



U.S. Department of Energy  
**Office of River Protection**

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

**MAY 09 2008**

08-TOD-044

Mr. Jerry W. Long,  
Chief Operating Officer  
CH2M HILL Hanford Group, Inc.  
2440 Stevens Center Place  
Richland, Washington 99354

Dear Mr. Long:

CONTRACT NO. DE-AC27-99RL14047- U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION (ORP) ASSESSMENT OF TANK FARM PROJECT OPERATIONS, MARCH 2008 (A-08-AMTF-TANKFARM-012)

The ORP Tank Farm Project Facility Representatives and technical staff conducted evaluations of the Tank Farm and 222-S Laboratory operations and activities during March 2008. The attached report documents the results of the evaluations, which identified one strength, two findings, one non-cited finding, and three observations.

Within 30 days of receipt of this letter you should respond to the assessment findings and non-cited findings. The response should include:

- the cause(s) of the findings;
- the corrective actions that have been taken to control or remove any adverse impact from noncompliant conditions (remedial actions) and the results achieved;
- the corrective actions that will be taken to identify the extent of condition, correct the cause(s), and prevent further findings; and
- the date when all corrective actions will be completed, verified, and compliance to applicable requirements achieved.

If you have any questions, please contact me, or your staff may contact Mark C. Brown, Director of Tank Farm Operations Division, (509) 373-9150.

Sincerely,

A handwritten signature in black ink, appearing to read "DLNoyes".

Delmar L. Noyes, Acting Assistant Manager  
Tank Farms Project

TOD:MCB

Attachment

cc: See Page 2

Mr. Jerry W. Long  
08-TOD-044

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cc w/attach:

E. J. Adams, CH2M HILL  
C. E. Anderson, CH2M HILL  
J. J. Badden, CH2M HILL  
H. S. Berman, CH2M HILL  
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R. A. Dodd, CH2M HILL  
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K. T. Juroff, EM-22  
W. M. Linzau, DNFSB  
R. G. Quirk, DNFSB  
CH2M HILL Correspondence

Attachment  
08-TOD-044

Tank Farm Project Monthly Report  
for March 2008  
A-08-AMTF-TANKFARM-012

Consisting of 8 pages, including coversheet

# Office of River Protection

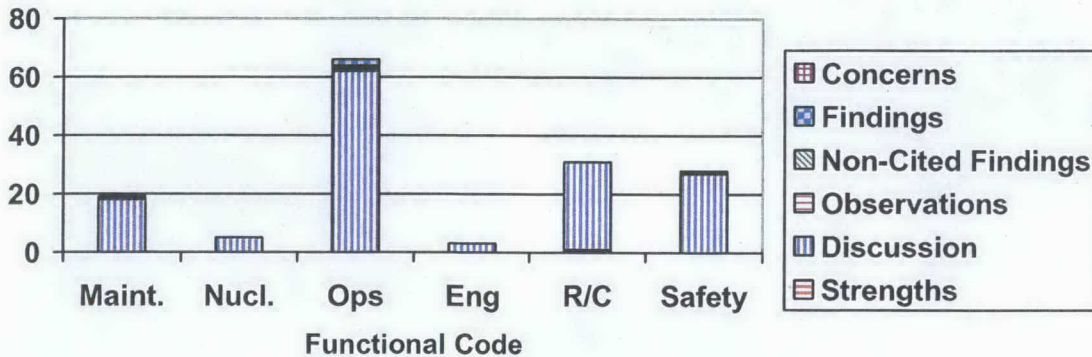
## Tank Farm Project Monthly Report for March 2008

A-08-AMTF-TANKFARM-012

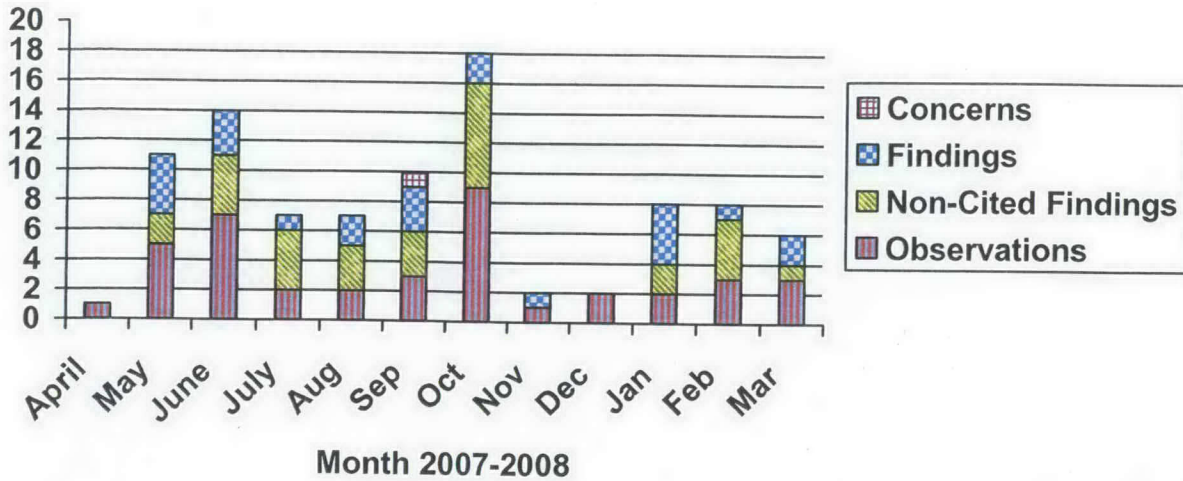
### I. Introduction/Summary

During the month of March 2008, the U.S. Department of Energy (DOE), Office of River Protection (ORP) Facility Representative's (FR) and technical staff reviewed maintenance and operations at the Tank Farms and 222-S Laboratory. For this reporting period, 89 entries were made in the Operational Awareness (OA) database. Figure 1 groups the entries by functional area since some entries cover more than one functional area they may be represented in the graph more than once. One strength, two findings, one non-cited finding, and three observations were reported during the month. These strengths and issues are discussed in Section IV of this report.

Figure 1 - Number of OA Entries by Category



**Figure 2 - Number of Deficiencies by Type**



## II. Analysis and Discussion

In March 2008, the ORP FR and technical staff performed 25 surveillances in areas that included conduct of operations, radiological control practices, industrial safety, integrated safety management, quality assurance, nuclear safety, and maintenance.

While this report does include data from the oversight of S-102 recovery actions and uses it in the overall assessment of contractor operations, it does not use that data to provide a detailed analysis of the S-102 recovery. This will be done in a separate document.

Although the majority of the issues were in the area of operations, Figure 1 reflects the need for continued effort in the area of operations and industrial safety. This report identifies one strength in the area of operations and the report's findings, non-cited finding, and observations demonstrate that there is need for additional improvement.

Figure 2 indicates a slight decrease, with respect to January and February, in the quantity of issues identified for March. Given the available resources, this is viewed as not representing a statistically significant change from the previous months.

The oversight performed by the FRs during March 2008 included, but was not limited to:

- Attended a Process Hazards Analysis/Procedure Analysis for TO-220-112, *Over-Ground Transfer from 241-C-109 to 241-AN-106 and Sluicing of Tank 241-C-109*
- Back-pulling of drill rods at Vadose Zone UPR 86 site
- Cleanup status of a diesel spill at the Dean Dome
- Field work for AP-108 core sampling
- Field work for AW exhaustor seal pot work
- Inspection and planning for the repair of the 222-S, Room 2B, Hood No. 16 Pipe Leak
- JRG for CLO-WO-07-0728, *C-104 Perform Pit Videos*
- Observed fold-track demonstration at the Cold Test Facility for the Level 2 Readiness Assessment
- Observed planning activities, pre-job, field work, and post-job review for the removal of liquid waste from a plastic-wrapped pipe tee identified in 219-S, Cell A
- Performed C-109 Retrieval Industrial Hygiene Monitoring surveillance
- Performed reviews of chemistry recovery plans for 241-AN-107, 241-AP-105, and 241-AY-101
- Pre-job briefing and field activities for AP-105 recirculation
- Pre-job briefing and field oversight of CLO-WO-08-0411, *C-109, Insert High Pressure Water Sprayer in R3*
- Pre-job briefing and field work at C-109 to install a go-no-go gauge at Riser 006
- Pre-job briefing and field work for 219-S P7 pump installation
- Pre-job briefing and field work for 241-S-102 soil excavation
- Pre-job briefing and field work for AP-105 to AP-101 waste transfer
- Pre-job briefing and field work for AP-105 to AW-102 waste transfer
- Pre-job briefing and field work for AW Farm annulus ventilation aerosol test
- Pre-job briefing and field work for determining if C-109 Riser 3 was large enough to accommodate the fold-track installation
- Pre-job briefing and field work for T-Farm interim surface barrier work
- Pre-job briefing and field work for the set-up of C-104 pit video
- Pre-job briefing for AZ-102 pit work
- Pre-job briefing for CLO-WO-08-0091, *S-Farm Remove Plates Covering Hose-In-Hose Transfer Lines (HIHTLs)*
- Pre-job briefing for installation of the new vacuum breaker at AW-104 to support the new primary exhausters in AW Farm;
- Pre-job briefing and field work associated with the replacement of the Inductive Couple Plasma Mass Spectrometer in Room 1L
- Responded as the FR for emergency preparedness coached drill at the Incident Command Post
- Reviewed confined space postings in S & SX Farms
- Reviewed High Radiation Areas (HRAs) throughout Tank Farms
- Reviewed Plan of Action for C-109 Level 2 Readiness Assessment
- Reviewed radiological barriers and postings at ER-311

- Reviewed RPP-PLAN-33095, *Process Control Plan for Tank 241-C-109 Waste Retrieval*
- Reviewed the annulus corrosion recovery plan for 241-AY-101 and 241-AY-102
- Verified closure of S-102 related corrective actions
- Walk down for CLO-WO-08-0103, *C-104, Excavate for WRS Conduit and HIHTL*

### III. Injuries and Occurrences

During the month of March 2008, there were no lost work days or recordable cases.

There were no occurrences during March 2008.

### IV. Strengths and Deficiencies

#### STRENGTHS

#### **Excellent responsiveness to housekeeping issue at 242-S (Ron Frink - March 27, 2008)**

During a walk-through of 242-S for housekeeping purposes, the FR noted that the contamination area that leads to the south door had significant debris and considerable sand build-up. This was brought to the attention of the Shift Manager (SM) for correction.

Retrieval and closure operations personnel are commended for being prompt to clean up this area.

#### FINDINGS

#### **A-08-AMTF-TANKFARM-012-F01; No written approvals in the standing order logbook for two standing orders that have been in place greater than six months (Chris Sorensen – February 29, 2008)**

*Requirement:* TFC-OPS-OPER-C-40, *Shift Instructions/Standing Orders*, requires obtaining written approval from the senior operations director for any standing orders in place beyond six months and retaining the documented approval with the applicable standing order in the logbook. *Discussion:* Two standing orders have been in place beyond six months and neither one had the required written approval in the standing order logbook. The first of the two standing orders was WFO-07-002, *Radiological Contamination Control Measures*, which had been in place since July 20, 2007. The second standing order was WFO-07-003, *Releasing Work Involving Potential Release of Radioactive Liquids*, which had been in place since August 21, 2007. The Waste Feed Operations (WFO) SM took prompt action to obtain the required written approvals and placed them in the applicable sections of the standing order logbook once he became aware of the issue.

**A-08-AMTF-TANKFARM-012-F02; On-call FR was not notified of call to outside agency regarding diesel spill** (Chris Sorensen – March 3, 2008)

*Requirement:* TFC-OPS-OPER-D-1, *Event Notification*, requires a phone call to the on-call ORP FR for environmental spills or concerns and for calls made to outside agencies. This procedure applies to WFO, Closure Operations and Analytical Technical Services (ATS).

*Discussion:* The Tank Farm Contractor (TFC) environmental on-call representative called the Washington State Department of Ecology to inform them of a diesel oil spill beneath a generator on the east side of the “Dean Dome” on March 3, 2008, but the on-call FR was not called or otherwise informed.

**NON-CITED FINDINGS**

**A-08-AMTF-TANKFARM-012-N03; Operator aid log keeping and control inadequate** (Ron Frink/Brandon Williamson – March 20, 2008)

TFC-OPS-OPER-C-41, Revision A-2, *Operator Aids*, Section 4.3, Step 4 states, “File the Operator Aid Request and Approval Sheet (with a copy of the aid attached) in the Operator Aid Log.” A copy of operator aid CO-07-001 was not filed with the Operator Aid Request and Approval Sheet.

An uncontrolled operator aid was found in use during the AP-105 to AP-101 transfer. A printed sheet containing information regarding the leak detectors relevant to the transfer was found at the Human-Machine Interface Operator’s station. The FR recognizes the value of an alarm monitoring point summary sheet to the operator, however, this sheet was not controlled as an operator aid in accordance with TFC-OPS-OPER-C-41, Revision A-2, *Operator Aids*. Consequently, there was no assurance that this aid did not supersede or conflict with any other controlled procedure such as the transfer procedure or TO-025-005.

Operator Aid 2E-01-005 consists of two distinct operator aids located on different locations of the same panel. Given that the operator aids are unique, each operator aid should have a unique identification number (TFC-OPS-OPER-C-41, Revision A-2, Section 4.3, *Operator Aids*).

TFC-OPS-OPER-C-41, Revision A-2, Section 4.6, *Operator Aids*, requires that each audit be documented by signing and dating each Operator Aid Audit Checklist and the Operator Log Index. The East Tank Farms Operator Aid Logbook did not document the audits on the Operator Aid Log Index.

**OBSERVATIONS**

**A-08-AMTF-TANKFARM-012-O04; Weaknesses noted while performing an Operator Aid surveillance** (Ron Frink – March 18, 2008)



Several weaknesses were noted while performing an Operator Aid surveillance. These included:

- A key was requested from the West Tank Farm Work Release Station for the 242-S Decon Station. Although the facility is normally unlocked, a key was provided. The key that was provided did not operate the doors. The key has since been removed from the 200W Work Release Station key inventory.
- Although identical, two operator aids were located within the 242-S Decon Trailer, each had the same Operator Aid Identification Number (CO-07-001). The 702-AZ Decon Trailer also has two identical operator aids with the same Operator Aid Identification Number (WFO-07-001). All backflow preventers in 200E have the same operator aid but all have the same Operator Aid Identification Number (2E-00-005). This appears to conflict with the intent of TFC-OPS-OPER-C-41, Revision A-2, *Operator Aids*. Consideration should be given to assigning a unique identification number for each operator aid.

**A-08-AMTF-TANKFARM-012-O05; Confined space postings less than adequate** (Ron Frink – March 27, 2008)

During a walk down of Tank Farm High Radiation Areas, the FR noted several confined space covers with the Confined Space postings significantly faded. The text on the postings is almost illegible. The fading, if continued, will prevent personnel from identifying a space as a Confined Space. Those confined spaces that were observed are located adjacent to the 401-SX Condenser Building and between S-106 and S-109.

Additionally, the over sized cover of the Confined Space located between S-106 and S-109 has become displaced and is on the verge of uncovering the Confined Space region. The hinged cover is ajar (approximately 3 inches open) and allows access to only approximately one-half of the intended opening of the confined space.

**A-08-AMTF-TANKFARM-012-O06; An electrical safety surveillance was performed at AP-271, during which the following observations were identified** (Chris Sorensen – March 26, 2008)

- A power strip being used as a power supply for computer equipment was permanently mounted on the northeast wall using velcro.
- The door into the monitoring and control system room was being held open by a piece of wire tied around the door handle at one end and some electrical conduit fastened to the wall at the other end.
- An electrical outlet faceplate cover was damaged.

## V. Closed Finding

### Contaminated Equipment Staged for Disposal Requires Repackaging (Courtney Blanchard – June 21, 2007)

*Requirement:* The Washington Administrative Code (WAC) 173-303-630, *Use and Management of Containers*, Paragraph 2, *Condition of Containers*, requires that if a container holding dangerous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the dangerous waste from the container to a container that is in good condition or manage the waste in some other way that complies with the requirements of chapter 173-303 of the WAC. Additionally, Paragraph 5, *Management of Containers*, requires, in part that:

- (b) A container holding dangerous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

*Discussion:* On June 7, 2007, waste services attempted to load contaminated equipment that had been field-wrapped in plastic then placed in strong tight packages onto a flat bed trailer when liquid was observed dripping from the packaging. The craft stopped the work because of the potential hazard associated with the liquid, concerns that the appropriate controls had not been implemented, and Department of Transportation regulatory concerns. The work was re-planned.

Various pieces of equipment had been staged for shipment to a waste packaging contractor located offsite including a truck bed, camera, water lances, exhauster, wood box filled with equipment, rock slinger, and water tank. After liquid was observed dripping from some of the packaged equipment during movement, the Waste and Transportation/Packaging Manager performed a thorough inspection of the remaining pieces of equipment. They identified that this equipment had been packaged and staged the same way as the equipment that had leaked liquid. The packaged contaminated equipment was staged out in the weather and elevated only a few inches above the concrete storage pads. Additionally, the secondary container (strong tight package) on several of the long length pieces of equipment used Velcro seams for closure. These seams were not designed to be water tight and were observed lying on the concrete pad, which would allow rain water to enter the strong tight package. The issue with liquid within the strong tight wrapped and packaged contaminated equipment has occurred in the past and either no corrective actions were implemented, or they were ineffective. Requiring the waste handling craft to repackage contaminated equipment is a poor As Low As Reasonably Achievable practice (ALARA), demonstrates ineffective Integrated Safety Management System, and increases project cost.

Procedures TFC-OPS-WM-C-10 Revision C, *Contaminated Equipment Management Practices*, and TO-100-052 Revision K-4, *Perform Waste Generation, Segregation, Accumulation and Clean-up*, were revised to address the need to package equipment and waste to prevent intrusion of liquids. The FR has observed that equipment packaged in accordance with these revised procedures has not had water intrusion and has determined that **this issue is closed**.