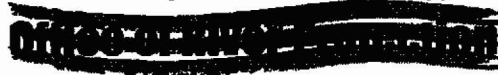




U.S. Department of Energy



P.O. Box 450, MSIN H6-60
Richland, Washington 99352

JAN 14 2008

08-ESQ-008

Mr. John C. Fulton, President
and Chief Executive Officer
CH2M HILL Hanford Group, Inc.
2440 Stevens Center Place
Richland, Washington 99354

Dear Mr. Fulton:

CONTRACT NO. DE-AC27-99RL14047 – ASSESSMENT REPORT A-08-ESQ-TANKFARM-001 – ASSESSMENT OF CH2M HILL HANFORD GROUP, INC. (CH2M HILL) OCCURRENCE REPORTING PROGRAM, OCTOBER 1 THROUGH 4, 2007

This letter forwards the results of the U.S. Department of Energy (DOE), Office of River Protection assessment of the CH2M HILL Occurrence Reporting Program conducted from October 1 through 4, 2007 (attached).

The assessment found that CH2M HILL complied with the requirements of DOE O 231.1A, "Environmental, Safety, and Health Reporting," and DOE M 231.1-2, "Occurrence Reporting and Processing of Operations Information." CH2M HILL's implementing procedures provided sufficient details to ensure the following program elements were met:

- Event or Condition Identification;
- Event or Condition Categorization;
- DOE Headquarters Operations Center Prompt Notification;
- Written Notification;
- Occurrence Investigation and Analysis;
- Occurrence Report Closure including development of Lessons Learned;
- Short Form Reports;
- Performance Analyses and Identification of Recurring Occurrences; and
- Training.

Mr. John C. Fulton
08-ESQ-008

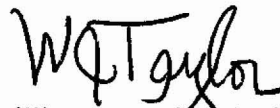
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JAN 14 2008

The assessor also concluded that CH2M HILL personnel were knowledgeable of the process requirements and exhibited strong ownership for ensuring occurrence reports were tracked and reported in a timely manner. No findings or observations were identified during this assessment.

If you have any questions, please contact me, or your staff may contact Patrick P. Carrier, Office of Environmental Safety and Quality, (509) 376-3574.

Sincerely,



William J. Taylor, Assistant Manager
Office of Environmental Safety and Quality

ESQ:PPC

Attachment

cc w/attach:

S. F. Waters, CH2M HILL
CH2M HILL Correspondence

U.S. DEPARTMENT OF ENERGY
Office of River Protection
Environmental Safety and Quality

ASSESSMENT: CH2M HILL Hanford Group, Inc. Occurrence Reporting Program

REPORT: A-08-ESQ-TANKFARM-001

FACILITY: Hanford Tank Farms

LOCATION: Richland, Washington

DATES: October 1 through 4, 2007

ASSESSORS: Patrick Carier, ORP, Lead Assessor
Scott Nicholson, Savannah River Site, Facility Representative

APPROVED BY: William Taylor, Assistant Manager, Office of Environmental Safety and
Quality

Executive Summary

The U.S. Department of Energy (DOE), Office of River Protection conducted an assessment of Occurrence Reporting Program at the Hanford Tank Farms from October 1 through 4, 2007. The assessment evaluated CH2M HILL Hanford Group, Inc. (CH2M HILL) implementation of the Occurrence Reporting Program requirements of DOE O 231.1A, "Environmental, Safety, and Health Reporting," and DOE M 231.1-2, "Occurrence Reporting and Processing of Operations Information." A facility representative from Savannah River Site was the subject matter expert for this assessment.

The assessment found that CH2M HILL complied with the requirements of the above DOE Order and Manual. CH2M HILL's implementing procedures provided sufficient details to ensure the following program elements were met:

1. Event or Condition Identification;
2. Event or Condition Categorization;
3. DOE Headquarters Operations Center Prompt Notification;
4. Written Notification;
5. Occurrence Investigation and Analysis;
6. Occurrence Report Closure including development of Lessons Learned;
7. Short Form Reports;
8. Performance Analyses and Identification of Recurring Occurrences; and
9. Training.

The assessor also concluded that CH2M HILL personnel were knowledgeable of the process requirements and exhibited strong ownership for ensuring occurrence reports were tracked and reported in a timely manner.

The assessor reviewed and interviewed personnel involved in the preparation and submittal of occurrence reports submitted in the past 12 months (22 reports). The reports reviewed were properly categorized, well written, timely, and were consistent with reports generated at other DOE sites. Training provided to CH2M HILL personnel involved in the Occurrence Reporting Program was consistent with DOE Expectations.

Additional details on the above topics are provided in this report.

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List of Acronyms

CFR	Code of Federal Regulations
CH2M HILL	CH2M HILL Hanford Group, Inc.
CRAD	Criteria Review and Approach Documents
DOE	U.S. Department of Energy
EM	Office of Environmental Management
FR	Facility Representative
HQ	Headquarters
ORP	Office of River Protection
ORPS	Occurrence Reporting and Processing System

**U.S. Department of Energy (DOE), Office of River Protection (ORP)
Assessment of CH2M HILL Hanford Group, Inc. (CH2M HILL)
Occurrence Reporting Program**

1.0 Details

This assessment evaluated CH2M HILL's implementation of the ORP requirements of DOE O 231.1A, "Environmental, Safety, and Health Reporting," and DOE M 231.1-2, "Occurrence Reporting and Processing of Operations Information." The review focused on Occurrence Reports submitted by the contractor during the past 12 months prior to the start of this assessment.

Two specific Criteria Review and Approach Documents (CRAD) were developed to evaluate the CH2M HILL Occurrence Reporting Program and the CRADs considered the following elements:

1. Programmatic:

- Evaluate the comprehensiveness of the Contractor's Occurrence Reporting Program documents to ensure that the requirements for identification, categorization, notification, investigation, report closure, and training are properly established, documented, and implemented.
- Ensure the Contractor's Occurrence Reporting Program establishes requirements to ensure that events are appropriately categorized and meet timeliness requirements as stipulated in the DOE Manual. This includes:
 - Categorization within two hours of discovery
 - Prompt Notification requirements
 - Written Notification requirements
 - Update Report Requirements
 - Written Revision requirements based on Facility Representative (FR) disapproval of the report

2. Implementation: Based on review of the past 12 months of submitted contractor Occurrence Reporting and Processing System (ORPS) reports, the following elements will be evaluated to determine if implementation of the Occurrence Reporting Program met DOE expectations:

- Implementation of program elements to ensure that the appropriate events or conditions are reported by the contractor;
- Implementation of program elements to ensure that event or conditions are appropriately categorized by the contractors including the appropriate selection of reporting criteria/criterion;
- Implementations of program elements to ensure the appropriate notifications are performed by the contractors based on the Significance Category;

- Implementation of program elements to ensure written notification reports submitted by the contractors meets DOE expectations including schedule requirements;
- Implementation of program elements for Investigating and Analyzing events or conditions identified by the contractor; and
- Implementation of program elements pertaining to Occurrence Report Closure including how lessons learned are developed and communicated to the appropriate individuals and organizations.

1.1 CH2M HILL Occurrence Reporting Program

CH2M HILL developed procedure "Occurrence Reporting and Process Operations Information," TFC-OPS-OPER-C-24, Revision B-7 to implement the DOE Order and DOE Manual requirements. The assessor reviewed the procedure and concluded that the following requirements were adequately specified:

- Event or Condition Identification;
- Event or Condition Categorization;
- DOE Headquarters (HQ) Operations Center Prompt Notification;
- Written Notification;
- Occurrence Investigation and Analysis;
- Occurrence Report Closure including development of Lessons Learned;
- Short Form Reports;
- Performance Analyses and Identification of Recurring Occurrences; and
- Training.

Some minor opportunities for improvement were noted by the assessor and are discussed below:

- The information contained in Attachment A is based on a previous revision of the DOE O 151.1C. For example, the wording in the Health and Safety Section Item 5 refers to "An unplanned nuclear criticality resulting in an actual or potential facility damage." Current wording in the DOE Order is broader in text, which simply states "An unplanned nuclear criticality." In addition, Items 3, 4, and 5 of the procedure TFC-OPS-OPER-C-24, in the Security and Safeguard section are not in the current order and the entire section identified by the order for the "Hazardous Biological Agent or Toxin" is not included in the procedure. A review should be performed of Attachment A to ensure compliance with DOE O 151.1C criteria for event classification and response;

- Procedure TFC-OPS-OPER-C-24, Step 4.1.3.2 (3a) discusses classifying a confirmed abnormal event under category Group 10(4). This category requires HQ prompt notification. There should be a NOTE added to this section, similar to Step 4.1.3.1(1) for ensuring the HQ notification is made for consistency;
- For consistency, Group 6, (3) SC3, should be identified as >1X but <100X; and
- The values specified for the Group 1 radionuclides in Attachment D of Procedure TFC-OPS-OPER-C-24 have been taken from a 1995 memorandum developed by the Office of Environmental Policy and Assistance, specifically the "Average" value. Although the value used in the procedure specified by the memorandum are conservative as compared to the values specified by 10 Code of Federal Regulations (CFR) 835, Part D, an evaluation should be performed to ensure the rationale for using the 1995 memorandum is still valid with the current regulations. In addition, the value specified in the same attachment for tritium is identified as 1,000. The 10 CFR 835 value is 10,000.

1.2 Occurrence Reporting Program Implementation

The assessors evaluated 22 Occurrence Reports submitted by CH2M HILL during the past 12 months. The review concluded that the ORPS reports generated by the Contractor followed contractor procedure TFC-OPS-OPER-C-24 and DOE expectations. The written reports generated met the content requirements established in the DOE Manual. Reports contained sufficient information and were easily understood. With few exceptions, the timeliness requirement for discovery, categorization, and report generation were typically met. The few instances where timeliness was not met the DOE FRs were properly notified.

The reviewed ORPS reports indicated that CH2M HILL used a conservative approach in determining the need for generating and categorizing reports. Discussions are held with the DOE FR on a regular basis to ensure there is agreement on the significance level and categorization of the report. The approach for categorization was further discussed during interviews with a Shift Manager and a Shift Director. The interviewees were consistent in their approach to categorizing reports and stated that if there was doubt between categories, they would pick the most conservative category. Review of the 22 occurrence reports further validated their statements.

The contractor utilized procedure TFC-OPS-OPER-D-01 for event notification. The procedure defined the requirements and situations when the on-call DOE FR should be verbally notified. The procedure adequately described when the FRs should be notified for all ORPS events. Based on discussions with the FR's, timeliness of notification for ORPS events has not been a problem. However, for events that are not ORPS events, there have been issues with the notification to the DOE FR. This issue is being handled via separate ORP correspondence.

An Office of Environmental Management (EM) direction letter received from the Deputy Assistant Secretary for Safety Management and Operations provided direction for DOE notification of additional events that are not depicted in the DOE order for prompt HQ notifications. This notification is required to be completed by DOE. The procedure, TFC-OPS-OPER-D-01, utilized for contacting the FR did not include all examples from the HQ letter.

During discussions with the contractor, it was apparent they were not aware of these additional criteria although some aspects of the letter were contained in the above procedure. All the information from the directive letter should be included in the procedure to ensure the additional 30 minute notification requirements are met. CH2M HILL should review the EM direction letter and incorporate those missing elements. ORP will ensure that appropriate contract direction is provided in future contract modification.

The assessor reviewed training courses conducted by the contractor to ensure personnel involved in the Occurrence Reporting Program had adequate knowledge to perform their assigned work. The following CH2M HILL Lesson Plans were reviewed: Apparent Cause Analysis, Course Number 357011; Corrective Action Management, 357014; Advance Root cause and Common Cause, 357010; and CH2M HILL ORPS Redesign Implementation Training. The assessor concluded that the training courses were consistent with DOE expectations and that the individuals performing the occurrence reporting tasks were adequately trained to the above courses.

2.0 Findings and Observations

There were no findings or observations during this assessment.

3.0 Conclusion

The assessor concluded that CH2M HILL has developed an Occurrence Reporting Program that met DOE expectations as depicted in the DOE O 231.1A and DOE M 231.1-2. Some minor opportunities for improvement to the implementing procedure were discussed in the above report. The assessor also concluded that CH2M HILL was adequately implementing the requirements of the ORP.

4.0 Documents Reviewed

- DOE O 231.1A;
- DOE M 231.1-2, Attachment 2, Contractor Requirements Document;
- CH2M HILL, "Occurrence Reporting and Process Operations Information," Manual Operations, Document TFC-OPS-OPER-C-24, Revision B-7;
- CH2M HILL, "Lessons Learned," TFC-OPS-OPER-C-28, Revision A-4; and
- CH2M HILL, "Event Notification," TFC-OPS-OPER-D-01, Revision B-26.

CH2M HILL ORPS Reports

- EM-RP--CHG-TANKFARM-2006-0029;
- EM-RP--CHG-TANKFARM-2006-0030;

- EM-RP--CHG-TANKFARM-2006-0031;
- EM-RP--CHG-TANKFARM-2006-0032;
- EM-RP--CHG-TANKFARM-2006-0033;
- EM-RP--CHG-TANKFARM-2006-0035;
- EM-RP--CHG-TANKFARM-2006-0036;
- EM-RP--CHG-TANKFARM-2006-0037;
- EM-RP--CHG-ANALLAB-2007-0001;
- EM-RP--CHG-ANALLAB-2007-0002;
- EM-RP--CHG-ANALLAB-2006-0003;
- EM-RP--CHG-TANKFARM-2007-0001;
- EM-RP--CHG-TANKFARM-2007-0002;
- EM-RP--CHG-TANKFARM-2007-0003;
- EM-RP--CHG-TANKFARM-2007-0004;
- EM-RP--CHG-TANKFARM-2007-0005;
- EM-RP--CHG-TANKFARM-2007-0006;
- EM-RP--CHG-TANKFARM-2007-0007;
- EM-RP--CHG-TANKFARM-2007-0008;
- EM-RP--CHG-TANKFARM-2007-0009;
- EM-RP--CHG-TANKFARM-2007-0010;
- EM-RP--CHG-TANKFARM-2007-0011;
- CH2M HILL Lesson Plan for Apparent Cause Analysis, Course Number 357011;
- CH2M HILL ORPS Redesign Implementation Training; and
- Training Records for: Corrective Action Management, 357014; Apparent Cause Analysis, 357011; and Advance Root cause and Common Cause, 357010.

5.0 Personnel/Positions Interviewed

- CH2M HILL Operations Specialist for Occurrence Report Writing;
- CH2M HILL Waste Feed Operations Shift Manager; and
- CH2M HILL Shift Director.