/CQP		Surveillance/Maintenance and Transition Projects	A				Apr-01			
<b>10 Maintenance</b>											
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Freeze Protection	A							
<b>11 Radiation Protection</b>											
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Radcon (Review of Self-Assessment Program)	A							Nov-00
2	BHI/CQP		Radiological Release	A							Feb-01
3	BHI/CQP		Radiological Material Storage Areas	A							Feb-01
4	BHI/CQP		Environmental Radiation Measurement	A							Aug-01
<b>12 Fire Protection</b>											

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	Lead / Point of Contact	FTE by Org./ Duration in Weeks	Function \ Facility	Type	D&D \ Interim Safe Storage Project (ISSP)	Remedial Action / Waste Disposal / ERDF	Ground-water Vadose Zone	Surveillance & Maintenance (S&M) / Transition	233-S	Other	BHI Program Area
1	RL/ESD	1 (ESD)	Comprehensive of Program Elements (DOE O 420.1)	A						Jan-01	
<b>13 Packaging &amp; Transportation</b>											
<b>14 Environmental Protection</b>											
1	RL/A&E Chalk	2 (A&E) / 3	B-Plant Complex	A						Dec-00	
2	RL/A&E Chalk	3 (A&E) / 1	Purex Storage Tunnels - Record Review Only	A						Feb-01	
3	RL/ERD	2FTE/1Wk	CERCLA Waste Management Processes	A	Jul-01	Apr-01	May-01	Jun-01	Aug-01		
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		IDW Waste/CERCLA (Pump & Treat)	A			CQP-00-14 / CNN 083760				
2	BHI/CQP		Treatment, Storage, Disposal Facilities	A		Oct-00 (5); Jan-01 (5); Apr-01 (5); Jul-01 (5)	Oct-00 (5); Jan-01 (5); Apr-01 (5); Jul-01 (5)	Oct-00 (5); Jan-01 (5); Apr-01 (5); Jul-01 (5)			
3	BHI/CQP		<90-Day Pads	A				Nov-00, May-01			
4	BHI/CQP		Satellite Accumulation Areas	A			Nov-00, May-01	Nov-00; May-01			
5	BHI/CQP		Lead	A						Feb-01	
6	BHI/CQP		CERCLA Waste Management (233-S)	A					Jun-01		
7	BHI/CQP		B Plant Stacks (296-B-1, 296-B-2)	A				Apr-01			
8	BHI/CQP		S and U Stacks (291-S-1; 296-S-2; 291-U-1)	A				Jun-01			
9	BHI/CQP		233-S Stacks (296-S-7E; 3-6-9 Exhauster)	A					Jul-01		
10	BHI/CQP		100N Water Plant	A						Dec-00	
<b>15 Integrated Safety Management (ISMS)</b>											
1	RL/ERD	2FTE/1Wk	Post ISMS Validation Audit	A						Feb-01	
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		ISMS Validation	A						Jan-01	
<b>16 Waste Management</b>											
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Performance of Waste Container Haul Trucks	A		Jan-01					
2	BHI/CQP		L-18 Contractor, Equipment, Vessel Dismantle	A							
<b>17 R&amp;D and Experimental Activities</b>											
<b>18 Nuclear Safety</b>											
<b>19 Occupational Safety &amp; Health (OSHA)</b>											
1	RL/A&E		ERC Lock and Tag Audit	A						3/13 - 4/24/00	
2	RL/ESD	ESD 3 / 1 week	Industrial Hygiene Program (DOE O 5480.10)	A							3QFY01

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES of BHI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org. / Duration in Weeks	Function \ Facility	Type	D&D \ Interim Safe Storage Project (ISSP)	Remedial Action / Waste Disposal / ERDF	Ground-water Vadose Zone	Surveillance & Maintenance (S&M) / Transition	233-S	Other	BHI Program Area
3	A&E / Eizaguirre	A&E 3-4 / 2 Field weeks	Construction Safety at ERC Projects	A						3QFY01	
4	A&E / Eizaguirre	A&E 1 / 3 weeks	Contractor OSH Self Assessment - OSHA topical areas	A						2QFY01 4QFY01	
<b>Contractor Internal (Independent) Oversight of Performing Organizations (Level B)</b>											
1	BHI/CQP		Chemical Management	A							Feb-01
2	BHI/CQP		Lockout and Tagout	A							Feb-01
3	BHI/CQP		Hoisting and Rigging	A							Mar-01
4	BHI/CQP		Hearing Conservation	A							Apr-01
5	BHI/CQP		Welding Control	A							Jun-01
6	BHI/CQP		Industrial Hygiene (Facility and Field/QAPP)	A							Jul-01
7	BHI/CQP		Project Safety Planning and Documentation	A							Aug-01
8	BHI/CQP		Fall Protection	A							Sep-01
9	BHI/CQP		Beryllium	A							Jun-01
10	BHI/CQP		Respiratory Protection	A							May-01
<b>20 Operational Readiness Reviews (ORR)</b>											
1	BHI/RAWD		100B/C Pipeline Remediation	RA		Feb-01					
2	BHI/RAWD		618-4 Burial Ground Drum Excavation	RA		Jun/Jul-01					

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES OF BMI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org/ Duration In Weeks	Function \ Facility	Type	Business / Financial Management	Nuclear Facilities	300 Area Non-nuclear Facilities	RCHN Non-nuclear Facilities	Other	BMI Program Area
<b>01 Management Systems</b>										
1	RL/A&E		FY2000 BMOP Review	A						
2	RL/FIN		CFO/SC Review of Overhead Practices	A	3QFY01					
3	RL/AMT	12 /	Year End Eval FY00 Critical Outcomes	A						
4	RL/AMT	10 / 5 days	Year End Eval FY00 Self Assessment	A						
5	RL/BUD	BUD/ .5FTE	Contractor Estimate Budget Validation Reviews (DOE O 130.1)	A						Annually (Apr-July)
6	RL/A&E	Melling	Management Control & Financial Management System Review (DOE O 413.1)	A					Annually Oct	
7	RL/A&E Eizaguire	A&E 1 / 3 weeks	Contractor OSH Self Assessments - OSHA topical areas	S						2QFY01, 4QFY01
8	RL/A&E		FY00 Fee Evaluation	A						
9	L/FIN Mend	.5 FIN	Financial System Adequacy Determination	A					Aug-01	
<b>02 Quality Assurance</b>										
1	RL/ESD	ESD-5	Adequacy of QAP and verify effective implementation of corrective actions on safety issues. (DOE O 414.1A)	A					Apr-01	
<b>03 Configuration Management</b>										
<b>04 Qualification &amp; Training</b>										
<b>05 Emergency Management</b>										
<b>06 Safeguards &amp; Security</b>										
1	RL/SES		PNNL CMPC Special Survey	A						Apr-01
2	RL/SES (B. Rogers)	1 (SES), 1 (A&E)/3 day	Classified Matter Protection and Control Special Survey (DOE O 470)	A						Apr-01
<b>07 Engineering</b>										
<b>08 Construction</b>										
<b>09 Operations</b>										

**RL INTEGRATED EVALUATION PLAN - ASSESSMENTS/SURVEILLANCES OF BMI (12/20/00 revision)**

	Lead / Point of Contact	FTE by Org./ Duration In Weeks	Function \ Facility	Type	Business / Financial Management	Nuclear Facilities	300 Area Non-nuclear Facilities	RCHN Non-nuclear Facilities	Other	BMI Program Area
1	HQ/SC	HQ-21; Other Site Offices - 9 / 12 weeks	HQ Office os Science Landlord Review of PNNL Facilities and Operations	R						
<b>10 Maintenance</b>										
<b>11 Radiation Protection</b>										
<b>12 Fire Protection</b>										
1	RL/ESD	1 (ESD)	Comprehensive of Program Elements (DOE O. 420.1)	A						Jan-01
<b>13 Packaging &amp; Transportation</b>										
<b>14 Environmental Protection</b>										
<b>15 Integrated Safety Management (ISMS)</b>										
<b>16 Waste Management</b>										
<b>17 R&amp;D and Experimental Activities</b>										
<b>18 Nuclear Safety</b>										
1	HQ/EH-10		PNNL PAAA Program Assessment	A						
<b>19 Occupational Safety &amp; Health (OSHA)</b>										
1	RL/ESD	ESD 3 / 1 week	Industrial Hygiene Program per DOE 5480.10)	A						3QFY01
2	RL/A&E Eizaguirre	A&E 1 / 3 weeks	Contractor OSH self assessment - OSHA topical areas	S						2QFY01 4QFY01
3	HQ/EH	11 - HQ and other sites / 9 weeks	HQ/EH Voluntary Protection Program (VPP) Review of PNNL's VPP	A					Apr-Jun-01	
<b>20 Operational Readiness Reviews (ORR)</b>										

## RL INTEGRATED EVALUATION PLAN - RL SELF ASSESSMENTS (12/20/00 revision)

	Assessment Title / Subject	RL Point of Contact / Organization	FTE (ORG) / Duration in Weeks	Planned Performance Date(s)	
<b>RIMS Management System Assessments</b>					
1	Environmental Management (Managing Regulatory Agency Issued Environmental Enforcement and Compliance Documents and Direction)	R. Krekel / OSS		4/9/01	
2	RL Integrated Management	S. Einan / AMI	6 (AMI) / 2	4QFY01	(HRMAP)
3	Safety and Health Management	K. Benguiat / ESD	6 (ESD) / 2	3QFY01	
4	Security and Emergency Services	R. Myjak / SES		4QFY01	
5	Integrated Planning (Mission Planning)	J. Kautzky / MPD		3QFY01	
6	Asset and Infrastructure Management (Disposition of RL Personal Property)	S. Ortiz / OSS		7/9/01	
7	Communications Management	F. Miera / IPI	4 (IPI)	4QFY01	
8	Human Resources	C. Pierce / HRM	4 (HRM) /	2QFY01	
9	Regulatory Inspection & Enforcement	N. Moorner / OPE	1 (A&E) /	3QFY01	
10	Acquisition Management	M. Roske / PRO	6 (PRO) / 1	3QFY01	
11	Performance Improvement	R. Gerton / ERD	2 (ERD) / 1	3QFY01	
12	Financial Management	J. Ward / BUD		7/31/01	
13	Information Management (May determine this management system is not needed)	M. Blancq		4QFY01	
14	Integrated Performance Evaluation	N. Moorner / OPE	2 (A&E) /	3QFY01	
<b>Organizational Specific</b>					
1	Managing Reg. Agency Issued Environmental Direction	Krekel / OSS		4/9/01	
2	BMOP Self Assessment to HQ (RL)	Corbett/A&E		1/15/01	
3	RL/BUD Self Assessment against HQ-CFO BMOP Measures	Massey/BUD		Dec - Annually	
4	Summary Management Review - Federal Mgr. Financial Integrity Act (DOE O 413.1)	Melling/A&E	all RL	Aug - Annually	
5	Federal Employee Occupational Safety and Health Program (FEOSH)	Eizaguirre/A&E	1 (A&E) / 2 week	1QFY01	
6	RL/FIN Self Assessment against HQ-CFO BMOP measures.	Kuon/FIN		Dec - Annually	
7	Asbestos Survey of Federal Building Office Spaces.	Eizaguirre/A&E	1 (A&E) / 1 week		
<b>HQ/Regulatory/Other - SMB Baseline</b>					



**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCE of FHI (12/20/00 revision)**

Surveillance Guide Number	Surveillance Guide Title	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/Disposal (SWSD/WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (FPF)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area
1	MSS 1 1	Corrective Action/Issue Mgmt	S	000-01	May-01			2QFY01 ETF/TEDF	4QFY01		3QFY01			3QFY01			
2	QAS 2 1	Nonconforming Conditions	S	3QFY01	Oct-00				4QFY01	2QFY01			3QFY01	3QFY01			
3	QAS 2 2	Staging/Storage of Components	S		Mar-00	3QFY01				2QFY01							
4	QAS 2 3	Procurement	S	000-01	Sep-00		4QFY01		4QFY01								
5	QAS 2 4	Instrument Calibration	S		Mar-00			1QFY01	1QFY01 ETF			4QFY01					
6	QAS 2 5	Design Control	S		Sep-00												
7	QAS 2 6	Quality Assurance Records	S	000-01	Mar-00			4QFY01 242A		3QFY01							
8	CMS 3 1	Configuration Management / Control of Drawings and Safety Documents	S		Oct-00		4QFY00	1QFY01 ETF & TEDF									
9	CMS 3 3	Verification of System Configuration and Operations	S	000-01													
10	TQS 4 1	Class Room Training	S				3QFY01										
11	TQS 4 2	On-the-Job Training	S			4QFY01											
12	TQS 4 3	Training Program Content	S														
13	ENS 7 1	Definition of Design Requirements	S														
14	CPS 8 1	Hoisting and Rigging	S			3QFY01				4QFY01		000-01	1QFY01				
15	CPS 8 2	Trenching and Excavation	S														
16	OPS 9 1	Operations Organization & Admin	S	000-01	Nov-00		4QFY01							2QFY01			3QFY01
17	OPS 9 2	Shift Routines/Op Practices	S		000-01			1QFY01 ETF / 242A		1QFY01	2QFY01		1QFY01	1QFY01			
18	OPS 9 3	Control Area Activities	S	2QFY01	Jan-01	1QFY01	000-01			2QFY01							1QFY01
19	OPS 9 4	Communications	S														
20	OPS 9 5	Control of On-Shift Training	S	1QFY01		2QFY01											
21	OPS 9 6	Investigation of Abnormal Events	S	000-01		2QFY01			2QFY01								1QFY01
22	OPS 9 7	Notifications	S			3QFY01				S-01-000- 200-ADP- 001				2QFY01			
23	OPS 9 8	Control of Equip & Sys Status	S	1QFY01										2QFY01			1QFY01
24	OPS 9 9	Lockout & Tagout	S	000-01		4QFY01	1QFY01							3QFY01			1QFY01
25	OPS 9 10	Independent Verification	S														
26	OPS 9 11	Logkeeping	S		Jul-01						3QFY01			1QFY01			4QFY01
27	OPS 9 12	Operations Turnover	S			2QFY01	2QFY01				1QFY01						
28	OPS 9 13	Facility Chemistry/Unique Process	S	2QFY01													
29	OPS 9 14	Required Reading	S	3QFY01		1QFY01					4QFY01	4QFY01					
30	OPS 9 15	Timely Orders to Operators	S	4QFY01	Apr-01										2QFY01		
31	OPS 9 16	Procedure Content & Use	S	000-01				4QFY01 ETF / TEDF						4QFY01			
32	OPS 9 17	Control of Procedures/Op Aids	S				4QFY01							2QFY01			2QFY01
33	OPS 9 18	Equipment & Piping Labeling	S														2QFY01
34	MAS10 1	ISMS/Maintenance Activities	S		Feb-01		1QFY01				4QFY01						2QFY01 4QFY01
35	MAS 10 2	Control of Measuring/Test Equip	S														

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCE of FHI (12/20/00 revision)**

	Surveillance Guide Number	Surveillance Guide Title	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWSD/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities Utilities	B Plant	Other	FHI Program Area
36	MAS 10.3	Seasonal Preparation	S							S-01-00D-200-ADP-001			1QFY01	4QFY01				
37	RPS 11.1	ALARA Programs	S	1QFY01	Nov 00			3QFY01				1QFY01						
38	RPS 11.2	Radiological Work Practices	S	Quarterly		2QFY01	1QFY01		3QFY01 ETF/242A		1QFY01							
39	RPS 11.3	Radiological Work Permits	S	1QFY01	May 01		1QFY01							3QFY01				
40	RPS 11.4	Rad Control Barriers & Postings	S					3QFY01	2QFY01 340		1QFY01		2QFY01					
41	RPS 11.5	Radiological Monitoring & Surveys	S	1QFY01				3QFY01			1QFY02	2QFY01 4QFY01						
42	FPS 12.1	Life Safety	S	2QFY01	Oct-01				3QFY01		4QFY01							
43	FPS 12.2	Fire Protection and Prevention	S	3QFY01	Jan-01	1QFY01	3QFY01	4QFY01	3QFY01		4QFY01							
44	PIS 13.1	Rad & Haz Material Transportation	S	1QFY01					3QFY01		3QFY01	3QFY01	2QFY01					
45	PIS 13.2	Packaging/Shipping Preparation	S	4QFY01							3QFY01							
46	ERS 14.1	RCRA Compliance	S		Dec-01									1QFY01				
47	ERS 14.2	Emissions Monitoring	S				3QFY01		3QFY01				3QFY01					
48	ERS 14.3	Toxic Substances Control Act	S		Nov 01													
49	ERS 14.4	Underground Storage Tanks	S															
50	WMS 16.1	Waste Management Activities	S	3QFY01					1QFY01									
51	WMS 16.2	Facility Waste Tracking Records	S	4QFY01	Aug-01				1QFY01									
52	NSS 18.1	Criticality Safety	S	4QFY00	Dec-00	4QFY01												
53	NSS 18.2	Technical Safety Requirements	S	1QFY01	Oct-01		2QFY01		1QFY01 242A									
54	NSS 18.3	Verification of Auth Basis	S		Feb-01			4QFY01				2QFY01		4QFY01				
55	NSS 18.4	Unreviewed Safety Questions	S		Apr-01													
56	OSS 19.1	Personal Protective Equipment	S						4QFY01 ETF									
57	OSS 19.2	Electrical Safety	S															
58	OSS 19.3	Confined Space	S	2QFY01		3QFY01												
59	OSS 19.4	Pressure Safety	S															
60	OSS 19.5	Haz Waste Ops and Emerg Resp	S	1QFY01		3QFY01								1AFY01				
61	OSS 19.7	Ergonomics	S															
62	OSS 19.8	Heat Stress	S	4QFY01														
63	OSS 19.9	Industrial Hygiene	S															
64	OSS 19.10	Barriers and Postings	S									4QFY01						
65	OSS 19.11	Injury & Illness Record Keeping	S	1QFY01		2QFY01												
66	OSS 19.12	Chemical Safety	S											2QFY01	4QFY01			
67	OSS 19.13	Worker Protection	S	2QFY01														
68	EPA 20.1	Env Restoration & Env Protection	S															
69	EMS 21.1	Emergency Prepare Interviews	S		Jun-00	1QFY01								1QFY01				
70	EMS 21.2	Emergency Management Program	S		Jun-00			4QFY01			2QFY01		3QFY01	4QFY01	3QFY01			
71	Emergent Issue	Last T Hopper Movement and Material Inventory Shipment Off-Site and Biennial Inventory, 300 Area Fuel and Uranium Billet Biennial Inventory	S															

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCE of FHI (12/20/00 revision)**

Surveillance Guide Number	Surveillance Guide Title	Type	Spent Nuclear Fuel (SNF)	Solid Waste Storage/ Disposal (SWSD/ WRAP)	Labs (222-S/ WSCF)	Pu Finish Plant (PFP)	Waste Encap. & Storage (WESF)	Liquid Effluent (ETF/242A/ TEDF/340)	200/300 Area ADP (Accel. Deact.)	Fast Flux Test Facility (FFTF)	Bldg. 324	Bldg. 327	T-Plant	Support Facilities /Utilities	B Plant	Other	FHI Program Area
72	Satellite Accumulation Area																
73	Backshift and Weekend Tours																

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCES of BHI (12/20/00 revision)**

	Surveillance Guide Number	Surveillance Guide Title	Type	General / Other	Interim Safe Storage Project (ISSP)	Remedial Action / Waste Disposal / ERDF	Ground-water Vadose Zone	Surveillance & Maintenance (S&M) / Transition	D & D	233-S	BHI Program Area
1	MSS 1 1	Corrective Action/Issue Mgmt	S					4QFY01			
2	QAS 2.1	Nonconforming Conditions	S					1QFY01		1QFY01	
3	QAS 2.2	Staging/Storage of Components	S		Oct-00		Oct-00	1QFY01		1QFY01	
4	QAS 2.3	Procurement									
5	QAS 2.4	Instrument Calibration	S				Mar-01				
6	QAS 2.5	Design Control	S			Apr-01	Apr-01				
7	QAS 2.6	Quality Assurance Records	S		Sep-01	Sep-01	Sep-01	2QFY01		2QFY01	
8	CMS 3.1	Configuration Management / Control of Drawings and Safety Documents	S				May-01				
9	CMS 3.3	Verification of System Configuration and Operations									
10	TQS 4.1	Class Room Training									
11	TQS 4.2	On-the-Job Training									
12	TQS 4.3	Training Program Content									
13	ENS 7.1	Definition of Design Requirements									
14	CPS 8.1	Hoisting and Rigging	S				3QFY01		3QFY01		
15	CPS 8.2	Trenching and Excavation									
16	OPS 9.1	Operations Organization & Admin	S								
17	OPS 9.2	Shift Routines/Op Practices									
18	OPS 9.3	Control Area Activities									
19	OPS 9.4	Communications	S					2QFY01		2QFY01	
20	OPS 9.5	Control of On-Shift Training	S				Mar-01	3QFY01		3QFY01	
21	OPS 9.6	Investigation of Abnormal Events (OPS 9.6)									
22	OPS 9.7	Notifications (OPS 9.7)	S				Oct-01				
23	OPS 9.8	Control of Equip & Sys Status	S					4QFY01		4QFY01	
24	OPS 9.9	Lockout & Tagout	S								
25	OPS 9.10	Independent Verification									
26	OPS 9.11	Logkeeping									
27	OPS 9.12	Operations Turnover	S				Dec-00				
28	OPS 9.13	Facility Chemistry/Unique Process	S		Jun-01	Jun-01					
29	OPS 9.14	Required Reading	S		Apr-01						
30	OPS 9.15	Timely Orders to Operators									
31	OPS 9.16	Procedure Content & Use	S		Dec-01	Dec-01	Dec-01				
32	OPS 9.17	Control of Procedures/Op Aids	S								
33	OPS 9.18	Equipment & Piping Labeling	S					4QFY01		4QFY01	
34	MAS 10.1	ISMS/Maintenance Activities									
35	MAS 10.2	Control of Measuring/Test Equip									
36	MAS 10.3	Seasonal Preparation									
37	RPS 11.1	ALARA Programs	S		Dec-00	Dec-00					
38	RPS 11.2	Radiological Work Practices	S		Jul-01	Jul-01	Jul-01				
39	RPS 11.3	Radiological Work Permits	S								
40	RPS 11.4	Rad Control Barriers & Postings	S		Feb-01	Feb-01					

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCES of BHI (12/20/00 revision)**

	Surveillance Guide Number	Surveillance Guide Title	Type	General / Other	Interim Safe Storage Project (ISSP)	Remedial Action / Waste Disposal / ERDF	Ground-water Vadose Zone	Surveillance & Maintenance (S&M) / Transition	D & D	233-S	BHI Program Area
41	RPS 11 5	Radiological Monitoring & Surveys	S		Feb-01	Feb-01					
42	FPS 12 1	Life Safety	S					3QFY01		3QFY01	
43	FPS 12 2	Fire Protection and Prevention	S					3QFY01			
44	PTS 13 1	Rad & Haz Material Transportation	S				Aug-02	2QFY01		2QFY01	
45	PTS 13 2	Packaging/Shipping Preparation	S					2QFY01			
46	ERS 14 1	RCRA Compliance									
47	ERS 14 2	Emissions Monitoring									
48	ERS 14 3	Toxic Substances Control Act									
49	ERS 14 4	Underground Storage Tanks									
50	WMS 16 1	Waste Management Activities									
51	WMS 16 2	Facility Waste Tracking Records									
52	NSS 18 1	Criticality Safety	S							4QFY01	
53	NSS 18 2	Technical Safety Requirements									
54	NSS 18 3	Verification of Auth Basis									
55	NSS 18 4	Unreviewed Safety Questions									
56	OSS 19 1	Personal Protective Equipment									
57	OSS 19 2	Electrical Safety									
58	OSS 19 3	Confined Space									
59	OSS 19 4	Pressure Safety									
60	OSS 19 5	Haz Waste Ops and Emerg Resp									
61	OSS 19 7	Ergonomics									
62	OSS 19 8	Heat Stress									
63	OSS 19 9	Industrial Hygiene									
64	OSS 19 10	Barriers and Postings									
65	OSS 19 11	Injury & Illness Record Keeping									
66	OSS 19 12	Chemical Safety									
67	OSS 19 13	Worker Protection	S		Jun-01						
68	EPA 20 1	Env Restoration & Env. Protection									
69	EMS 21 1	Emergency Prepare Interviews									
70	EMS 21 2	Emergency Management Program	S			Oct-00		1QFY01			

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCES of BMI (12/20/00 revision)**

	Surveillance Guide Number	Surveillance Guide Title	Type	Business / Financial Management	Nuclear Facilities	300 Area Non-nuclear Facilities	RCHN Non-nuclear Facilities	Other	BMI Program Area
1	MSS 1.1	Corrective Action/Issue Mgmt.	S		4QFY01				
2	QAS 2.1	Nonconforming Conditions							
3	QAS 2.2	Staging/Storage of Components							
4	QAS 2.3	Procurement							
5	QAS 2.4	Instrument Calibration	S			2QFY01			
6	QAS 2.5	Design Control	S				1QFY01		
7	QAS 2.6	Quality Assurance Records	S			3QFY01	4QFY01		
8	CMS 3.1	Configuration Management / Control of Drawings and Safety Documents	S		2QFY01		3QFY01		
9	CMS 3.3	Verification of System Configuration and Operations							
10	TQS 4.1	Class Room Training							
11	TQS 4.2	On-the-Job Training							
12	TQS 4.3	Training Program Content	S		3QFY01				
13	ENS 7.1	Definition of Design Requirements							
14	CPS 8.1	Hoisting and Rigging	S				1QFY01		
15	CPS 8.2	Trenching and Excavation							
16	OPS 9.1	Operations Organization & Admin	S				3QFY01		
17	OPS 9.2	Shift Routines/Op Practices	S		2QFY01 4QFY01				
18	OPS 9.3	Control Area Activities							
19	OPS 9.4	Communications							
20	OPS 9.5	Control of On-Shift Training							
21	OPS 9.6	Investigation of Abnormal Events (OPS 9.6)							
22	OPS 9.7	Notifications (OPS 9.7)							
23	OPS 9.8	Control of Equip & Sys Status							OOD-00-PNNL-29
24	OPS 9.9	Lockout & Tagout	S		4QFY01	4QFY01			
25	OPS 9.10	Independent Verification							OOD-00-PNNL-29
26	OPS 9.11	Logkeeping							
27	OPS 9.12	Operations Turnover							
28	OPS 9.13	Facility Chemistry/Unique Process	S			3QFY01			
29	OPS 9.14	Required Reading							
30	OPS 9.15	Timely Orders to Operators	S		1QFY01	2QFY01			

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCES of BMI (12/20/00 revision)**

	Surveillance Guide Number	Surveillance Guide Title	Type	Business / Financial Management	Nuclear Facilities	300 Area Non-nuclear Facilities	RCHN Non-nuclear Facilities	Other	BMI Program Area
31	OPS 9.16	Procedure Content & Use	S				2QFY01		
32	OPS 9.17	Control of Procedures/Op Aids							
33	OPS 9.18	Equipment & Piping Labeling							
34	MAS10.1	ISMS/Maintenance Activities	S				4QFY01		
35	MAS 10.2	Control of Measuring/Test Equip.							
36	MAS 10.3	Seasonal Preparation							
37	RPS 11.1	ALARA Programs	S				4QFY01		
38	RPS 11.2	Radiological Work Practices	S						
39	RPS 11.3	Radiological Work Permits	S		3QFY01	1QFY01			
40	RPS 11.4	Rad Control Barriers & Postings							
41	RPS 11.5	Radiological Monitoring & Surveys	S		1QFY01				
42	FPS 12.1	Life Safety							
43	FPS 12.2	Fire Protection and Prevention	S			2QFY01	3QFY01		
44	PTS 13.1	Rad & Haz Material Transportation							
45	PTS 13.2	Packaging/Shipping Preparation	S			1QFY01			
46	ERS 14.1	RCRA Compliance	S			3QFY01			
47	ERS 14.2	Emmissions Monitoring	S		3QFY01	1QFY01			
48	ERS 14.3	Toxic Substances Control Act	S				2QFY01		
49	ERS 14.4	Underground Storage Tanks							
50	WMS 16.1	Waste Management Activities							
51	WMS 16.2	Facility Waste Tracking Records	S				1QFY01		
52	NSS 18.1	Criticality Safety							
53	NSS 18.2	Technical Safety Requirements	S		1QFY01				
54	NSS 18.3	Verification of Auth. Basis							
55	NSS 18.4	Unreviewed Safety Questions							
56	OSS 19.1	Personal Protective Equipment							
57	OSS 19.2	Electrical Safety	S				2QFY01		
58	OSS 19.3	Confined Space							
59	OSS 19.4	Pressure Safety							
60	OSS 19.5	Haz Waste Ops and Emerg Resp							
61	OSS 19.7	Ergonomics							
62	OSS 19.8	Heat Stress							
63	OSS 19.9	Industrial Hygiene							
64	OSS 19.10	Barriers and Postings	S		2QFY01				

**RL INTEGRATED EVALUATION PLAN - FAC REP SURVEILLANCES of BMI (12/20/00 revision)**

	Surveillance Guide Number	Surveillance Guide Title	Type	Business / Financial Management	Nuclear Facilities	300 Area Non-nuclear Facilities	RCHN Non-nuclear Facilities	Other	BMI Program Area
65	OSS 19.11	Injury & Illness Record Keeping							
66	OSS 19.12	Chemical Safety							
67	OSS 19.13	Worker Protection							
68	EPA 20.1	Env. Restoration & Env. Protection							
69	EMS 21.1	Emergency Prepare Interviews							
70	EMS 21.2	Emergency Management Program							
71		Preparations to Receive Sectioned Tritium Producing Burnable Absorber Rods (ISMS Identification of Hazards)							
72		Safety Shower and Eyewash Preventive Maintenance at 300 Area Facilities				S-01-000 PNNL			





## QS Surveillance Log

Printed on 3/29/00

Surveillance Number	Date Issued	Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-001	1/10/00	Everett Adamson	RAWD	RADIOACTIVE SOURCE CONTROL.	Satisfactory	NA	A. L. Langstaff	Closed	1/7/00	Verified the Source Control Coordinator properly accounts for the above controlled sources.
QSS-00-002	1/10/00	Everett Adamson	RAWD	RADIOACTIVE SOURCE CONTROL.	Satisfactory	NA	B. D. Schilperoort	Closed	1/7/00	Verified the Source Control Coordinator properly accounts for the above controlled sources.
QSS-00-003	1/10/00	Everett Adamson	RAWD	RADIOACTIVE SOURCE CONTROL.	Satisfactory	NA	T. F. Kisenwether	Closed	1/7/00	Verified the Source Control Coordinator properly accounts for the above controlled sources.
QSS-00-004	1/4/00	Everett Adamson	RAWD	NPDES INSPECTION	Satisfactory	NA	A. L. Langstaff	Closed	1/4/00	Large tire track near east fence entrance on haul road, berm still intact, repairs not necessary.
QSS-00-005	1/24/00	Everett Adamson	RAWD	RCIE-TRANSPORTATION DOCUMENT CONTROL	Satisfactory	NA	B. P. Moyers	Closed	1/24/00	Administrative document control corrections were made by RCIE during the course of this surveillance which provided assurance of RCIE Management approval of eighteen procedures provided to ERC
QSS-00-006	3/13/00	Everett Adamson	RAWD	100-BC SMALL SITE BACKFILL	Satisfactory	NA	A. L. LANGSTAFF	closed	3/13/00	
QSS-00-007	2/17/00	Everett Adamson	RAWD	RCIE/REMEDIAL ACTION TRAINING	Satisfactory	NA	A. L. LANGSTAFF	CLOSE D	2/17/00	Randomly selected six RCI personnel folders. Training is current.
QSS-00-008	2/17/00	Everett Adamson	RAWD	RCIE Waste Transportation	Unsatisfactory	NA	B. P. Moyers	CLOSE D	2/17/00	Two persons had been hired by RCIE directly from ERC. There was inadequate follow - up of required near future training requirements by RCIE. One of the two new-hires was not up - to - date for HGET. Corrected immediately.
QSS-00-009	2/17/00	Everett Adamson	RAWD	WMFS Management Assessment Program	Satisfactory	NA	B. D. Schilperoort	CLOSE D	2/17/00	
QSS-00-010	2/17/00	Everett Adamson	RAWD	P. W. Stevens Personnel Training and Qualification program	Satisfactory	NA	T. F. Kisenwether	CLOSE D	2/17/00	Input errors were noted and corrected during the surveillance with respect to the PWS Trainig Class Attendance Report (Class # RAD-001-RWII Initial/Retraining and Class # RAD-002-RWII Refresher tracking programs).
QSS-00-011		Everett Adamson								THIS NUMBER IS CANCELLED (ela-3/1/00)
QSS-00-012	2/23/00	Jim Carson	ERDF	ERDF Leachate sampling	Unsatisfactory	CAR	A. Michael	Closed	3/29/00	
QSS-00-013		Cheryl Volkman	233-S Project	Criticality Requirements for Arrays	Satisfactory	NA	Ruben Trevino	SAT	3/16/00	
QSS-00-014		Cheryl Volkman	233-S Decommissioning project	Rigging	Satisfactory	NA	Ruben Trevino	SAT	3/16/00	



## QS Surveillance Log

Printed on 5/26/00

Surveillance Number	Date Issued	Date Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-015	3/27/00	Everett Adamson	RAWD	100B/C NPDES Inspection	Satisfactory	NA	A. Langstaff(BHI 100BC-RA Task Lead)	CLOSE D	3/27/00	Ref QSS-00-004 for initial inspections. Subsequent inspections have been conducted as required for Feb and Mar 2000. A third inspection as a result of concerns with potential storm events was also conducted on Feb. 14, 2000.
QSS-00-016	3/27/00	Everett Adamson	RAWD	RCI Environmental Self Assessment Program	Satisfactory	NA	A. Langstaff	CLOSE D	3/27/00	
QSS-00-017	3/27/00	Everett Adamson	RAWD	100H NPDES Inspection	Satisfactory	NA	T. F. Kisenwether	CLOSE D	3/27/00	Inspections have been successfully implemented since Dec. 1999. Documentation of the inspections is adequate.
QSS-00-018	3/29/00	Everett Adamson	RAWD	WMFS CERTIFICATION OF PERSONNEL.	Unsatisfactory	NA	B. D. Schilperoot	Open		Documentation of the inspections of compaction are inadequately completed by the newly certified inspector; his identification (signature, etc.) is not documented on the Nuclear Moisture/Density Data Sheet as required by Criterion 10, section 10.2.1
QSS-00-019	3/29/00	Everett Adamson	RAWD	PWS Container Condition at 100H "full container" Que	Satisfactory	NA	T. F. Kisenwether	Closed	3/29/00	PWS Site Supervisor R. M. Park stated during this surveillance to E. L. Adamson and J. W. Carson that PWS laborers would be instructed to "patrol" the Full side of the Que to assure tarping and bungie tension are adequate.
QSS-00-020	5/24/00	Everett Adamson	RAWD	K Massey (RCIE Transportation Mgr)K Massey (RCIE Transportation Mgr)	Satisfactory	NA	B. P. MOYERS	closed	5/24/00	
QSS-00-021	3/30/00	Cheryl Volkman	233-S Decommissioning Project	Analytical services performance	Unsatisfactory	CAR	WMFS	closed	3/30/00	The CAR will track the deficiencies. This surveillance report documents and will identify the "Audit" for purposes of tracking on the project.
QSS-00-022	3/31/00	Everett Adamson	RAWD	RCIE Container Condition at 100D "full container" Que	Satisfactory	NA	A. LANGSTAFF	Closed	3/31/00	Cursory inspections of seals to the extent possible as well as spacing (front to back) of containers and random checks for "Sidewinder" ratchet tightness were also conducted. Deficiencies noted were corrected in place.
QSS-00-023	4/6/00	Everett Adamson	RAWD	WMFS Container Condition at ERDF "EMPTY" QUE	Satisfactory	NA	B. P. Moyers(acting BHI ERDF Task Lead)	CLOSE D	4/6/00	Cursory inspections of seals, spacing (front to back) of containers & random checks for "Sidewinder" ratchet tightness conducted. Deficiencies corrected in place. All latches engaged, container "strong - tight" integrity appeared adequate.
QSS-00-024		Everett Adamson	RAWP	Disposal of Slug Baskets	Satisfactory	NA	B. P. MOYERS			



## QS Surveillance Log

Printed on 9/25/00

Surveillance Number	Date Issued	Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-026	4/5/00	Joan Plastino	Decommissioning	Demolition activities	Satisfactory	NA	Earl Prichard	closed	4/5/00	
QSS-00-027		Cheryl Volkman	233-S Decommissioning Project	RMS II MONTHLY TEST	Satisfactory	NA	Ruben Trevino/Jake Laws			Reviewed the log book and data sheets to determine that the monthly test had been performed. The Data sheet was missing from the Daily Log - however the Field Engineer obtained a copy. A copy was given to the Field Superintendent for the log.
QSS-00-028	4/19/00	Joan Plastino	Decommissioning	pourbacks at 105 F	Satisfactory	NA	Bob Bone	closed	4/19/00	
QSS-00-029		Cheryl Volkman		Procurement - subcontractor submittal reviews	Satisfactory	NA	George Carter	Sat	5/18/00	
QSS-00-030		Cheryl Volkman	233-S Decommissioning Project	Receipt Inspections	Satisfactory	NA	Rubin Trevino/Jock Davis	sat	5/18/00	
QSS-00-031		Cheryl Volkman	233-S Decommissioning project	RadCon Records and Schedules	Satisfactory	NA	Kevin Funke	sat	5/18/00	
QSS-00-032		Cheryl Volkman	233-S Decommissioning Project	RMS II Monthly Testing	Satisfactory	NA	Jake Laws	SAT	5/18/00	
QSS-00-033		Cheryl Volkman	233-S Decommissioning Project	Fissile Material Storage Array Configuration	Satisfactory	NA	Ruben Trevino	sat	5/18/00	
QSS-00-034	5/24/00	Everett Adamson	RAWD	RCIE TRANSPORTATION SELF ASSESSMENTS	Satisfactory	NA	B. P. Moyers	closed	5/24/00	
QSS-00-035		Everett Adamson	RAWD	PWS QUALITY IMPROVEMENT IMPLEMENTATION			T. F. KISENWETHER			
QSS-00-036		Everett Adamson	RAWD	FWENC QA/C PROGRAM REVIEW	Satisfactory	NA	R. L. DONAHOE	Closed	5/24/00	The Program, as written, adequately addresses the BHI QA Program Requirements listed in the checklist.
<del>QSS-00-037</del>		<del>Everett Adamson</del>	RAWD	<del>ERDF TRAFFIC FLOW</del>	<del>Unsatisfactory</del>	NA	B. P. Moyers	<del>CANCELLED</del>		<del>Data provided in support of the Traffic Flow control is inadequate in that it is obsolete (12/22/98). It doesn't accurately reflect the current traffic pattern/lanes physically in place.</del>
QSS-00-038	5/22/00	Jim Carson	300	300 Chemical Compliance	Unsatisfactory	OBS	P. Berthelot	open	9/25/00	Contract Terminated
QSS-00-039	5/23/00	Jim Carson	ERDF	Control of Procedures	Satisfactory	NA	B. Moyers	Closed	5/23/00	



# QS Surveillance Log

Surveillance Number	Date Issued	Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-040		Everett Adamson	RAWD	Oversight of 100D RA Waste Sites Backfill			A. L. Langstaff			
QSS-00-041		Cheryl Volkman	233-S	Verify RMS II Testing	Satisfactory	NA	Ruben Trevino	CLOSED		No deficiencies identified. One recommendation is to maintain copies of the completed monthly/quarterly test Data Sheets at 233-S
QSS-00-042		Cheryl Volkman	233-S Decommissioning Project	Criticality Requirements	Satisfactory	NA	Ruben Trevino	CLOSED		
QSS-00-043	6/2/00	Jim Carson	300	Weston Records	Satisfactory	NA	P. Berthelot	Closed	6/2/00	
QSS-00-044	6/13/00	Everett Adamson	RAWD	FWENC CONTROLLED DOCUMENT MAINTENANCE IMPLEMENTATION	Unsatisfactory	NA	R. L. DONAHOE	closed	6/13/00	Maintenance of formally and informally issued documents (eg Inspection Documentation, drawings, various project planning documents, etc.) is neither formal or disciplined. The system must be implemented prior to initiation of Intrusive Work.
QSS-00-045	6/8/00	Jim Carson	ERDF	Procurement Control	Satisfactory	NA	P. Berthelot	Closed	6/8/00	
QSS-00-046	6/13/00	Everett Adamson	RAWD	RCT Supervisors Qualifications	Unsatisfactory	CAR	T. L. Lafreniere	closed	6/13/00	Corrective Action Request No. 00-QS-05 has been initiated. This Surveillance is closed.
QSS-00-047	6/13/00	Everett Adamson		FWENC PERSONNEL TRAINING AND QUALIFICATION FOR 116-N-3 GROUTING	Satisfactory	NA	R. L. Donahoe	closed	6/13/00	FWENC management has performed an adequate evaluation of qualifications for personnel designated to enter the 116-N-3 exclusion zone. (Ref. FWENC QA/C Plan - 116-N-3 Grouting Section II, Sub. Sect. 1.2)
QSS-00-048	6/29/00	Jim Carson	ERDF Trans.	BIII Rad worker Training	Satisfactory	NA	B. Moyers	Closed	6/29/00	
QSS-00-049	7/11/00	Cheryl Volkman	233-S Decommissioning Project	RMS II MONTHLY TESTING	Satisfactory	NA	Ruben Trevino	closed		
QSS-00-050	7/11/00	Cheryl Volkman	233-S Decommissioning Project	Quarterly Criticality Prevention Posing	Satisfactory	NA	Ruben Trevino	Accepted	7/11/00	
QSS-00-051	7/13/00	Jim Carson	ERDF	WMS Lab Surveillances	Satisfactory	NA	P. Berthelot	closed	7/13/00	
QSS-00-052	7/14/00	Jim Carson	300	618-4 Drums	Satisfactory	NA	P. Berthelot	Closed	7/14/00	
QSS-00-053	7/18/00	Cheryl Volkman	233-S Decommissioning project	Fissile Material Storage Array Configuration	Satisfactory	NA	Ruben Trevino			



# QS Surveillance Log

Surveillance Number	Date Issued	Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-054		Cheryl Volkman	233-S Decommissioning Project	Fissile Material Storage Array Configuration	Satisfactory	NA	Ruben Trevino	ACCEPT	7/18/00	
QSS-00-055	8/18/00	Everett Adamson	RAWD	FWENC WORK PROCESSESS (QAIP 5.2.1)	Satisfactory	NA	R. L. DONAHOE	closed	8/18/00	
QSS-00-056	7/26/00	Jim Carson	GW/Vados	Evaporation Pond	Satisfactory	NA	G. Mitchem	Closed	7/26/00	
QSS-00-057	7/27/00	Jim Carson	ERDF Trans.	RCIE Rad Worker Training	Satisfactory	NA	P. Berthelot	Closed	7/27/00	
QSS-00-058		Cheryl Volkman	233-S Decommissioning	Criticality Requirements for Arrays			Ruben Trevino			
QSS-00-059		Everett Adamson	RAWD	PWS QUALITY IMPROVEMENT PROGRAM			T. F. KISENWETHER			
QSS-00-060		Everett Adamson	RAWD	PWS DOCUMENTS AND RECORDS			T. F. KISENWETHER			
QSS-00-061		Everett Adamson	RAWD	PWS DESIGN			T. F. KISENWETHER			
QSS-00-062		Everett Adamson	RAWD	PWS PROCUREMENT			T. F. KISENWETHER			
QSS-00-063		Cheryl Volkman	233-S Decommissioning Project	Interim Storage Cubicle	Satisfactory	NA	Ruben Trevino	acceptabl e		
QSS-00-064		Cheryl Volkman	233-S Decommissioning Project	QA Program Compliance	Unsatisfactory	CAR	Mark J. Owens			
QSS-00-065	8/26/00	Jim Carson	ERDF Trans.	RCIE Document Control	Unsatisfactory	OBS	B. Moyers	open		
QSS-00-066		Cheryl Volkman	233-S Decommissioning Project	Air Quality Documents generated by RadCon	Unsatisfactory	CAR	D.E. Gergely			
QSS-00-067		Everett Adamson	NR-1	FWENC QUALITY IMPROVEMENT PROGRAM			R. L. DONAHOE			
QSS-00-068	9/7/00	Jim Carson	ERDF	RCIE Lock/Out Tag Out	Satisfactory	NA	B. Moyers	Closed	9/7/00	



ERC PROJECT, JOB NO 22192

## QS Surveillance Log

Printed on 1/18/01

Surveillance Number	Date Issued	Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-067	10/16/00	Everett Adamson	NR-1	FWENC QUALITY IMPROVEMENT PROGRAM	Satisfactory	NA	R. L. DONAHOE	complete	10/16/00	
QSS-00-068	9/7/00	Jim Carson	ERDF	RCIE Lock/Out Tag Out	Satisfactory	NA	B. Moyers	Closed	9/7/00	
QSS-00-069		Joan Plastino	D&D	Thompson Mechanical Concrete Doc.	Unsatisfactory	OBS	R. Bone			
QSS-00-070		Cheryl Volkman	233-S Decommissioning Project	Criticality Posting	Satisfactory	NA	R. Trevino			
QSS-00-071	9/28/00	Jim Carson	ERDF Transportation	RCIE Inspection Planning	Satisfactory	NA	B. Moyers	Closed	9/28/00	
QSS-00-072	10/11/00	Jim Carson	ERDF Ops.	Waste Mgt. Surveillances	Satisfactory	NA	P. Berthelot	Closed	10/11/00	
QSS-00-073	10/26/00	Jim Carson	N/A	Lessons Learned Program	Satisfactory	NA	J. Tarpinian	Closed	10/26/00	
QSS-00-074		Cheryl Volkman	233-S Decommissioning Project	Fissile Material Storage Array configuration	Satisfactory	NA	Ruben Trevino			
QSS-00-075	11/7/00	Jim Carson	ERDF Trans.	Quality Records	Satisfactory	NA	B. Moyers	Closed	11/7/00	
QSS-00-076		Cheryl Volkman	233-S Decommissioning Project	Monthly Operable Check of RMS II	Satisfactory	NA	Steve Hamblin			
QSS-00-077	11/15/00	Jim Carson	ERDF Ops.	ERDF Compaction Tests	Satisfactory	NA	P. Berthelot	Closed	11/15/00	
QSS-00-078	11/15/00	Cheryl Volkman	233-S Decommissioning Project	Winterization	Satisfactory	NA	Steve Hamblin			
QSS-00-079	12/12/00	Everett Adamson	RAWD	FWENC DOCUMENTS AND RECORDS	Satisfactory	NA	R. L. DONAHOE	Closed	12/12/00	FWENC has adequately implemented its Documents and Records program as demonstrated by its control of documents transmitted to them via ERC CCN-02382.
QSS-00-080	12/12/00	Everett Adamson	RAWD	FWENC INSPECTION AND ACCEPTANCE TESTING	Satisfactory	NA	R. L. DONAHOE	Closed	12/12/00	
QSS-00-081	12/12/00	Everett Adamson	RAWD	Verification of PWS QA corrective actions	Satisfactory	NA	T. F. Kisenwether	Closed	12/12/00	Ref Surveillance Reports #d QSS-00-059 & QSS-00-060.



# QS Surveillance Log

Surveillance Number	Date Issued	Performed by	Project/OU TSD/Area	Subject	Sat/Unsat	NCR/CAR Observation	Responsible Party	Surv Status	Closure Date	Comments
QSS-00-082	12/12/00	Everett Adamson		FWENC MANAGEMENT ASSESSMENTS	Satisfactory	NA	R. L. DONAHOE	Closed	12/12/00	
QSS-00-083		Cheryl Volkman	233S Decommissioning Project	RMS II Testing	Satisfactory	NA	S.M. Hamblin			
QSS-00-084		Cheryl Volkman	233S Decommissioning Project	Fissile Material Storage Array configuration	Satisfactory	NA	S.M. Hamblin			
QSS-00-085		Cheryl Volkman	233S Decommissioning Project	Criticality Posting (Quarterly)	Satisfactory	NA	S.M. Hamblin			
QSS-00-086	12/22/00	Jim Carson	ERDF Ops.	Leachate Test Frequency	Satisfactory	NA	P. Berthelot	Closed	12/22/00	
QSS-00-087		Everett Adamson		Oversight of 100D RA Waste Sites Backfill per CCN's 082153 & 082154						
QSS-00-088		Everett Adamson	RAWD	FWENC PERSONNEL TRAINING/QUALIFICATION	Satisfactory	NA	R. L. Donahoe	Closed	1/2/01	
QSS-01-001		Everett Adamson	RAWD	Radiation Source Control			R. L. Donahoe			
QSS-01-002		Everett Adamson	RAWD	Radiation Source Control			T. F. KISENWETHER			
QSS-01-003	1/10/01	Jim Carson	Jones Dig Site	Jones Review	Satisfactory	NA	P. Berthelot	Closed	1/11/01	
QSS-01-004	1/17/01	Jim Carson	General	Occurrence Reports	Satisfactory	NA	R. Litchfield	Closed	1/17/01	
<del>QSS-96-001</del>	<del>11/7/96</del>	<del>Jim Carson</del>	<del>ERDF</del>	<del>ERDF COMPACTION TESTS</del>	<del>Satisfactory</del>	<del>NA</del>	<del>P. BERTHELOT</del>	<del>Closed</del>	<del>11/7/96</del>	
<del>QSS-96-002</del>	<del>11/12/96</del>	<del>Jim Carson</del>	<del>ERDF</del>	<del>ERDF WINTERIZATION</del>	<del>Satisfactory</del>	<del>NA</del>	<del>P. BERTHELOT</del>	<del>Closed</del>	<del>11/12/96</del>	
<del>QSS-96-003</del>	<del>11/13/96</del>	<del>Jim Carson</del>	<del>ERDF</del>	<del>SOIL DENSITY TEST</del>	<del>Satisfactory</del>	<del>NA</del>	<del>P. BERTHELOT</del>	<del>Closed</del>	<del>11/13/96</del>	
<del>QSS-96-004</del>	<del>11/14/96</del>	<del>Jim Carson</del>	<del>ERDF</del>	<del>final compaction test report</del>	<del>Satisfactory</del>	<del>NA</del>	<del>p. berthelot</del>	<del>Closed</del>	<del>11/14/96</del>	
<del>QSS-96-005</del>	<del>11/15/96</del>	<del>Bill Frisbee</del>	<del>224-B cells F&amp;G</del>	<del>Airborne Rad Sampling</del>	<del>Unsatisfactory</del>	<del>CAR</del>	<del>K. Smith</del>	<del>Closed</del>	<del>12/12/96</del>	<del>See CAR 96-012-01</del>

## QUALITY SERVICES, SAFETY & HEALTH SELF ASSESSMENT LOG

Number	Subject	Initiator	Date Completed	Status
QSH-99-003	Electrical safety Practices	Sheldon Coleman	01/24/2000	CCN 076155
QSH-99-004	Respirator Training	Sheldon Coleman	01/24/2000	CCN 076156
	Fire Protection - 1120-N Service Building	Dave Parthree	02/01/2000	
	Emergency Preparedness Administrative Assessment	Vic Edens	03/28/2000	
QSH-00-001	Hazwoper Program	Judy Vaughn	04/05/2000	CCN 075912
	Fire Protection - 105-B Reactor (Museum Study)	Dave Parthree	03/01/2000	
	Electrical Assessment - 105-B Reactor (Museum Study)	Dave Parthree	03/01/2000	
	Fire Protection - 233-S Project	Dave Parthree	Quarterly	
QSH-00-002	Physical Security & Badging	Tim Quinn	03/23/2000	CCN 077960
	Fire Protection - 1143-N Shop	Dave Parthree	04/01/2000	
QSH-00-003	Breathing Air quality	Sheldon Coleman	04/03/2000	CCN 078090
	Fire Protection - 1720-K Service Building	Dave Parthree	05/01/2000	
	Electrical - 233-S Project	Dave Parthree	Quarterly	
	Electrical Assessment - 100-DR Remedial Action	Dave Parthree	05/01/2000	
QSH-00-004	Scott O' Vista Facepieces	Sheldon Coleman	05/15/2000	CCN 079016



## QUALITY SERVICES, SAFETY & HEALTH SELF ASSESSMENT LOG

Number	Subject	Initiator	Date Completed	Status
	Electrical Assessment - 105-DR ISS Project	Dave Parthree	06/01/2000	
QSH-00-005	ERC Respiratory Protection Program	Bobby Hobbs	06/29/2000	CCN 079715
QSH-00-006	Security Management and Planning	Tim Quinn	07/06/2000	CCN 080323
	Fire Protection - 100-F Group 4 Remediation	Dave Parthree	08/01/2000	
	Electrical Assessment - 100-F Group 4 Remediation	Dave Parthree	08/01/2000	
233S-SA-00-039	Combustible Loading and Heater Installation 233-S Proj	Dave Parthree	08/10/2000	CCN 082971
QSH-00-008	Heat Stress Measurements	Sheldon Coleman	08/14/2000	CCN 079990
QSH-00-009	BHI-SH-02 IH Procedures	Sheldon Coleman	09/27/2000	CCN 082681
QSH-00-009	EJTA Process and Occupational Medicine	Darlene McClure	09/30/2000	CCN 082733
	Unclassified Visits and Assignments by Foreign Nationals	Tim Quinn	09/27/2000	CCN 081696
QSH-01-001	SH 01 & 02 Procedures	Bobby Hobbs	10/17/2000	CCN 083048
	Electrical Assessment - 105-F Reactor ISS	Dave Parthree	11/01/2000	
QSH-01-002	Surveys, Self-Assessments & Resolution of Findings	Tim Quinn	12/11/2000	CCN 084537
	Emergency Preparedness Surveillance	Vic Edens	12/21/2000	CCN 085473
QSH-01-003	CONEX Box Assessment	Dave Parthree	12/27/2000	CCN 085549

## QUALITY SERVICES, SAFETY & HEALTH SELF ASSESSMENT LOG

Number	Subject	Initiator	Date Completed	Status
QSH-01-004	Adequacy of Hearing Protectors	Sheldon Coleman	12/29/2000	CCN 085097
QSH-01-005	Effectiveness of Ergonomic Evaluations	Sheldon Coleman	12/29/2000	CCN 085096

LISTING OF ES&H ASSESSMENTS PERFORMED BY FH  
CALENDAR YEAR 2000

Attachment 1

Fluor Hanford, Inc. (FH) performs periodic assessments in the areas of Environment, Safety, and Health (ES&H) to identify potential areas of needed improvement and to feed-forward information regarding successes to all FH managed projects/facilities. Program, processes, and system level assessments are conducted in accordance with DOE O 414.1A, Quality Assurance. The attached table, Table 1, presents a listing of ES&H related assessments performed by external organizations during Calendar Year 2000. The majority of the identified assessments were performed by the Facility Evaluation Board (FEB). The FEB was established to ensure comprehensive, thorough, and timely evaluation of FH managed operations. The results of these assessments are communicated throughout FH operations. Deficiencies noted under these assessments are tracked until appropriately closed.

In addition to the ES&H assessments identified in Table 1, FH management teams perform internal to organization assessments throughout the company on a routine basis. Management Assessments (MAs) reports are compiled on a quarterly basis and presented to the FH Executive Leadership Team to provide feedback for FH improvement opportunities and to ensure Senior Management involvement in the program. A site wide procedure for the performance of MAs, HNF-PRO-246, was installed early in the fourth quarter of FY 2000. Other continuing MA program improvement initiatives include: 1) development of an executive level management assessment orientation program to increase understanding and consistency; 2) development of a tracking system that can be used for the tracking of improvement actions from MAs; and, 3) identification of ISMS core function and guidance principle areas addressed by MAs. There were approximately 465 MAs performed during Calendar Year 2000. Although not all MAs performed are ES&H related, a vast majority of these assessments are related to ES&H concerns. Also in addition to the assessments identified Table 1, are major assessments such as Operational Readiness Reviews that contain significant ES&H elements.

<b>Table 1 – Listing of ES&amp;H Assessments for Calendar Year 2000</b>			
<b>Assessment Identifier</b>	<b>Facility/Operation Assessed</b>	<b>Scope of Assessment</b>	<b>Assessment Date</b>
FEB-FY00-04-1.1.1	Waste Encapsulation and Storage Facility (WESF)	Management Systems – Internal Assessments	August 22 – 29, 2000
FEB-FY00-04-1.1.2	WESF	Management Systems – Facility Compliance Assurance	August 22 – 29, 2000
FEB-FY00-04-1.2.1	WESF	Operations – Lockouts and Tagouts	August 22 – 29, 2000
FEB-FY00-04-1.2.2	WESF	Operations – Operations Turnover	August 22 – 29, 2000
FEB-FY00-04-1.2.3	WESF	Operations – Required Reading	August 22 – 29, 2000
FEB-FY00-04-1.2.4	WESF	Operations – Timely Orders to Operators	August 22 – 29, 2000
FEB-FY00-04-1.2.5	WESF	Operations – Equipment and Piping Labeling	August 22 – 29, 2000
FEB-FY00-04-1.3.1	WESF	Radiation Protection – Entry Control	August 22 – 29, 2000
FEB-FY00-04-1.3.2	WESF	Radiation Protection – Posting and Labeling	August 22 – 29, 2000

LISTING OF ES&H ASSESSMENTS PERFORMED BY FH  
CALENDAR YEAR 2000

Attachment 1

Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
FEB-FY00-04-1.3.3	WESF	Radiation Protection – Design and Control and ALARA	August 22 – 29, 2000
FEB-FY00-04-1.3.4	WESF	Radiation Protection – Conduct of Radiological Operations	August 22 – 29, 2000
FEB-FY00-04-1.3.5	WESF	Radiation Protection – Workplace Monitoring and Contamination Control	August 22 – 29, 2000
FEB-FY00-04-1.3.6	WESF	Radiation Protection – Radioactive Material and Source Control	August 22 – 29, 2000
FEB-FY00-04-1.4.1	WESF	Engineering – Configuration Identification	August 22 – 29, 2000
FEB-FY00-04-1.4.2	WESF	Engineering – Maintaining Technical Baselines	August 22 – 29, 2000
FEB-FY00-04-1.4.3	WESF	Engineering – Safety Analysis	August 22 – 29, 2000
FEB-FY00-04-1.4.4	WESF	Engineering – Operation within Limits	August 22 – 29, 2000
FEB-FY00-04-1.5.1	WESF	Maintenance – Maintenance Procedures	August 22 – 29, 2000
FEB-FY00-04-1.5.2	WESF	Maintenance – Conduct of Maintenance	August 22 – 29, 2000
FEB-FY00-04-1.5.3	WESF	Maintenance – Analysis of Maintenance Problems	August 22 – 29, 2000
FEB-FY00-04-1.5.4	WESF	Maintenance – Planning, Scheduling, and Work Control	August 22 – 29, 2000
FEB-FY00-04-1.5.5	WESF	Maintenance – Preventive Maintenance	August 22 – 29, 2000
FEB-FY00-04-1.5.6	WESF	Maintenance – Maintenance Implementation Plan	August 22 – 29, 2000
FEB-FY00-04-1.6.1	WESF	Occupational Safety and Health – Identify Hazards and Requirements	August 22 – 29, 2000
FEB-FY00-04-1.6.2	WESF	Occupational Safety and Health – Analyze Hazards and Implement Controls	August 22 – 29, 2000
FEB-FY00-04-1.6.3	WESF	Occupational Safety and Health – Perform Work within Controls	August 22 – 29, 2000
FEB-FY00-04-1.7.1	WESF	Training – Administration and Organization	August 22 – 29, 2000
FEB-FY00-04-1.7.2	WESF	Training – Implementing Training	August 22 – 29, 2000
FEB-FY00-04-1.7.3	WESF	Training – Analyze Training Requirements	August 22 – 29, 2000
FEB-FY00-04-1.8.1	WESF	Emergency Management – Emergency Preparedness Administration	August 22 – 29, 2000
FEB-FY00-04-1.8.2	WESF	Emergency Management – Drill Program	August 22 – 29, 2000
FEB-FY00-04-1.9.1	WESF	Environmental Programs – Environmental Program	August 22 – 29, 2000
FEB-FY00-04-1.9.2	WESF	Environmental Programs – National Environmental Policy Act	August 22 – 29, 2000
FEB-FY00-	WESF	Environmental Programs – Water Quality	August 22 –

LISTING OF ES&H ASSESSMENTS PERFORMED BY FH  
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Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
04-1.9.3			29, 2000
FEB-FY00-04-1.9.4	WESF	Environmental Programs – Packaging and Transportation	August 22 – 29, 2000
FEB-FY00-04-1.10.1	WESF	Quality Assurance – Documents and Records	August 22 – 29, 2000
FEB-FY00-04-1.10.2	WESF	Quality Assurance – Work Processes	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Line Management Responsible for Safety	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Clear Roles and Responsibilities	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Competence Commensurate with Responsibilities	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Define the Scope of Work; Balanced Priorities	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Identification of Safety Standards and Requirements; Analyze the Hazards	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Hazard Controls Tailored to Work Being Prepared; Develop and Implement Hazard Controls	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Operations Authorization; Perform Work within Controls	August 22 – 29, 2000
FEB-FY00-04-Appendix A	WESF	Assessment of Integrated Environmental, Safety and Health Management System Implementation - Provide Feedback and Continuous Improvement	August 22 – 29, 2000
FEB-FY00-03-1.1.1	Nuclear Materials Stabilization Project – Plutonium Finishing Plant (PFP)	Management Systems – Management Assessment	April 17 – 27, 2000
FEB-FY00-03-1.1.2	PFP	Management Systems – Facility Compliance Assurance	April 17 – 27, 2000
FEB-FY00-03-1.1.3	PFP	Management Systems – Issue Management	April 17 – 27, 2000
FEB-FY00-03-1.2.1	PFP	Operations – Conduct of Operations	April 17 – 27, 2000

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Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
FEB-FY00-03-1.2.2	PFP	Operations – Shift Routines and Operating Practices	April 17 – 27, 2000
FEB-FY00-03-1.2.3	PFP	Operations – Control Area Activities	April 17 – 27, 2000
FEB-FY00-03-1.2.4	PFP	Operations – Communications	April 17 – 27, 2000
FEB-FY00-03-1.2.5	PFP	Operations – Control of Equipment and System Status	April 17 – 27, 2000
FEB-FY00-03-1.2.6	PFP	Operations – Log Keeping	April 17 – 27, 2000
FEB-FY00-03-1.2.7	PFP	Operations – Operations Turnover	April 17 – 27, 2000
FEB-FY00-03-1.2.8	PFP	Operations – Operations Aspect of Facility Chemistry and Unique Process	April 17 – 27, 2000
FEB-FY00-03-1.2.9	PFP	Operations – Required Reading	April 17 – 27, 2000
FEB-FY00-03-1.2.10	PFP	Operations – Timely Orders to Operators	April 17 – 27, 2000
FEB-FY00-03-1.2.11	PFP	Operations – Technical Procedures	April 17 – 27, 2000
FEB-FY00-03-1.2.12	PFP	Operations – Operator Aid Postings	April 17 – 27, 2000
FEB-FY00-03-1.2.13	PFP	Operations – Equipment and Piping Labeling	April 17 – 27, 2000
FEB-FY00-03-1.3.1	PFP	Radiation Protection – Design and Control	April 17 – 27, 2000
FEB-FY00-03-1.3.2	PFP	Radiation Protection – Conduct of Radiological Operations	April 17 – 27, 2000
FEB-FY00-03-1.3.3	PFP	Radiation Protection – Monitoring of Individuals and Areas	April 17 – 27, 2000
FEB-FY00-03-1.3.4	PFP	Radiation Protection – Posting and Labeling	April 17 – 27, 2000
FEB-FY00-03-1.3.5	PFP	Radiation Protection – Radiological Records	April 17 – 27, 2000
FEB-FY00-03-1.4.1	PFP	Engineering – Maintaining Technical Baselines and Design Activities	April 17 – 27, 2000
FEB-FY00-03-1.4.2	PFP	Engineering – Personnel Training and Qualification	April 17 – 27, 2000
FEB-FY00-03-1.4.3	PFP	Engineering – Engineering Program Management	April 17 – 27, 2000
FEB-FY00-03-1.4.4	PFP	Engineering – Changes and Unreviewed Safety Questions	April 17 – 27, 2000
FEB-FY00-03-1.4.5	PFP	Engineering – Operation within Limits	April 17 – 27, 2000
FEB-FY00-03-1.4.6	PFP	Engineering – Criticality Safety Precautions for Fire Fighting	April 17 – 27, 2000
FEB-FY00-03-1.4.7	PFP	Engineering – Configuration Management System Management	April 17 – 27, 2000
FEB-FY00-	PFP	Maintenance – Maintenance Implementation Plan	April 17 – 27,

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Table 1 - Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
03-1.5.1			2000
FEB-FY00-03-1.5.2	PFP	Maintenance - Maintenance Organization and Administration	April 17 - 27, 2000
FEB-FY00-03-1.5.3	PFP	Maintenance - Types of Maintenance	April 17 - 27, 2000
FEB-FY00-03-1.5.4	PFP	Maintenance - Maintenance Procedures	April 17 - 27, 2000
FEB-FY00-03-1.5.5	PFP	Maintenance - Planning, Scheduling, and Coordination of Maintenance	April 17 - 27, 2000
FEB-FY00-03-1.5.6	PFP	Maintenance - Control of Maintenance Activities	April 17 - 27, 2000
FEB-FY00-03-1.5.7	PFP	Maintenance - Tool and Equipment Control	April 17 - 27, 2000
FEB-FY00-03-1.5.8	PFP	Maintenance - Facility Condition Inspection	April 17 - 27, 2000
FEB-FY00-03-1.5.9	PFP	Maintenance - Management Involvement	April 17 - 27, 2000
FEB-FY00-03-1.5.10	PFP	Maintenance - Analysis of Maintenance Problems	April 17 - 27, 2000
FEB-FY00-03-1.6.1	PFP	Occupational Safety and Health - Management Leadership	April 17 - 27, 2000
FEB-FY00-03-1.6.2	PFP	Occupational Safety and Health - Worksite Analysis	April 17 - 27, 2000
FEB-FY00-03-1.6.3	PFP	Occupational Safety and Health - Hazard Prevention and Control	April 17 - 27, 2000
FEB-FY00-03-1.6.4	PFP	Occupational Safety and Health - Fire Protection	April 17 - 27, 2000
FEB-FY00-03-1.6.5	PFP	Occupational Safety and Health - Safety Statistics	April 17 - 27, 2000
FEB-FY00-03-1.7.1	PFP	Training - Administration and Organization	April 17 - 27, 2000
FEB-FY00-03-1.7.2	PFP	Training - Analyzing Training Requirements	April 17 - 27, 2000
FEB-FY00-03-1.7.3	PFP	Training - Implementing Training	April 17 - 27, 2000
FEB-FY00-03-1.7.4	PFP	Training - Evaluating Training - Trainees	April 17 - 27, 2000
FEB-FY00-03-1.8.1	PFP	Emergency Management - Personnel Protection	April 17 - 27, 2000
FEB-FY00-03-1.8.2	PFP	Emergency Management - Administration and Organization	April 17 - 27, 2000
FEB-FY00-03-1.8.3	PFP	Emergency Management - Emergency Preparedness Training	April 17 - 27, 2000
FEB-FY00-03-1.9.1	PFP	Environmental Programs - National Environmental Policy Act	April 17 - 27, 2000
FEB-FY00-03-1.9.2	PFP	Environmental Programs - Resource Conservation and Recovery Act Treatment, Storage, and Disposal Permits	April 17 - 27, 2000
FEB-FY00-	PFP	Environmental Programs - State Waste Discharge	April 17 - 27,

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Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
03-1.9.3		Permits	2000
FEB-FY00-03-1.9.4	PFP	Environmental Programs – Air Quality Program	April 17 – 27, 2000
FEB-FY00-03-1.9.5	PFP	Environmental Programs – Waste Container Management	April 17 – 27, 2000
FEB-FY00-03-1.9.6	PFP	Environmental Programs – Records and Reporting	April 17 – 27, 2000
FEB-FY00-03-1.9.7	PFP	Environmental Programs – Inactive Waste Site Surveillance	April 17 – 27, 2000
FEB-FY00-03-1.9.8	PFP	Environmental Programs – Polychlorinated Biphenyls and Asbestos Waste Categories	April 17 – 27, 2000
FEB-FY00-03-1.10.1	PFP	Quality Assurance – Quality Assurance Program	April 17 – 27, 2000
FEB-FY00-03-1.10.2	PFP	Quality Assurance – Quality Improvement	April 17 – 27, 2000
FEB-FY00-03-1.10.3	PFP	Quality Assurance – Documents and Records	April 17 – 27, 2000
FEB-FY00-03-1.10.4	PFP	Quality Assurance – Work Processes	April 17 – 27, 2000
FEB-FY00-02-1.1.1	Solid Waste Projects (SWP)	Management Systems – Organizational Staffing	February 28 – March 10, 2000
FEB-FY00-02-1.1.2	SWP	Management Systems – Management Assessment	February 28 – March 10, 2000
FEB-FY00-02-1.1.3	SWP	Management Systems – Facility Compliance Assurance	February 28 – March 10, 2000
FEB-FY00-02-1.2.1	SWP	Operations – Shift Routines and Operating Practices	February 28 – March 10, 2000
FEB-FY00-02-1.2.2	SWP	Operations – Independent Verification	February 28 – March 10, 2000
FEB-FY00-02-1.2.3	SWP	Operations – Required Reading	February 28 – March 10, 2000
FEB-FY00-02-1.2.4	SWP	Operations – Timely Orders to Operators	February 28 – March 10, 2000
FEB-FY00-02-1.3.1	SWP	Radiation Protection – Posting and Labeling	February 28 – March 10, 2000
FEB-FY00-02-1.3.2	SWP	Radiation Protection – Radioactive Material and Source Control	February 28 – March 10, 2000
FEB-FY00-02-1.3.3	SWP	Radiation Protection – Conduct of Radiological Operations	February 28 – March 10, 2000
FEB-FY00-	SWP	Radiation Protection – Organization and	February 28 –



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<b>Table 1 – Listing of ES&amp;H Assessments for Calendar Year 2000</b>			
<b>Assessment Identifier</b>	<b>Facility/Operation Assessed</b>	<b>Scope of Assessment</b>	<b>Assessment Date</b>
02-1.3.4		Administration	March 10, 2000
FEB-FY00-02-1.3.5	SWP	Radiation Protection – Workplace Monitoring and Contamination Control	February 28 – March 10, 2000
FEB-FY00-02-1.3.6	SWP	Radiation Protection – Design and Control and ALARA	February 28 – March 10, 2000
FEB-FY00-02-1.3.7	SWP	Radiation Protection – Radiological Records	February 28 – March 10, 2000
FEB-FY00-02-1.4.1	SWP	Engineering – Engineering Program Management	February 28 – March 10, 2000
FEB-FY00-02-1.4.2	SWP	Engineering – Maintaining Technical Baselines	February 28 – March 10, 2000
FEB-FY00-02-1.4.3	SWP	Engineering – Configuration Management System Management	February 28 – March 10, 2000
FEB-FY00-02-1.5.1	SWP	Maintenance – Maintenance Procedures	February 28 – March 10, 2000
FEB-FY00-02-1.5.2	SWP	Maintenance – Control of Maintenance Activities	February 28 – March 10, 2000
FEB-FY00-02-1.5.3	SWP	Maintenance – Types of Maintenance	February 28 – March 10, 2000
FEB-FY00-02-1.5.4	SWP	Maintenance – Planning, Scheduling, and Work Control	February 28 – March 10, 2000
FEB-FY00-02-1.5.5	SWP	Maintenance – Management Involvement	February 28 – March 10, 2000
FEB-FY00-02-1.6.1	SWP	Occupational Safety and Health – Management Leadership	February 28 – March 10, 2000
FEB-FY00-02-1.6.2	SWP	Occupational Safety and Health – Worksite Analysis	February 28 – March 10, 2000
FEB-FY00-02-1.6.3	SWP	Occupational Safety and Health – Hazard Prevention and Control	February 28 – March 10, 2000
FEB-FY00-02-1.6.4	SWP	Occupational Safety and Health – Fire Protection	February 28 – March 10, 2000
FEB-FY00-02-1.6.5	SWP	Occupational Safety and Health – Safety Statistics	February 28 – March 10, 2000

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Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
FEB-FY00-02-1.7.1	SWP	Training – Administration and Organization	February 28 – March 10, 2000
FEB-FY00-02-1.7.2	SWP	Training – Analyzing Training Requirements	February 28 – March 10, 2000
FEB-FY00-02-1.7.3	SWP	Training – Implementing Training	February 28 – March 10, 2000
FEB-FY00-02-1.7.4	SWP	Training – Evaluating Training - Trainees	February 28 – March 10, 2000
FEB-FY00-02-1.8.1	SWP	Emergency Management – Emergency Response Training	February 28 – March 10, 2000
FEB-FY00-02-1.8.2	SWP	Emergency Management – Emergency Facilities, Equipment, and Resources	February 28 – March 10, 2000
FEB-FY00-02-1.9.1	SWP	Environmental Programs – Resource Conservation and Recovery Act Treatment, Storage, and Disposal Permit	February 28 – March 10, 2000
FEB-FY00-02-1.9.2	SWP	Environmental Programs – Solid Waste Discharge Permits and National Pollutant Discharge Elimination System	February 28 – March 10, 2000
FEB-FY00-02-1.9.3	SWP	Environmental Programs – Waste Characterization and Certification	February 28 – March 10, 2000
FEB-FY00-02-1.9.4	SWP	Environmental Programs – Packaging, Labeling, and Transportation	February 28 – March 10, 2000
FEB-FY00-02-1.9.5	SWP	Environmental Programs – Records and Reporting	February 28 – March 10, 2000
FEB-FY00-02-1.9.6	SWP	Environmental Programs – PCB and Asbestos Waste Categories	February 28 – March 10, 2000
FEB-FY00-02-1.9.7	SWP	Environmental Programs – Chemical Management	February 28 – March 10, 2000
FEB-FY00-02-1.10.1	SWP	Quality Assurance – Management - Programs	February 28 – March 10, 2000
FEB-FY00-02-1.10.2	SWP	Quality Assurance – Quality Improvement	February 28 – March 10, 2000
FEB-FY00-01-2.1.1	Analytical Services Project (ASP)	Management Systems – Organizational Staffing	January 17 – 28, 2000
FEB-FY00-01-2.1.2	ASP	Management Systems – Management Objectives	January 17 – 28, 2000
FEB-FY00-	ASP	Management Systems – Management Assessment	January 17 –

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<b>Table 1 – Listing of ES&amp;H Assessments for Calendar Year 2000</b>			
<b>Assessment Identifier</b>	<b>Facility/Operation Assessed</b>	<b>Scope of Assessment</b>	<b>Assessment Date</b>
01-2.1.3			28, 2000
FEB-FY00-01-2.1.4	ASP	Management Systems – Facility Compliance Assurance	January 17 – 28, 2000
FEB-FY00-01-2.1.5	ASP	Management Systems – Issue Management	January 17 – 28, 2000
FEB-FY00-01-2.1.6	ASP	Management Systems – Trending and Analysis	January 17 – 28, 2000
FEB-FY00-01-2.2.1	ASP	Operations – Operations Organization and Administration	January 17 – 28, 2000
FEB-FY00-01-2.2.2	ASP	Operations – Shift Routines and Operating Practices	January 17 – 28, 2000
FEB-FY00-01-2.2.3	ASP	Operations – Control Area Activities	January 17 – 28, 2000
FEB-FY00-01-2.2.4	ASP	Operations – Communications	January 17 – 28, 2000
FEB-FY00-01-2.2.5	ASP	Operations – Control of On-Shift Training	January 17 – 28, 2000
FEB-FY00-01-2.2.6	ASP	Operations – Investigation of Abnormal Events	January 17 – 28, 2000
FEB-FY00-01-2.2.7	ASP	Operations – Notifications	January 17 – 28, 2000
FEB-FY00-01-2.2.8	ASP	Operations – Control of Equipment and System Status	January 17 – 28, 2000
FEB-FY00-01-2.2.9	ASP	Operations – Lockouts and Tagouts	January 17 – 28, 2000
FEB-FY00-01-2.2.10	ASP	Operations – Independent Verification	January 17 – 28, 2000
FEB-FY00-01-2.2.11	ASP	Operations – Log Keeping	January 17 – 28, 2000
FEB-FY00-01-2.2.12	ASP	Operations – Operations Turnover	January 17 – 28, 2000
FEB-FY00-01-2.2.13	ASP	Operations – Operations Aspect of Facility Chemistry and Unique Process	January 17 – 28, 2000
FEB-FY00-01-2.2.14	ASP	Operations – Required Reading	January 17 – 28, 2000
FEB-FY00-01-2.2.15	ASP	Operations – Timely Orders to Operators	January 17 – 28, 2000
FEB-FY00-01-2.2.16	ASP	Operations – Technical Procedures	January 17 – 28, 2000
FEB-FY00-01-2.2.17	ASP	Operations – Operator Aid Postings	January 17 – 28, 2000
FEB-FY00-01-2.2.18	ASP	Operations – Equipment and Piping Labeling	January 17 – 28, 2000
FEB-FY00-01-2.3.1	ASP	Radiation Protection – Organization and Administration	January 17 – 28, 2000
FEB-FY00-01-2.3.2	ASP	Radiation Protection – Standards for Internal and External Exposure and Dosimetry	January 17 – 28, 2000
FEB-FY00-01-2.3.3	ASP	Radiation Protection – Workplace Monitoring and Contamination Control	January 17 – 28, 2000

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Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
FEB-FY00-01-2.3.4	ASP	Radiation Protection – Entry Control	January 17 – 28, 2000
FEB-FY00-01-2.3.5	ASP	Radiation Protection – Posting and Labeling	January 17 – 28, 2000
FEB-FY00-01-2.3.6	ASP	Radiation Protection – Radiological Records	January 17 – 28, 2000
FEB-FY00-01-2.3.7	ASP	Radiation Protection – Radiological Reports	January 17 – 28, 2000
FEB-FY00-01-2.3.8	ASP	Radiation Protection – Radiological Safety Training	January 17 – 28, 2000
FEB-FY00-01-2.3.9	ASP	Radiation Protection – Design and Control and ALARA	January 17 – 28, 2000
FEB-FY00-01-2.3.10	ASP	Radiation Protection – Release of Materials and Equipment	January 17 – 28, 2000
FEB-FY00-01-2.3.11	ASP	Radiation Protection – Accidents and Emergencies	January 17 – 28, 2000
FEB-FY00-01-2.3.12	ASP	Radiation Protection – Radioactive Material and Source Control	January 17 – 28, 2000
FEB-FY00-01-2.3.13	ASP	Radiation Protection – Conduct of Radiological Operations	January 17 – 28, 2000
FEB-FY00-01-2.4.1	ASP	Engineering – Engineering Program Management	January 17 – 28, 2000
FEB-FY00-01-2.4.2	ASP	Engineering – Personnel Training and Qualification	January 17 – 28, 2000
FEB-FY00-01-2.4.3	ASP	Engineering – Maintaining Technical Baselines	January 17 – 28, 2000
FEB-FY00-01-2.4.4	ASP	Engineering – Operations and Maintenance Support	January 17 – 28, 2000
FEB-FY00-01-2.4.5	ASP	Engineering – Design Activities	January 17 – 28, 2000
FEB-FY00-01-2.4.6	ASP	Engineering – Safety Analysis	January 17 – 28, 2000
FEB-FY00-01-2.4.7	ASP	Engineering – Operational and Administrative Controls	January 17 – 28, 2000
FEB-FY00-01-2.4.8	ASP	Engineering – Changes/Unreviewed Safety Questions	January 17 – 28, 2000
FEB-FY00-01-2.4.9	ASP	Engineering – Operation within Limits	January 17 – 28, 2000
FEB-FY00-01-2.4.10	ASP	Engineering – Nuclear Criticality Administrative Procedures	January 17 – 28, 2000
FEB-FY00-01-2.4.11	ASP	Engineering – Criticality Safety Technical Practices	January 17 – 28, 2000
FEB-FY00-01-2.4.12	ASP	Engineering – Operating Procedures and Operational Aids	January 17 – 28, 2000
FEB-FY00-01-2.4.13	ASP	Engineering – Criticality Accident Alarm System	January 17 – 28, 2000
FEB-FY00-01-2.4.14	ASP	Engineering – Fissionable Material Storage and Transfer	January 17 – 28, 2000
FEB-FY00-	ASP	Engineering – Criticality Safety Precautions for	January 17 –

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Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
01-2.4.15		Firefighting	28, 2000
FEB-FY00-01-2.4.16	ASP	Engineering – Configuration Management System Management	January 17 – 28, 2000
FEB-FY00-01-2.4.17	ASP	Engineering – Configuration Identification	January 17 – 28, 2000
FEB-FY00-01-2.4.18	ASP	Engineering – Configuration Status Accounting	January 17 – 28, 2000
FEB-FY00-01-2.4.19	ASP	Engineering – Configuration Assessments	January 17 – 28, 2000
FEB-FY00-01-2.4.20	ASP	Engineering – Change Control	January 17 – 28, 2000
FEB-FY00-01-2.5.1	ASP	Maintenance – Maintenance Implementation Plan	January 17 – 28, 2000
FEB-FY00-01-2.5.2	ASP	Maintenance – Organization and Administration	January 17 – 28, 2000
FEB-FY00-01-2.5.3	ASP	Maintenance – Training and Qualification of Maintenance Personnel	January 17 – 28, 2000
FEB-FY00-01-2.5.4	ASP	Maintenance – Maintenance Facilities, Equipment, and Tools	January 17 – 28, 2000
FEB-FY00-01-2.5.5	ASP	Maintenance – Types of Maintenance	January 17 – 28, 2000
FEB-FY00-01-2.5.6	ASP	Maintenance – Maintenance Procedures	January 17 – 28, 2000
FEB-FY00-01-2.5.7	ASP	Maintenance – Planning, Scheduling, and Work Control	January 17 – 28, 2000
FEB-FY00-01-2.5.8	ASP	Maintenance – Control of Maintenance Activities	January 17 – 28, 2000
FEB-FY00-01-2.5.9	ASP	Maintenance – Post-Maintenance Activities	January 17 – 28, 2000
FEB-FY00-01-2.5.10	ASP	Maintenance – Procurement of Parts, Materials, and Services	January 17 – 28, 2000
FEB-FY00-01-2.5.11	ASP	Maintenance – Material Control	January 17 – 28, 2000
FEB-FY00-01-2.5.12	ASP	Maintenance – Control and Calibration of M&TE	January 17 – 28, 2000
FEB-FY00-01-2.5.13	ASP	Maintenance – Tool and Equipment Control	January 17 – 28, 2000
FEB-FY00-01-2.5.14	ASP	Maintenance – Facility Condition Inspection	January 17 – 28, 2000
FEB-FY00-01-2.5.15	ASP	Maintenance – Management Involvement	January 17 – 28, 2000
FEB-FY00-01-2.5.16	ASP	Maintenance – Maintenance History	January 17 – 28, 2000
FEB-FY00-01-2.5.17	ASP	Maintenance – Analysis of Maintenance Problems	January 17 – 28, 2000
FEB-FY00-01-2.5.18	ASP	Maintenance – Modification Work	January 17 – 28, 2000
FEB-FY00-01-2.5.19	ASP	Maintenance – Facility Seasonal Protection	January 17 – 28, 2000

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<b>Table 1 – Listing of ES&amp;H Assessments for Calendar Year 2000</b>			
<b>Assessment Identifier</b>	<b>Facility/Operation Assessed</b>	<b>Scope of Assessment</b>	<b>Assessment Date</b>
FEB-FY00-01-2.6.1	ASP	Occupational Safety and Health – Management Leadership	January 17 – 28, 2000
FEB-FY00-01-2.6.2	ASP	Occupational Safety and Health – Worksite Analysis	January 17 – 28, 2000
FEB-FY00-01-2.6.3	ASP	Occupational Safety and Health – Hazard Prevention and Control	January 17 – 28, 2000
FEB-FY00-01-2.6.4	ASP	Occupational Safety and Health – Laboratory Safety/Chemical Management	January 17 – 28, 2000
FEB-FY00-01-2.6.5	ASP	Occupational Safety and Health – Fire Protection	January 17 – 28, 2000
FEB-FY00-01-2.7.1	ASP	Training – Administration and Organization	January 17 – 28, 2000
FEB-FY00-01-2.7.2	ASP	Training – Qualifying Instructional Staff	January 17 – 28, 2000
FEB-FY00-01-2.7.3	ASP	Training – Qualification Programs	January 17 – 28, 2000
FEB-FY00-01-2.7.4	ASP	Training – Analyzing Training Requirements	January 17 – 28, 2000
FEB-FY00-01-2.7.5	ASP	Training – Training Development	January 17 – 28, 2000
FEB-FY00-01-2.7.6	ASP	Training – Implementing Training	January 17 – 28, 2000
FEB-FY00-01-2.7.7	ASP	Training – Evaluating Training - Trainees	January 17 – 28, 2000
FEB-FY00-01-2.7.8	ASP	Training – Training Effectiveness	January 17 – 28, 2000
FEB-FY00-01-2.8.1	ASP	Emergency Management – Administration and Organization	January 17 – 28, 2000
FEB-FY00-01-2.8.2	ASP	Emergency Management – Emergency Response Plan/Procedure	January 17 – 28, 2000
FEB-FY00-01-2.8.3	ASP	Emergency Management – Emergency Response Training	January 17 – 28, 2000
FEB-FY00-01-2.8.4	ASP	Emergency Management – Emergency Preparedness Drills	January 17 – 28, 2000
FEB-FY00-01-2.8.5	ASP	Emergency Management – Emergency Facilities, Equipment, and Resources	January 17 – 28, 2000
FEB-FY00-01-2.8.6	ASP	Emergency Management – Personnel Protection	January 17 – 28, 2000
FEB-FY00-01-2.9.1	ASP	Environmental Programs – Facility Management System	January 17 – 28, 2000
FEB-FY00-01-2.9.2	ASP	Environmental Programs – Organization, Administration, Training, and Communications	January 17 – 28, 2000
FEB-FY00-01-2.9.3	ASP	Environmental Programs – Environmental Policy	January 17 – 28, 2000
FEB-FY00-01-2.9.4	ASP	Environmental Programs – National Environmental Policy Act	January 17 – 28, 2000
FEB-FY00-01-2.9.5	ASP	Environmental Programs – Preservation of Cultural and Natural Resources	January 17 – 28, 2000
FEB-FY00-	ASP	Environmental Programs – Permits	January 17 –

LISTING OF ES&H ASSESSMENTS PERFORMED BY FH  
CALENDAR YEAR 2000

Attachment 1

Table 1 – Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
01-2.9.6			28, 2000
FEB-FY00-01-2.9.7	ASP	Environmental Programs – Resource Conservation and Recovery Act Treatment, Storage and Disposal Permit	January 17 – 28, 2000
FEB-FY00-01-2.9.8	ASP	Environmental Programs – State Waste Discharge Permits and National Pollutant Elimination System	January 17 – 28, 2000
FEB-FY00-01-2.9.9	ASP	Environmental Programs – Air Quality Program	January 17 – 28, 2000
FEB-FY00-01-2.9.10	ASP	Environmental Programs – Environmental Monitoring, Surveillance, and Inspections	January 17 – 28, 2000
FEB-FY00-01-2.9.11	ASP	Environmental Programs – Pollution Prevention/Waste Minimization	January 17 – 28, 2000
FEB-FY00-01-2.9.12	ASP	Environmental Programs – Incident Investigations and Notifications	January 17 – 28, 2000
FEB-FY00-01-2.9.13	ASP	Environmental Programs – Waste Management Plan	January 17 – 28, 2000
FEB-FY00-01-2.9.14	ASP	Environmental Programs – Waste Characterization and Certification	January 17 – 28, 2000
FEB-FY00-01-2.9.15	ASP	Environmental Programs – Packaging, Labeling, and Transportation	January 17 – 28, 2000
FEB-FY00-01-2.9.16	ASP	Environmental Programs – Waste Treatment, Storage, and Disposal Technology	January 17 – 28, 2000
FEB-FY00-01-2.9.17	ASP	Environmental Programs – Radiological Performance Assessment	January 17 – 28, 2000
FEB-FY00-01-2.9.18	ASP	Environmental Programs – PCB and Asbestos Waste Categories	January 17 – 28, 2000
FEB-FY00-01-2.10.1	ASP	Quality Assurance – Management - Programs	January 17 – 28, 2000
FEB-FY00-01-2.10.2	ASP	Quality Assurance – Management – Personnel Training and Qualification	January 17 – 28, 2000
FEB-FY00-01-2.10.3	ASP	Quality Assurance – Management – Quality Improvement	January 17 – 28, 2000
FEB-FY00-01-2.10.4	ASP	Quality Assurance – Management – Documents and Records	January 17 – 28, 2000
FEB-FY00-01-2.10.5	ASP	Quality Assurance – Performance – Work Processes	January 17 – 28, 2000
FEB-FY00-01-2.10.6	ASP	Quality Assurance – Performance – Design	January 17 – 28, 2000
FEB-FY00-01-2.10.7	ASP	Quality Assurance – Performance – Procurement	January 17 – 28, 2000
FEB-FY00-01-2.10.8	ASP	Quality Assurance – Performance – Inspection and Acceptance Testing	January 17 – 28, 2000
FEB-FY00-01-2.10.9	ASP	Quality Assurance – Assessment – Management Assessment	January 17 – 28, 2000
FEB-FY00-01-2.10.10	ASP	Quality Assurance – Assessment – Independent Assessment	January 17 – 28, 2000
FEB-FY-00-02-	Protection Technology Hanford	ISMS Validation	July 17 – 28, 2000

LISTING OF ES&H ASSESSMENTS PERFORMED BY FH  
CALENDAR YEAR 2000

Attachment 1

Table 1 - Listing of ES&H Assessments for Calendar Year 2000			
Assessment Identifier	Facility/Operation Assessed	Scope of Assessment	Assessment Date
ISMS			
MA-2 <sup>nd</sup> Qtr/2000- ES&H	ES&H	Assess Restructure Effectiveness in ES&H	2 <sup>nd</sup> Qtr FY2000
MA-2 <sup>nd</sup> Qtr/2000- ES&H	ES&H	Training Assessment	2 <sup>nd</sup> Qtr FY2000
MA-2 <sup>nd</sup> Qtr/2000- ES&H	ES&H	ISMS System Description Assessment	2 <sup>nd</sup> Qtr FY2000
MA-2 <sup>nd</sup> Qtr/2000- ES&H	ES&H	Chemical Exposure Baseline Evaluation	2 <sup>nd</sup> Qtr FY2000
MA-3 <sup>rd</sup> Qtr/2000- ES&H	ES&H	Automated Job Hazard	3 <sup>rd</sup> Qtr FY2000
MA-3 <sup>rd</sup> Qtr/2000- ES&H	ES&H	Corrective Action Management	3 <sup>rd</sup> Qtr FY2000
MA-3 <sup>rd</sup> Qtr/2000- ES&H	ES&H	Review Organization's Implementation Performance Against Criticality and Nuclear Safety Related Procedures	3 <sup>rd</sup> Qtr FY2000
MA-4 <sup>th</sup> Qtr/2000- ES&H	ES&H	Assess Restructure Effectiveness in ES&H	4 <sup>th</sup> Qtr FY2000
MA-4 <sup>th</sup> Qtr/2000- ES&H	ES&H	Radiological Requirements Flow-Down to Policies and Procedures with the PHMC	4 <sup>th</sup> Qtr FY2000
MA-4 <sup>th</sup> Qtr/2000- ES&H	ES&H	Implementation of Criticality/Nuclear Safety Related Procedures	4 <sup>th</sup> Qtr FY2000



**PNNL** FY 2001/FY 2002 SELF-ASSESSMENT SCHEDULE  
**RADIOLOGICAL CONTROL/WORKER SAFETY AND HEALTH  
 MANAGEMENT SYSTEMS**

RADIOLOGICAL CONTROL FY01						
No.	Assessment	ATS Condition Number	Lead Assessor	Assessment Plan Prepared or Revised	Assessment Completed	Report Issued
1.	Radiological Contamination Control	3093.3	VC Asmund	07/31/00	01/31/01	02/28/01
2.	Radiological Training	3523.1	RM Rogers (TA Shoemaker in ATS)	10/31/00	11/30/00	02/28/01
3.	Portable and Fixed Instrumentation Program	3523.2	AP Mileham GA Stoetzel	01/31/01	02/28/01	03/31/01
4.	External Dosimetry	3523.3	JA Robinson	02/30/01	03/31/01	04/30/01
5.	Sealed Sources and Radioactive Material Control	3523.4	RA Jones	04/30/01	05/31/01	06/30/01
6.	Trend Analysis of RPRs	3523.6	VC Asmund	N/A	N/A	02/28/01 04/30/01 07/31/01 10/31/01
7.	Air Sampling and Monitoring Review	3523.7	AP Mileham	06/30/01	08/31/01	09/30/01
8.	Temporary Shielding Review	3523.8	AP Mileham	04/30/01	05/31/01	05/31/01
9.	Area Radiation Monitor Review	3523.9	AP Mileham	09/15/01	09/30/01	09/30/01
10.	RC Supervisor Observations	3523.10	SR Bivins	N/A	03/30/01 06/30/01 09/30/01	03/30/01 06/30/01 09/30/01
			FR Bronson	N/A	03/30/01 06/30/01 09/30/01	03/30/01 06/30/01 09/30/01
			JR Christensen	N/A	03/30/01 06/30/01 09/30/01	03/30/01 06/30/01 09/30/01
			KD Ledgerwood	N/A	03/30/01 06/30/01 09/30/01	03/30/01 06/30/01 09/30/01
			MP Long	N/A	03/30/01 06/30/01 09/30/01	03/30/01 06/30/01 09/30/01
			CH Swanson	N/A	03/30/01 06/30/01 09/30/01	03/30/01 06/30/01 09/30/01
RADIOLOGICAL CONTROL FY02						
1.	Radiological Records and Reports	3523.5	GA Stoetzel	11/30/01	12/30/01	01/30/02
2.	Trend Analysis of RPRs		VC Asmund	N/A	N/A	01/31/02 04/30/02 07/31/02 10/31/02
	TBD					
	TBD					
WORKER SAFETY AND HEALTH FY01						
1.	Ergonomics	3095.4	MS Hardman	10/31/00	11/30/00	01/31/01
2.	Electrical Safety	3529.1	ME Pease	03/30/01	04/30/01	05/30/01
3.	Respiratory Protection Performance Review	3529.2	RD Mitchell	N/A	N/A	01/31/01
4.	Hoisting & Rigging	3529.3	HM Jones	N/A	N/A	02/28/01
5.	Confined Space Permit Review	3529.4	MW Fullmer	02/15/01	02/28/01	03/31/01

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6.	Chemical Management System Data Accuracy	3529.5	JA Piatt	07/30/01	08/30/01	09/30/01
7.	Lock and Tag Performance Review	3529.6	MW Fullmer	04/15/01	04/30/01	05/30/01
<b>WORKER SAFETY AND HEALTH FY01 (cont'd)</b>						
8.	Inventory Chemicals (used by the group)	3529.8	JL Allen CL Caldwell TA Shoemaker TA Graham ME Pease	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A	07/30/01 07/30/01 07/30/01 07/30/01 07/30/01
9.	QA on EJTA	3529.9	CL Caldwell	09/30/01	10/30/01	11/30/01
<b>WORKER SAFETY AND HEALTH FY02</b>						
1.	Respiratory Protection Performance Review					
2.	Confined Space Permit Review					
3.	Chemical Management System					
4.	Hazard Communications					
5.	Lock and Tag Performance Review					
6.	Inventory Chemicals (used by the group)					
7.	Biohazards					
8.	Confined Space Program					
9.	Lock and Tag Program					
10.	Non-Ionizing Radiation/Lasers					
11.	Thermal Stress					

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**Facility Safety: FY01 Self-Assessment Plan Summary/Schedule**

FS-01-01	Management Systems Fully Developed and Deployed	Obtain baseline information on functional elements of management system	Assessment Results	Program element is in compliance and deployed	Perform baseline assessment on building fire appraisal process to identify options to streamline and/or enhance the process	9/30/01	
FS-01-02	Management Systems Fully Developed and Deployed	Obtain baseline information on functional elements of management system	Assessment Results	Program element is in compliance and deployed	Perform targeted criticality safety self-assessment to baseline current process/procedure involving criticality safety reviews of new and modified facilities, equipment, parts, and components significant to criticality safety.	TBD	M Dec
FS-01-03	Management Systems Fully Developed and Deployed	Obtain baseline information on functional elements of management system	Assessment Results	Program element is in compliance and deployed	Perform biannual criticality safety inspections in RPL.	9/30/01	M Dec
FS-00-04	Optimized Staff Involvement, Ownership, and Professional Development	Develop strategy, tools, and techniques for collecting and analyzing staff satisfaction survey	Assessment Results	TBD	Perform a staff satisfaction survey focusing on Facility Safety staff involvement, ownership, and development	9/30/01	T Graham
FS-00-05	Excellence in management of the Laboratory's ES&H resources	Manage within 5% of budget including load following	Budget variance	± 5%	Review of monthly financial summary	Monthly	T Graham
FS-01-06	Management Systems Fully Developed and Deployed	Obtain baseline information on functional elements of management system	Assessment Results	Program element is in compliance and deployed	Perform assessment of RPL change control processes to determine whether changes to items (that is, laboratory procedures or programs, defined administrative processes, etc.) described in the RPL SAR that could have the potential to affect the safety analysis are submitted to the USQ review process.	9/30/01	N Cathey

Selfassessment/01 Plan/FS sch-plan.rev0.2-08-01

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**FY 2000 SELF-ASSESSMENTS FOR THE  
 RADIOLOGICAL CONTROL AND WORKER SAFETY AND HEALTH  
 MANAGEMENT SYSTEMS**

No.	Assessment	Lead Assessor	Report Issued
1.	Radiological Monitoring	Asmund, VC	05/12/00
2.	ALARA Program	Robinson, JA	09/28/00
3.	Respiratory Protection Program (Both Rad and NonRad)	Stoetzel, GA	02/22/00
4.	Radiological Access Control Program	Jones, RA	Still in progress
5.	Radiological Work Planning and Control	Rogers, RM	09/5/00
6.	Internal Dosimetry	Hoyt, JR	09/29/00
7.	Radiological Program Management	Rogers, RM	09/11/00
8.	Industrial Hygiene and Occupational Safety Records Management (Note: This was a FY1999 self-assessment, but was not fully completed until CY2000.	Long, MP	Report was issued 04/28/00
9.	Chemical Management System subject Area	Piatt, JA	02/02/00
10.	Hazard Communications	Mitchell, RD	11/02/00
11.	Chronic Beryllium Disease Prevention	Piatt, JA	08/23/00
12.	Firearms Safety	Wright, PA	04/26/00