U.S. Department of Energy
Office of River Protection
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

AUG 10 2006

06-TOD-062

Mr. M. S. Spears, President
and Chief Executive Officer
CH2M HILL Hanford Group, Inc.
2440 Stevens Center Place
Richland, Washington 99354

Dear Mr. Spears:

CONTRACT NO. DE-AC27-99RL14047 – U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION (ORP) TANK FARM OPERATIONS DIVISION (TOD) QUARTERLY REPORT COVERING TANK FARM CONTRACTOR OPERATIONS DURING THE THIRD QUARTER OF FISCAL YEAR 2006

The ORP TOD Facility Representatives and Technical Staff conducted evaluations of the CH2M HILL Hanford Group, Inc., Tank Farm operations during April, May and June 2006. The attached quarterly report documents the results of the evaluations.

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

Sincerely,

T. Zack Smith, Assistant Manager
for Tank Farms Projects

TOD:MCB

Attachment

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Tank Farms Operations Division Quarterly Report

Third Quarter
April, May and June 2006

Office of River Protection

ORP MISSION

Retrieve and treat Hanford's tank waste and close the tank farms to protect the Columbia River.

U.S. Department of Energy
Office of River Protection
Tank Farm Operations Division
Quarterly Report
Third Quarter
April, May and June 2006

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1. EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE), Office of River Protection (ORP), Tank Farm Operations Division (TOD) Facility Representatives (FR) and Technical Staff completed scheduled and reactive reviews of the Tank Farm Contractor (TFC) and Analytical Services Production Contractor activities and operations at TFC-managed facilities during the months of April, May and June 2006. The reviews conducted during the quarter were focused on evaluating contractor activities, operations and continuous improvement efforts in the following areas: Radiological Work Practices, Cross-Site Transfer Oversight, Job Hazard Analysis Compliance, and C-200 Reconfiguration. Below is a summary of the results; detailed results are provided in Section 2.0 of this report.

A. Radiological Work Practices

A review of Radiological work practices was conducted during this quarter by the FRs. The review consisted of observing pre-job briefings, work activities, post-job reviews and walkdowns of facilities to determine how effectively the radiological control program is implemented at the Tank Farms and 222-S Laboratory facilities. The FRs determined that the contractor has implemented an effective radiological control program to perform field work. Good planning and adherence to procedures were seen to contribute to an effective program and should be encouraged. Problems that were observed did not appear to be programmatic and follow-up actions should be used as a basis for continuous improvement.

B. Cross-Site Transfer Oversight

ORP FRs and Industrial Hygiene staff reviewed the SY-101 to AP-107 Cross Site Transfer, observing preparations and operations throughout the transfer. The transfer was conducted May 2-13, 2006. The pre-transfer review consisted of evaluating the areas of personnel, equipment and procedures. The in-process review consisted of observing the transfer from start to finish on a periodic basis, performing reviews of selected operator stations, surveillance data and calculations, alarm logs, and procedure adequacy and field conditions. Although both CH2M HILL Hanford Group, Inc. (CH2M HILL) and the FRs noted conduct of operations related problems at the beginning of the transfer, CH2M HILL took action to ensure these problems were addressed within the first few shifts of transfer operations. Overall conduct of the transfer was adequate.

C. Job Hazard Analysis Compliance

A review of Job Hazard Analysis (JHA) compliance was conducted during this quarter by the FRs. The review consisted of observing pre-job briefings and work activities and evaluating the implementation of the Job Specific JHA's controls for the work activities observed. The Job Specific JHA controls evaluated during work performance were found implemented for the majority of the work activities observed. Improvements were noted with work crews

conducting peer checking and performing self-correction. Improvements are suggested for briefings to include discussions of the hazards and controls that could be encountered during the work activity for that day. The use of the new worksite hazard analysis checklist could help improve these discussions.

D. C-200 Reconfiguration

A review of the work planning and work activities related to reconfiguration of the C-200 series retrieval system was conducted during this quarter. This work included retrieval system disconnect from Tank C-201 and system connections to Tank C-204. The FRs reviewed corrective actions taken as a result of lessons learned from previous reconfiguration problems. The FRs determined that the corrective actions evaluated during reconfiguration work were found implemented for the work activities observed. Improvements were noted with preparation, planning and work performance.

2. QUARTERLY PERFORMANCE EVALUATION

Review Scope and Method: The ORP FRs completed evaluations of operations and activities at CH2M HILL managed facilities during the third quarter of Fiscal Year (FY) 2006, covering the months of April, May, and June 2006. The evaluations conducted during the quarter were focused on evaluating contractor activities and continuous improvement in the following areas:

- Radiological Work Practices
- Cross-Site Transfer Operations
- Job Hazard Analysis Compliance
- C-200 Reconfiguration

Results: The FRs identified 9 Strengths during the quarter, 1 Finding, and 11 Issues. The results of the FR reviews were provided to CH2M HILL management periodically during the quarter both verbally and via the Tank Farm FR Weekly Reports. The FR issues identified in these reports were also discussed with CH2M HILL management at the monthly interface meetings conducted on May 1, June 5, and July 10, 2006.

The in-depth FR review of the cross-site transfer provided evaluations in many areas, including training, safety basis implementation, conduct of operations, and conduct of maintenance. Although some deficiencies were identified, no adverse trends or recurring deficiencies were identified. Additionally, the FRs determined that contractor Conduct of Operations performance during the transfer was adequate.

Through routine review of contractor activities, the FRs determined that electrical safety problems have been steadily improving. The TFC has been making concerted efforts in the field at improving their electrical safety posture.

FRs continued to observe hazard analysis and work control problems. These problems may be abated by the contractor's revised work control process (revised May 31, 2006). FR review of the contractor's work control program is a focus area for the Fourth Quarter FY 2006.

An increased number of Occurrence Reports (OR) occurred this quarter. No negative trends were identified. The higher number of ORs was attributed to increased legacy contamination events. Reporting of these events are now done on a quarterly basis beginning July 1, 2006.

FRs continued to identify problems with the integrity of waste and radioactive material packaging in the field. FRs observed packaging and labeling degradation from environmental conditions. FR review of Equipment Storage/Waste Management is a focus area for the 4th Quarter FY 2006.

The following sections provide details of the results of the focused reviews for the quarter. Refer to section 3.0, *Facility Representative Issues*, for a complete listing of FR issues identified during the quarter.

A. Radiological Work Practices

A review of Radiological work practices was conducted during this quarter by the FRs. The review consisted of observing pre-job briefings, work activities, post-job reviews and walkdowns of facilities to determine how effectively the radiological control program is implemented at the Tank Farms and 222-S Laboratory facilities.

The work activities observed during the Third Quarter of FY 2006 included: SY-B valve pit cleanup, 222-S P-1 pump bleed valve modifications, 244-BX construction activities, routine contamination and dose surveys in 222-S Room 11A, 222-S cleanout of Transuranic waste, ER-311 camera removal, C-200 reconfiguration, C-103 sluicer replacement, vadose zone characterization at C and BX Farms, C-103 retrieval, steam piping removal from AY-102, solid core sampling at AW-106, foam coating application at 244-S, Post-Job As Low As Reasonably Achievable (ALARA) Review for SY-B pit cleanup, and walkdowns of tank farms and associated facilities and the 222-S Laboratory.

The review found that radiological work practices were effectively implemented at Tank Farms and 222-S Laboratory facilities. In work preparation, it was noted that effective planning resulted in a reduction of radiological exposure for the SY-B valve pit cleanup. FRs

observed good adherence to established radiological practices across a wide variety of activities, including donning and doffing of Personal Protective Equipment (PPE), radiological surveys, proper use of dosimetry, performing work within requirements of the applicable Radiological Work Permit (RWP) and review of work done through a Post-job ALARA Review.

While the majority of work observed indicated that radiological work practices were effectively and properly implemented, there were some deficiencies which should be focused on for continued improvement. These were not considered to be programmatic problems. In particular, the following examples were seen:

- In the C-103 Sluicer Replacement, the RWP called for one worker from each craft to wear a lapel sampler when working in the Airborne Radioactive Area (ARA). On one occasion, three crafts were inside the ARA (riggers, operators and Health Physics Technicians [HPT]), but only the HPT wore a lapel sampler. Follow-up actions taken by TFC in response to FR identified problem was adequate.
- In AX Farm, the High Contamination Area barriers and postings around a water lance were found to have fallen down and the plastic sleeving used to wrap the water lance was severely degraded. Follow-up inspection showed repeat of same deficiency. TFC proposed action was adequate and was to be completed in the last week of this quarter; verification of actions by the FR will be done in the next quarter.
- Two out of three sides of a Collection Area in AW Farm were missing the proper posting. Follow-up actions taken by TFC in response to FR identified problem was adequate.

In conclusion, the radiological work practices observed and evaluated during this quarter showed that the contractor has implemented an effective radiological control program to perform field work. Good planning and adherence to procedures were seen to contribute to an effective program and should be encouraged. Problems that were observed did not appear to be programmatic and follow-up actions should be used as a basis for continuous improvement.

B. Cross-Site Transfer Oversight

ORP FRs and Industrial Hygiene staff reviewed the SY-101 to AP-107 Cross Site Transfer, observing preparations and operations throughout the transfer. The transfer was conducted May 2-13, 2006. The previous Cross-Site transfer was performed in July 2004. In June 2005, the transfer route was tied in (near 244-A) to a new line that bypassed many of the 200 East Tank Farm transfer lines and reduced the amount of physically connected transfer structures. This was the first transfer through the new line (an extension of SN-3150).

The review was divided into a pre-transfer review and an in-process review. The purpose of the pre-transfer review was to evaluate the contractor's readiness to perform the transfer by reviewing the areas of personnel, equipment and procedures. The purpose of the in-process review was to evaluate the contractor's performance during the transfer. This was accomplished by observing the transfer from start to finish on a periodic basis, performing reviews of selected operator stations, surveillance data and calculations, alarm logs, and procedure adequacy and field conditions. A review of the implementation of vehicle restrictions or aboveground transfer system vehicle barriers was also performed.

Both CH2M HILL and the FRs noted conduct of operations related problems at the beginning of the transfer (The FR identified issues are discussed below). CH2M HILL took action to ensure these problems were addressed within the first few shifts of transfer operations. Overall conduct of the transfer was adequate.

Industrial hygiene sampling and monitoring plans as defined by the contractor for the cross-site transfer were fully implemented throughout the cross site campaign period. CH2M HILL demonstrated a complete analysis of potential worker exposure concerns before embarking on the transfer. The contractor's health risk analysis of potential worker exposure was adequate, fully disclosed, and well communicated to the workforce. In addition to the above, the newly developed vapor exposure control zone sign and Tank Vapor Information Sheets (TVIS) were clearly displayed and posted as expected in all the affected Tank Farms. The assigned Cross-Site Transfer workers accomplished their assigned tasks without any industrial hygiene or safety mishaps.

This review resulted in five identified Strengths, one Finding, and five Issues, which are all discussed below.

1) Strengths:

Operations personnel displayed strong ownership of the equipment, the facility and the transfer process. This was observed throughout the transfer.

The contractor was evaluating, real time, the lessons learned and issues from this transfer for applicability to the upcoming SY-102 to SY-101 transfer.

The contractor provided ongoing Senior Supervisory Watch / Management Oversight coverage throughout much of the transfer. This coverage was provided appropriately: during the first several shifts of transfer operation; during many shift turnovers, and on an as needed basis in response to issues. This coverage resulted in identification of issues and clear communication of issues and their corrective actions to all shifts involved in the transfer.

Good work practices relating to the at-the-controls area in 242-S. This included control of the area, personnel requesting to enter, and minimizing distraction to personnel in the at-the-controls area.

Good three-way communication was performed throughout the transfer.

2) Issues:

Finding: Inadequate implementation of vehicle barrier controls (Sorensen/Williamson May 8, 2006)

Requirements:
HNF-SD-WM-TSR-006, *Tank Farms Technical Safety Requirements*, Administrative Control (AC) 5.11 Key Element 5.11.2.a.1 requires that either vehicle restrictions or above ground transfer system vehicle barriers be in place for above ground waste transfer lines physically connected to a waste transfer pump not under admin lock.

RPP-13033, *Tank Farms Documented Safety Analysis*, Section 4.4.4 specifies the approved configuration of vehicle barriers. One type of vehicle barrier utilizes a piece of 6" steel pipe welded to ¾" steel plate. The approved design configuration for this type is shown in RPP-7916, *Calculations for SY-101 Cross Site Connection System*.

Discussion:
The contractor had initially elected to impose vehicle restrictions in SY Farm to comply with AC 5.11 Key Element 5.11.2.a.1 for the cross-site transfer. They later decided to utilize above ground transfer system vehicle barriers due to a need to move a vehicle in SY Farm. Upon review of RPP-7916, FRs noted that the configuration that actually existed in the field did not match the approved design configuration of RPP-7916. The steel plate was supposed to be braced against the concrete footings of the SY-101 Prefabricated Pump Pit (PPP). In reality, the steel plate for each of these vehicle barriers was located several feet away from the PPP footings. Once this was identified, the contractor elected to re-impose vehicle restrictions in SY Farm while addressing the issue.

The contractor later concluded that, not only was the design for this type of vehicle barrier improperly implemented in the field, but the design itself had calculation errors that rendered this type of vehicle barrier inadequate even if it had been implemented as described in RPP-7916. The contractor subsequently declared a Potential Inadequacy in the Safety Analysis (PISA).

In addition, when operations personnel were interviewed about existing vehicle barriers in SY Farm, it was unclear whether they understood what constituted approved above ·

ground transfer system vehicle barriers. This is an important consideration since the Shift Manager/Operating Engineer is responsible to sign the transfer procedure verifying that vehicle barriers are in place prior to removing the admin lock from the transfer pump.

Contractor senior management agreed to address potential training issues, design issues, implementation issues, and any possible procedure improvements as part of their corrective actions for the PISA Problem Evaluation Request (PER)/Occurrence Report.

Two issues were identified by the contractor during the beginning of the transfer. They are covered here as the ORP review team viewed them as key conduct of operations issues and as such ORP closely monitored the contractor response. CH2M HILL responded effectively to these issues.

Contractor Identified Issue: The line fill was performed without performing the required Material Balance Discrepancy (MBD) calculation.

Contractor Identified Issue: The first MBD calculations were performed erroneously. The contractor recognized this and re-performed the calculations to verify that the transfer did not exceed the required bounds. The MBD includes consideration of the flush volume. In this calculation, it subtracts out non cross-site transfer water use (from Data Sheet 5). In these MBDs, the fill water was incorrectly included on Data Sheet 5, even though it is cross site transfer related. As such, the flush water was not considered in the MBD calculation (It was added and then subtracted). This resulted in MBDs that were positive. The first correctly calculated MBD was about -5.0 inches. In a case where MBD was -5 inches, and there was a misroute or undetected leak, the MBD would become more negative. With a MBD of -5.4 inches, the transfer must be shut down. In the case where the MBD is incorrectly inflated, the time to recognize a leak or misroute (strictly using the MBD) is increased.

The issues below were noted by the ORP review team.

The MBD was not performed at the required time. (Trenchard May 2, 2006) The MBD was required (in step 5.3.35) to be performed at 30 minutes after the start of the transfer, 60 minutes after the start of the transfer, and then every two hours. The MBD was done at 30 minutes, and then 60 minutes later (or 90 minutes after the start of the transfer). All MBDs were performed within the HNF-IP-1266 required 2.4 hours.

The Material Balance Variance (G_1) was not reset as required by the transfer procedure Data Sheet 2 (Trenchard May 7, 2006) There were several shutdowns and restarts of the transfer prior to May 7, 2006. The G_1 value should be reset within 2 to 4 hours after each pump start (if the transfer line is full and steady state conditions exist) and it was not.

A pen-and-ink change was not in compliance with the Technical Procedure Control and Use Procedure. (Trenchard May 2, 2006) A pen-and-ink change was made to section 5.3.4. This change fails to document any concurrences obtained, and as such, it is not clear who concurred in the change. This is not in compliance with the first time use allowance of the Technical Procedure Control and Use. At a minimum, the shift manager approval must be documented in the working copy of the procedure.

Nuisance Alarms at the Monitoring Control Station (MCS) have the potential of distracting operations personnel. (Sorensen May 11, 2006) *Control room operators expressed this concern during informal interviews.* For example:

1. One alarm has been received on several occasions for level indicators and density indicators associated with 244-A. One of these doesn't even have an Alarm Response Procedure associated with it. 244-A has been bypassed and has no bearing on the cross-site transfer at all.
2. Periodic communication error alarms for the 6241-A booster pumps. These pumps are only used for slurry transfers, are not currently authorized for use in the Documented Safety Analysis, and are not even part of this cross-site transfer line (SNL-3150).
3. Alarms from the PCU-1 circulation heater for raw water have been frequent.
4. PCU-4 cabinet temperature alarm is always actuated. This is perhaps due to a failed temperature element or perhaps the temperature element is missing.
5. In addition, many alarms are locked in on the various panels in the 242-S control room.

These alarms, among others, have the undesired effect of de-sensitizing the control room operators to valid alarms that may take place which have a direct impact on the cross-site transfer.

FRs found several areas where transfer procedure TO-430-507 was incorrect or should be clarified. (Trenchard May 7, 2006)

- Inadequate procedure guidance on expectations during unintended transfer shut down periods. The transfer procedure does not clearly discuss continuing to record MBD in Data Sheet 2 when the transfer is temporarily shut down. Maintaining the 2 hour checks during troubleshooting of an unplanned transfer shutdown is expected, but not clearly described in the transfer procedure. There are no instructions covering how long a transfer can be shut down, yet still have active 2 hour MBDs being taken.

  When the transfer pump was not pumping, MBD variance was outside the allowed range. Some operators calculated the value, entered it in Data Sheet 2, and then noted that the value was not valid during a shutdown period. Others simply entered N/A. A consistent expectation should be provided.

The transfer procedure is not clear about when it is appropriate to complete final readings on Data Sheet 1. There were several "final" readings taken in Data Sheet 1. The whole process is not clearly described in the procedure.

- The draft transfer procedure did not contain a sign-off for the design authority to verify the Hose-In-Hose Transfer Line (HIHTL) service life was adequate for the transfer. This verification in the transfer procedure is required by OSD-010, paragraph 4.1, Service Life Limits. This was discussed with the transfer manager and the verification was added to the procedure.

- Transfer procedure step 5.6.3 is not worded to ensure an adequate transfer line drainage. Step 5.6.3 states "ALLOW transfer lines to drain for at least 4 hours following completion of transfer **OR** UNTIL liquid levels in Tanks 241-SY-101 and 241-AP-107 are steady (not changing)." It is written such that the drainage could be stopped after four hours even if the tank levels are still increasing.

- Wording covering double valve isolation was inadequate. Several locations in the procedure, including Checklist 4 and Checklist 12 (that says "*verify covers are installed or AC 5.11 controls are in place for any pit physically disconnected by 2 non-safety significant isolation valves*") were not consistent with AC 5.11.2 a. 2. The statements apply for cases where two isolation valves are non-safety significant, whereas the AC 5.11.2 a.2 requirement applies if one or both of the valves is an evaluated valve (non-safety significant). Following the procedure, workers may not apply a required control in a case where only one valve was a non-safety significant valve. Additionally, the term used in the Checklist 4 and 12 statements, "non-safety significant isolation valve", is too broad as it may apply to an evaluated valve or something less. These sections were revised with pen-and-ink changes (made per the first time use allowance).

- The AP Valve Pit, nozzles H and M were reversed on Figure 1. While the transfer figure is included in the procedure for reference only, it should be corrected.

3) Conclusion

Although both CH2M HILL and the FRs noted conduct of operations related problems at the beginning of the transfer, CH2M HILL took action to ensure these problems were addressed within the first few shifts of transfer operations. Overall conduct of the transfer was adequate.

CH2M HILL is implementing long-term corrective actions to improve the management of transfers. This will include a revision to the transfer template to improve the standardization of transfer procedures. ORP will monitor the implementation of these revisions.

C. Job Hazard Analysis Compliance

A review of JHA compliance was conducted during this quarter by the FRs. The review consisted of observing pre-job briefings and work activities and evaluating the implementation of the Job Specific JHA's controls for the work activities observed.

The work activities observed included: UX-302A open riser work, Integrated Disposal Facility (IDF) construction, 222- S Lab P-1 pump modification, SY-B pit refurbishment, pit sealing with foam and top coating, ER-311 camera removal, C-200 drain line removal, C-204 articulating mast maintenance, C-201 HIHTL disconnects, core sampling at Tank AW-106, sluicer replacement at tank C-103, steam line removal from AY Farm, 244-S jumper removal, vadose zone sampling at BX and C Farms, and caustic addition to Tank S-112.

During performance of the above work activities the TFC workers were observed actively participating in pre-job briefings. The pre-job briefings observed were mostly for medium risk work and followed the graded approach criteria. The briefings typically discussed the scope of work, work order instructions, work assignments, RWP requirements, emergency response and required PPE. The FRs observed workers, Field Work Supervisors or Senior Supervisor Watch's question and discuss various aspects of the work. Discussions of the JHA hazards and controls were not consistent among the various briefings observed and were usually limited reminders of PPE requirements. Overall the pre-job briefings were considered adequate and no Issues were identified. However, improvements are suggested for briefings to include discussions of the hazards and controls that could be encountered during the work activity for that day.

The Job Specific JHA controls during work performance were found adequately implemented for the majority of work activities observed. The PPE required by the JHAs were generally worn by the work crews. The practice of work crews conducting peer checking and performing self-correction was noted as an improvement. For example, worker crews were observed peer checking and correction for proper anti-contamination clothing, leaded gloves and lapel samplers during the C-103 sluicer replacement. The practice of peer checking and self-correction should continue to be practiced and noted in daily post job briefings.

Some problems were identified by the FR's while observing work activities. The items listed below are problems the FR's identified during the quarter where JHA requirements were not

implemented. Collectively, the problems were not considered programmatic and the actions taken by the TFC in response to these FR identified problems were adequate.

- Industrial hygiene limits for ammonia and total organics were not correctly specified in the work package for work at UX-302A. Respiratory protection was not required for the work performed but the limits specified for total organics and ammonia were for work performed when respiratory protection is required.
- A half face respirator was not worn by a worker while applying paint to a concrete pad at the IDF. The respirator was required for all painting and the worker misinterpreted the requirement for only painting in enclosed spaces.
- Vapor Control Zone (VCZ) postings were not changed at some infrequently accessed entry points to A/AX, AN, and AY/AZ Farms when the Farm changed from a locally posted to tank farm boundary posted VCZ; and a VCZ was not in place at C Farm when the entry gate was open.
- A worker entered the C Farm without the Self Contained Breathing Apparatus regulator attached to the worker's mask. The worker was in the Farm for less than a minute when notified and then exited the Farm.

The work control procedure was changed during the end of the quarter and instituted a new process for conducting a worksite hazards analysis. The new hazard analysis process was in a transition period and was partially evaluated. The FWS interviewed understood the expectations for transitioning to the new process and understood how to use the new worksite hazard analysis checklist. Use of the new checklist was observed on two work activities (S-112 caustic addition and C-201 hose-in-hose disconnection). The checklist used identified the appropriate hazards and controls and was used at the pre-job briefings.

In conclusion, the Job Specific JHA controls evaluated during work performance were found implemented for the majority of the work activities observed. Improvements were noted with work crews conducting peer checking and performing self-correction. These practices should continue to be encouraged and noted in daily post job briefings. Improvements are suggested for briefings to include discussions of the hazards and controls that could be encountered during the work activity for that day. The use of the new worksite hazard analysis checklist could help improve these discussions.

D. C-200 Reconfiguration

A review of the work planning and work activities related to reconfiguration of the C-200 series retrieval system was conducted during this quarter. This work included retrieval system disconnect from Tank C-201 and system connections to Tank C-204. The review consisted of observing job planning, pre-job briefings and work activities and evaluating the implementation of the corrective actions from the C-202 multi-personnel contamination event.

The reconfiguration related documents and activities reviewed included: lessons learned briefing; planning meeting for mitigating mobility problems; readiness verification checklist; end point assessment for C-202 Multi-Personnel Contamination Event; five work packages related to re-routing various HIHTL, articulating mast maintenance and modification; and evaluating the associated work activities.

Thorough preparation for the reconfiguration effort was observed before the work started. Lessons learned briefings and planning meetings were conducted. The lessons learned from previous reconfiguration problems was discussed; and Tank C-201 retrieval operating experience and retrieval system descriptions was presented to operations, engineering, planning, maintenance, and project personnel. The meetings observed were well conducted. These meetings served to improve personnel knowledge of the retrieval system and work scope and promote feedback for the upcoming work. In addition, a readiness verification checklist was completed prior to commence field work. This checklist provided a defense-in-depth review to ensure applicable actions were completed prior to staring reconfiguration.

The work packages reviewed contained the applicable corrective actions and lessons learned from the previous reconfiguration work. Specifically, the packages included steps to use damp rags when disconnecting hoses; and vague phrase were eliminated from the work instructions. In addition, all hose-in-hose disconnects and reconnects were completed utilizing glove-bag containments. The work instructions contained the appropriate level of radiological controls and the work activities observed were performed per the applicable work instructions. No issues were identified during the work performance.

An end-point assessment was completed during the quarter to verify the completion and effectiveness of corrective actions related to the C-202 Multi-Personnel Contamination Event. The assessment performed was a comprehensive review of the corrective actions and implementation. This assessment consisted of reviewing closure documents, reviewing for related problems, performing level of knowledge interviews, reviewing work procedures and observing work activities.

In conclusion, the corrective actions evaluated during reconfiguration work were found implemented for the work activities observed. Improvements were noted with preparation, planning and work performance.

3. FACILITY REPRESENTATIVE ISSUES

DOE-ORP FRs identified one Finding and several Issues during the quarter. These were previously provided to the contractor via the FR Weekly Reports. The Finding was detailed in the FR Weekly Report of May 12, 2006, is detailed in Section 2.B above, and is summarized below:

FINDING - Inadequate implementation of vehicle barrier controls (Sorensen/Williamson May 08, 2006): During oversight of the cross-site transfer from SY-101 to AP-107, in May 2006, FRs noted that the vehicle barrier field configuration for the above ground transfer line at SY-101 did not match the approved design configuration detailed in RPP-7916, *Calculations for SY-101 Cross Site Connection System.* The steel plate of the barrier was supposed to be braced against the concrete footings of the SY-101 PPP. In reality, the steel plate for each of these vehicle barriers was located several feet away from the PPP footings.

The following table provides a listing of the FR-identified Finding and Issues from the quarter.

Issue	FR	Date	PER # (PER-2006-)
Operational impacts were caused by issues with maintaining safety equipment operability.	Trenchard	4/5/06	0832
Industrial Hygiene Limits Not Correct in the Work Package.	George	4/3/06	0833
A painter was observed applying paint who was not wearing his half-face respirator as required by the Job Safety Analysis (JSA).	Sorensen	4/17/06	0885
FINDING - Inadequate implementation of vehicle barrier controls.	Sorensen, Williamson	5/8/06	1099, 1050
The MBD was not performed at the required time.	Trenchard	5/2/06	1053
The Material Balance Variance (G_I) was not reset as required by the transfer procedure Data Sheet 2.	Trenchard	5/7/06	1100
A pen-and-ink change was not in compliance with the Technical Procedure Control and Use Procedure.	Trenchard	5/2/06	1053
Nuisance Alarms at the Monitoring Control Station (MCS) have the potential of distracting operations personnel.	Sorensen	5/11/06	1101
FRs found several areas where transfer procedure TO-430-507 was incorrect or should be clarified.	Trenchard	5/7/06	1102

Issue	FR	Date	PER # (PER-2006-)
Leak-tight covers for leak detection drywells around Single-shell tanks (SSTs) are poorly maintained and allow intrusion of water which provides a motive force for movement of contaminants in the soil at SST farms.	Yasek	6/15/06	1245
High contamination barriers and posting were not adequate.	Wade	6/23/06	1285
Reusable equipment justification did not justify reusability for routine or planned future usage.	Wade	6/23/06	1286

4. CLOSURE

The following FR Finding was closed during the third quarter of FY 2006:

Performance issues identified with radiological work controls. (Blanchard, February 16, 2006)

Discussion: PER-2006-0419 was written to address this Finding. Corrective actions included a change to the ALARA work planning procedure that required all work packages involving the pulling of material/equipment from underground radioactive waste storage tanks shall be classified as a high risk activity unless the Project RadCon Director approves a lower risk level. The FR reviewed the corrective actions, determined they should prevent recurrence of the issue, and verified their implementation and effectiveness.