

EXECUTIVE SUMMARY

The Land Disposal Restrictions Assessment Program, as applied to tank farm facilities, was developed and initiated by the U.S. Department of Energy, Office of River Protection (ORP), to address requirements identified in a March 2000 Director's Final Determination from the State of Washington, Department of Ecology (Ecology)¹. The program assesses the status of mixed waste storage at tank farm facilities against federal and state requirements. In December 2002, with Ecology's concurrence, the ORP transferred the assessment program to CH2M HILL Hanford Group, Inc. (CH2M HILL).

This report documents the assessment activities conducted by CH2M HILL during calendar year 2003. The activities, and this report, are intended to meet in full the calendar year 2003 assessment requirements identified in DOE/RL-2002-21, *Calendar Year 2001 Hanford Site Mixed Waste Land Disposal Restrictions Report*. As this constitutes CH2M HILL's initial effort, a secondary goal of the assessment is to identify potential improvements to the Land Disposal Restrictions Assessment Program.

This assessment targets mixed waste storage activities at the following facilities:

- A, AX, T, TX, 2TY, and U single-shell tank farms
- AZ and AW double-shell tank farms
- UX-302A, A-350, AX-152, and AZ-151 catch tanks

Assessment results include three findings and five observations, as follows.

Finding RPP-ENV-LDR-2003-01-F-01: Organizations that own reusable contaminated equipment have not fully implemented the guidance in TFC-ESHQ-ENV_PP-C-01, "Contaminated Equipment Management Practices." Management of reusable contaminated equipment has been identified as problematic in three previous ORP assessments, most recently being classified by the ORP as a "CONCERN." (page 7)

Finding RPP-ENV-LDR-2003-01-F-02: Review of completed operator rounds sheets and related equipment deficiency lists shows that TFC-OPS-OPER-C-08, "Shift Routines and Operating Practices," Section 4.8, is not consistently implemented in the field. Several rounds sheet entries pertaining to equipment deficiencies did not document associated equipment deficiency list numbers. Several EDL listings identified no related problem evaluation request number or work package number. (page 13)

¹ Ecology, 2000, "Final Determination pursuant to the Hanford Federal Facility Agreement and Consent Order (HFFACO) regarding the U. S. Department of Energy's (DOE) compliance with Land Disposal Restriction (LDR) requirements of Washington State's Hazardous Waste Management Act (HWMA) and the federal Resource Conservation and Recovery Act (RCRA), DOE's annual Land Disposal Restrictions Report, and HFFACO milestone M-26-01." Letter to R. French, U.S. Department of Energy, Office of River Protection, and K. Klein, U.S. Department of Energy, Richland Operations Office, from the State of Washington, Department of Ecology, March 29, 2000.

Finding RPP-ENV-LDR-2003-01-F-03: Rounds sheets, which vary from tank farm to tank farm, sometimes omit inspections for specific environmental requirements. Inspections not consistently found included: 1) checking for corrosion or leaks in the aboveground portion of the tank system, 2) inspection for warning signs required by Resource Conservation and Recovery Act of 1976 (RCRA) on perimeter fencing and at access points, and 3) checking the status of alarm panels. (page 13)

Observation RPP-ENV-LDR-2003-01-OB-01: Environmental Program surveillance compliance inspection checklists do not effectively support the Land Disposal Restrictions Assessment Program. The (surveillance compliance inspection) checklist does not address all walk-through inspection criteria listed in the Land Disposal Restrictions Assessment Program checklist. Though not required, revision of the checklist would support a more efficient and cost-effective process for the Land Disposal Restrictions Assessment Program. (page 7)

Observation RPP-ENV-LDR-2003-01-OB-02: Inspection for RCRA-required postings on the perimeter fence and at tank farm entry points is conducted daily at the single-shell tank farms, and weekly at the double-shell tank farms. Justification for this variance was not made clear. This suggests that the current periodicity of some inspection schedules may be worth evaluating, both to ensure regulatory compliance and, where appropriate, to eliminate unnecessary inspections. (page 9)

Observation RPP-ENV-LDR-2003-01-OB-03: RPP-16922, *Environmental Specifications Requirements*, Sections 10.14 and 10.28, may need clarification. Two separate requirements, one to inspect tank farm perimeter fencing and a second to inspect tank farm access points, appear to be commingled. An evaluation is recommended to ensure that regulatory requirements are specifically addressed and that appropriate inspection periodicity is applied for each. (page 9)

Observation RPP-ENV-LDR-2003-01-OB-04: TFC-ESHQ-ENV-RM-D-02, "Environmental Records," does not reflect the transition of the 242-A Evaporator and 222-S Laboratory from Fluor Hanford, Inc. to CH2M HILL. Updates should include company organizational and procedure changes and any updates to regulatory policy reached with the regulators on RCRA issues. (page 14)

Observation RPP-ENV-LDR-2003-01-OB-05: F-contacted waste designations are inconsistent between operators (CH2M HILL) and construction (Fluor Federal Services) forces. In addition, a better job of waste segregation may be appropriate. This deficiency is identified here as an Observation rather than a Finding because CH2M HILL is not directly violating a RCRA requirement. (page 19)

1.0 INTRODUCTION

The Land Disposal Restrictions (LDR) Assessment Program, as applied to tank farm facilities, was developed and initiated by the U.S. Department of Energy, Office of River Protection (ORP), to address requirements identified in a March 2000 director's final determination from the State of Washington, Department of Ecology (Ecology) (Ecology 2000). The program assesses the status of mixed waste storage at tank farm facilities against federal and state requirements. In December 2002, with Ecology's concurrence, the ORP transferred the assessment program to CH2M HILL Hanford Group, Inc. (CH2M HILL).

CH2M HILL initially sought reductions in the assessment program, citing repetitions in both the scope and assessment targets. Following discussions with the ORP and Ecology, it was agreed: 1) that the five fiscal year (FY) 2003 reports could be consolidated into a single report, 2) that the facilities listed for calendar year (CY) 2003 in Table 3.4 of DOE/RL-2002-21, *Calendar Year 2001 Hanford Site Mixed Waste Land Disposal Restrictions Report*, would be addressed, and 3) that surveillance compliance inspections (SCI) of the target facilities, conducted earlier in the year, could be substituted for the facility walkdowns. As this constitutes CH2M HILL's initial effort, a secondary goal of the assessment was to identify potential improvements to the LDR Assessment Program.

CH2M HILL followed the format used by the ORP in its prior LDR assessments, to the extent possible, and attempted to note any deviations in the checklist and the report. The SCIs were conducted between May and November of 2003. The remaining assessment activities were conducted in November and December 2003.

Facilities targeted for assessment in 2003 were:

- A, AX, T, TX, TY, and U single-shell tank (SST) farms
- AZ and AW double-shell tank (DST) farms
- UX-302A, A-350, AX-152, AZ-151 catch tanks.

2.0 ASSESSMENT PLANS AND METHODS

At the time of transition, the ORP was conducting its LDR assessments in accordance with its Ecology-approved procedure ORPID 220.1-3, "AMSQ Mixed Waste Storage Assessments." CH2M HILL does not yet have an Ecology-approved LDR assessment procedure. Therefore, CH2M HILL followed the format used by the ORP in the two previous LDR assessments, including use of the ORP assessment checklist.

Assessment activities conducted during the November-December assessment period consisted primarily of document and record review and interviews. CH2M HILL did not conduct facility walkdowns during this period. Instead, it used information collected in

previously conducted SCIs of the subject facilities. Ecology gave one-time approval of this approach, on CH2M HILL's request, as a means to avoid repetitive assessment activities and facilitate transition of the assessment program.

Assessment methodology included the following:

- Review of facility (SCI reports documenting field walkdowns conducted by CH2M HILL environmental staff between May and December 2003
- Review of plans, procedures, and performance records
- Use of an LDR requirements checklist to guide personnel interviews and review of documents and records
- Interviews and records reviews conducted with general lines of inquiry.

Also, as in the reports prepared by the ORP, the following are included in this report:

- Issues identified as Concerns, Findings, or Observations are discussed in some detail
- Areas found to be in conformance are discussed in general terms.

2.1 INTERIM STATUS REQUIREMENTS GENERAL, WAC 173-303-400 (3), 40 CFR 265

The interim status permit requirements, incorporated by reference from 40 CFR 268.50, "Prohibitions on Storage of Restricted Wastes," are found in those parts of 40 CFR 265, "Interim Status for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," that are referenced under the standards section in WAC 173-303-400 (3), "Standards." The checklist consists of a subset of these requirements, selected based on their relevance to the target facilities. Compliance was assessed through the following:

- Review of plans, procedures, and records
- Personnel interviews
- Review of previously conducted facility inspections (SCIs).

The LDR checklist guided assessment activities. Relevant requirements in the regulations include:

1. General facility standards in 40 CFR 265 Subpart B, as expanded in WAC-173-303 including:
 - Waste analysis -- 40 CFR 265.13 (WAC 173-303-300)
 - Security -- 40 CFR 265.14 (WAC 173-303-310)
 - Inspections -- 40 CFR 265.15 (WAC 173-303-320)
 - Training -- 40 CFR 265.16 (WAC 173-303-330)
 - General for ignitable, reactive, and incompatible -- 40 CFR 265.17 (WAC 173-303-395).
2. Preparedness, prevention, emergency and contingency planning (WAC 173-303-340, -350, and -360)
3. Manifest recordkeeping and reporting (WAC 173-303-370)

4. Facility recordkeeping and reporting (WAC 173-303-380 and -390, 40 CFR 268.7)
5. Container management [WAC 173-303-630(3) and (7), 40 CFR 265 Subpart I]
6. Tank systems (40 CFR 265 Subpart J).

3.0 RESULTS

3.1 WALK-THROUGH INSPECTIONS

With concurrence from Ecology, CH2M HILL used information collected during previously conducted facility inspections (SCIs) to address issues typically assessed during walk-throughs. Referenced SCIs are listed here, followed by an evaluation of SCI results.

- RPP-SCI-03-012 (A and AY tank farms)
- RPP-SCI-03-007 (T/TX/TY tank farms)
- RPP-SCI-03-011 (AW tank farm)
- RPP-SCI-03-013 (U tank farm).

1. Is the entry to the active portion of the facility controlled (40 CFR 265.14, WAC 173-303-310)?

Each tank farm is surrounded by locked fences to control access. Fences and locked access points are sufficient to control access, and the administrative control procedures prevent access to the tank farms by the general public. Proper signs, barriers, and access control were found to be in place at the tank farms. The four tank farm surveillances conducted in 2003 found no discrepancies for this requirement.

2. Is safety equipment easily accessible at the storage facility (40 CFR 265.30-37 as expanded under WAC 173-303-340)?

The SCI checklist does not specifically address this requirement. However, RPP-16922, *Environmental Specifications Requirements*, (the environmental specifications requirements document) does identify this requirement and calls for periodic inspections. The assessment confirmed that this requirement is addressed through various methods including the tickler inspection systems, periodic maintenance procedures, and company assessments and inspections. An inspection of the emergency equipment was scheduled to be conducted in December 2003.

3. Is safety equipment in working condition at the storage facility? Is an emergency communication device or alarm device accessible to employees in the event of emergency (40 CFR 265.30-37 as expanded under WAC 173-303-340)?

The SCI checklist does not specifically address this requirement. However, the environmental specifications requirements document does list these requirements, and requires inspections on a set frequency. During interviews it was confirmed that there are several methods used in the field to ensure compliance, such as the tickler systems, periodic maintenance, and company assessments and inspections. Radios and cell phones are available to the operators and tested each day before use.

4. Are precautions taken to prevent accidental ignition or reaction of ignitable or reactive wastes [40 CFR 265.17(a)]?

The SCI checklist does not specifically address this requirement. However, the environmental specifications requirements document does list this requirement and requires inspections on a set frequency. During interviews it was confirmed that several methods are used in the field to ensure compliance, such as the tickler systems, periodic maintenance, and company assessments and inspections. Tank farm access is strictly controlled, and no smoking is allowed on the tank farms. The Hanford fire marshal conducts an annual ignitable/reactive waste inspection of the tank farms. A review of the most recent inspection, conducted in October 2003, identified no issues of concern.

5. Is an emergency coordinator on the treatment, storage, and disposal (TSD) premises or on call at all times (40 CFR 265.54 and 265.55 as expanded in WAC 173-303-350 and -360)?

The SCI checklist does not specifically address this requirement. Emergency cell phone numbers are posted in the change trailer. Both numbers are manned 24 hours a day by emergency trained personnel as stipulated in Sections 3 and 4 of HNF-IP-0263-TF, *Building Emergency Plan for Tank Farms*.

6. Are the containers used to store hazardous waste at the tank farms in good condition and not leaking, and are made of, or lined with, materials compatible with the waste stored in them (40 CFR 265.171)? Are inspections of storage areas conducted weekly (40 CFR 265.174)?

This requirement is addressed in the SCI checklist. The four tank farm surveillances conducted in 2003 found no discrepancies for this requirement.

7. Has leak detection instrumentation been calibrated, and is the instrumentation in good working order [40 CFR 265.193 (b)]?

The SCI checklist does not specifically address this requirement. However, the environmental specifications requirements document does list this requirement and requires inspections on a set frequency. During interviews it was confirmed that several methods are used in the field to ensure compliance, including operator rounds, the tickler systems, periodic maintenance procedures, and operations procedures.

8. Is contaminated reusable equipment properly stored and labeled indicating management by policy and not abandonment (40 CFR 261.2 (b) (3), (WAC-173-303-070)?

The process for inventorying and inspecting reusable equipment was initiated in August 2003 but has not been fully implemented. During interviews and records reviews, it was apparent that CH2M HILL procedures are not definitive enough regarding: 1) the definition of reusable equipment and 2) confirmation that the equipment has not been abandoned. It should be noted, however, that none of the

records reviewed by this assessment identified equipment that had been clearly abandoned with the possible exception of old power poles on the northwest side of U Tank Farm partially identified in August 2003 (the majority of poles have been dispositioned).

Finding RPP-ENV-LDR-2003-01-F-01: Organizations that own reusable contaminated equipment have not fully implemented the guidance in TFC-ESHQ-ENV_PP-C-01. Management of reusable contaminated equipment has been identified as problematic in three previous ORP assessments, most recently being classified by the ORP as a "CONCERN."

References: Tank Farms General Inventory of Reusable Equipment, *Reusable Equipment List*, August 2003 (hard copy available in the Shift Office); TFC-ESHQ-ENV_PP-C-01; and *Implementation Plan, Contaminated Equipment Management Practices*, August 2003.

TFC-ESHQ-ENV_PP-C-01 guidance for identifying, inspecting, evaluating, and inventorying reusable contaminated equipment, was first issued in August 2002; minor revisions were made in August 2003. This assessment found little evidence to suggest that organizations owning reusable contaminated equipment are implementing the related procedural requirements. A contributing factor may be that effective management of reusable contaminated equipment is an onerous task from a cost/benefit perspective. Also, during interviews and records reviews, it was apparent that CH2M HILL procedures do not sufficiently define reusable equipment. For example, handtools and size reduction equipment stored in locked conex boxes within tank farm fences could be considered reusable equipment but are not individually inventoried and/or labeled (and probably should not be). Conversely, scaffolding, ladders, spare coverblocks, trailers, and the conex boxes themselves are included.

Administrative and process controls do not appear to be effectively focused on the primary concern, which is compliant management of tank-contacted equipment (particularly long-length equipment) that has been removed from the tank and "stored" on-site.

None of the records reviewed by this assessment identified equipment that had been clearly abandoned with the possible exception of old power poles on the northwest side of U Tank Farm, identified in August 2003. According to interviews, 12 of 14 poles have been removed from the tank farm, but there is no current plan to remove the last two partially buried power poles. This may be significant because treated wood products can be handled as nondangerous waste only if they are disposed within 180 days of identification as a waste.

Observation RPP-ENV-LDR-2003-01-OB-01: Current Environmental Program SCI checklists do not effectively support the LDR assessment program. The SCI checklist does not address all walk-through inspection criteria listed in the LDR assessment checklist. Though not a requirement, revision of the checklist would support a more efficient and cost-effective LDR assessment process.

The SCI program, as currently conducted, provides annual or semiannual inspection of all tank farm facilities. The SCI checklist is not comprehensive, focusing instead on issues that have been problematic. It does not cover all issues addressed by the LDR assessment walk-throughs. Revising the SCI checklist to include all LDR walk-through items appears to be an efficient, cost-effective way to improve compliance and reduce assessment costs. This approach assumes concurrence from Ecology to continue substituting SCI inspections for LDR assessment walk-throughs.

3.2 INTERIM STATUS REQUIREMENTS - RECORDS REVIEW

3.2.1 Personnel Training, WAC 173-303-330; 265.16

Ecology inspectors assessed the Dangerous Waste Training Program in September 2003 and cited no deficiencies.

The CH2M HILL Dangerous Waste Training Program is detailed in TFC-PLN-07, "Dangerous Waste Training Plan (DWTP)." As noted in the plan, CH2M HILL relies on Waste Management unit managers to ensure that personnel accessing their facilities have appropriate dangerous waste training. The plan assigns the environmental compliance officer (ECO) with responsibility for supporting these managers in developing a compliant training program and for periodic evaluation of the program to ensure continued compliance. The plan also assigns specific responsibilities to the Waste Services organization, including ensuring that the training reflects current regulatory requirements and guidance. This system ensures sufficient expertise in directing dangerous waste training.

Training coordinators, with input from the ECO and Waste Management unit managers, tie job titles to current "waste worker" categories, based on job description. Three categories have specific dangerous waste related training requirements, established with input from the ECO, who ensures that appropriate course materials and pertinent procedures are identified for their training. Training is then assigned, documented, and tracked via the Integrated Training Electronic Matrix (ITEM) database.

Personnel in the Emergency Response organization take the Emergency Response organization training course. Other facility employees are trained to respond effectively to emergencies and to become familiar with emergency procedures, emergency equipment, and emergency systems in River Protection Project (RPP)/Tank Farm Facility Emergency Hazards Checklist training. This course also addresses contingency plan implementation. Other courses that address emergency procedures, equipment, and response include Hanford General Employee Training, Tank Farms Orientation, and facility-specific operation qualifications.

TFC-PLN-07 identifies ITEM as the formal mechanism for tracking, documenting, and recording names, job titles, and job descriptions of dangerous waste workers. ITEM is the official records database to document training status. This conforms to the approach used by Fluor Hanford, Inc. (FH), throughout the Hanford Site. Training personnel stated

that Ecology inspectors have agreed verbally that this is an acceptable approach to documenting current training status.

Hard copy files are available on request but are not maintained as the current record copy because of frequent changes (sometimes daily) in personnel and training status. Nonrecord hard copies are stored at Tank Farm Contractor (TFC) training. Record copies are provided to the TFC training group and are initially maintained in Richland, Washington, before shipment to the permanent record storage area in Renton, Washington. The DWTP states that training records are maintained in accordance with DOE/RL-91-28, *Hanford Facility Dangerous Waste Permit Application*, which requires retention of training records for ten years post-closure.

Problem Evaluation Request (PER)-2003-1721 documents repetitive waste management compliance issues and points to training as a potential factor. The associated corrective action plan calls for revisions to training and testing methodologies for web-based training. Appropriate changes to the program were developed and made ready for implementation in October 2003 and await upper management approval to proceed. In light of this situation, this assessment did not address the effectiveness of dangerous waste training.

3.2.2 Security and Hazards, WAC 173-303-310

All tank farms are completely enclosed with fences; access points are locked when unmanned. Entry can be made only with a key issued from either of the two shift offices. Administrative controls ensure that only individuals with the proper training are granted access. The keys are controlled and issued through procedures.

RPP-16922 lists the periodic inspections (daily, weekly, monthly, and annually) conducted by nonenvironmental staff to ensure environmental compliance. These include daily inspection of entry points (gates and change trailer doors) for all tank farms, daily inspection of perimeter fences at SST farms, and weekly inspection of the perimeter fences at all DST farms. RPP-16922 also identifies the requirement to conduct daily inspections to ensure that tank farm access keys are returned and that key logs are properly maintained.

RPP-16922 also identifies the requirement to inspect for postings required by RCRA on the perimeter fence and at tank farm entry points; the listed periodicity is daily for SST farms and weekly for DST farms.

See Section 3.2.5, "General Inspection Requirements," for discussion of any discrepancies noted with these requirements and any necessary corrective actions resulting from periodic inspections.

Observation RPP-ENV-LDR-2003-01-OB-02: Inspection for RCRA-required postings on the perimeter fence and at tank farm entry points is conducted daily at SST farms and weekly at DST farms. Justification for this variance was not made clear. This suggests that the current periodicity of some inspection schedules may be worth evaluating, both

to ensure regulatory compliance and, where appropriate, to eliminate unnecessary inspections.

Observation RPP-ENV-LDR-2003-01-OB-03: RPP-16922, Sections 10.14 and 10.28, may need clarification. Two separate requirements, one to inspect tank farm perimeter fencing and a second to inspect tank farm access points, appear to be commingled. Recommend evaluation to ensure regulatory requirements are specifically addressed and that appropriate inspection periodicity is applied for each.

3.2.3 Preparedness and Prevention, WAC 173-303-340 and 40 CFR 265.30-37, Subpart C

Facilities must be designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or any unplanned sudden or nonsudden release of dangerous waste to air soil, surface, or groundwater, which could threaten human health or environment. Review of records for the assessed facilities revealed no issues associated with equipment that would be used to avoid or mitigate emergency situations.

3.2.4 Contingency Plan and Emergency Procedures, WAC 173-303-350

A contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste constituents to air, soil, or surface water. The provisions of the plan must be carried out immediately.

Contingency plans and emergency procedures for the tank farms and catch tanks evaluated by this assessment are documented by HNF-IP-0263-TF, *Building Emergency Plan for Tank Farms*, and DOE/RL 94-02, *Hanford Emergency Management Plan*. No deficiencies were identified during this assessment.

Recently, two new portable decontamination trailers have been activated and made available for emergency decontamination of personnel in all Hanford tank farms. One trailer is currently staged in the 200 West Area, near the S Tank Farm; the second is staged in the 200 East Area, near the A Tank Farm.

DOE/RL 94-02 provides an excellent crosswalk of emergency procedure requirements to approximately 30 WAC 173-303 citations.

3.2.5 General Inspection Requirements, WAC 173-303-320 and 265.15

General inspection requirements applicable to SST and DST farms are listed in RPP-16922. These requirements are incorporated into either administrative or operations procedures for implementation in the field. Most daily general inspections are implemented and conducted through operator rounds. The operator uses detailed checklists called round sheets to walk down and inspect specific equipment and tank farm configuration on a daily basis. The other inspection requirements are conducted through

work packages or other inspection checklists either by operators or other organization personnel, such as the Hanford fire department, on specific periodic frequencies listed in RPP-16922.

RPP-16922 was reviewed and found to address the inspection of monitoring equipment, safety and emergency equipment, and security devices, as well as operating and structural equipment that helps prevent, detect, or respond to environmental or human health hazards. RPP-16922 describes the types of problems an inspector should look for and lists the frequency of inspections.

The round sheets and tickler indexes for A/AX, T/TX/TY, U and AW and AZ tank farms were reviewed as part of this assessment. A representative sample of completed daily, weekly, monthly, and quarterly rounds sheets were reviewed. These records, listed in Section 6.0, covered the time period of June to October 2003. In addition, assessors reviewed related equipment deficiency lists (EDLs) and PERs to assess whether the deficiency reporting and tracking process was being used as outlined in Section 10.0 of the RPP-16922.

The August 4, 2003, round sheets for AZ Tank Farms noted the following observations:

1. Page 18 of 44, round daily entries, Tanks 241-AZ-101 and 241-AZ-102 liquid levels (0 to 64 inches) are marked as "NA" for the week. No reading listed on round sheet, no comment for explaining entry, both entries are identified as environmental requirements on the round sheet.
2. Page 27 of 44, one comment deals with invalid reading and out of service (O/S) condition for Westronics scanner #225, no EDL or PER.
3. Page 38 of 44, general inspection items for the AZ Tank Farm. The following daily requirements are not listed on round sheets: Alarm panels in tank farms instrument buildings, inspection of aboveground portion of tank systems as required in RPP-16922.
4. Round sheets for AZ Tank Farm do list inspection for RCRA-required warning signs on perimeter fence and tank farm entry points.

The EDL for AZ Tank Farm dated August 8, 2003, listed 18 items, the oldest being discovered in the year 2000, and the latest being discovered in July 2003. One listing, AZ-03-011, had no PER or work package number listed. The associated equipment is listed as an environmental requirement for sludge temperature reading (AZ101-WST-TE-061 scanner #225) for Tank AZ-101. No date of identification is listed in EDL.

The August 4, 2003, round sheets for AW Tank Farm had the following observations noted:

1. Page 31 of 9, four comments: Comment 3 indicates Zone 4 on all tanks leads are lifted and is O/S; however, no EDL or PER was noted. Comment 4 indicates a bad tag for the equipment, again no EDL or PER.
2. Page 32 of 69, two comments: Comment 2 indicates that the leads are lifted and O/S, no EDL or PER.
3. Page 34 of 69, two comments: Comment 1 indicates an EDL AW-03-013 was written for AW103-WST-PI-102 on Monday and then used for all pressure gauges through Friday with no indication that there was a problem with six gauges versus one. In addition the EDL has no PER, and handwritten entry indicates the date corrected was in May and the round sheet is dated August.
4. Page 62 of 69, general inspection items for the AW Tank Farm. The following daily requirements are not listed on round sheets: inspection of aboveground portion of tank systems as required in RPP-16922.
5. There are no weekly or monthly inspections for AW Tank Farm listed on the web page listing procedures for conducting rounds; therefore, requirements such as posted warning signs (weekly) and monthly requirements are not covered by rounds sheets for the AW Tank Farm.

The August 4, 2003, round sheets for the 241-A Tank Farm noted the following observations:

1. Page 6 of 9, one comment dealing with perimeter fencing, no EDL or PER.
2. Page 7 of 9, one comment dealing with no signs at double gate near 242-S Evaporator, no EDL or PER.

The A Tank Farm EDL had 11 items, with one item having no PER or work package. The oldest is for year 2002, and the latest is March 2003. A-03-004, pertaining to the 241-A-221 control room panel board (listed as equipment under environmental requirement), identifies no related PER or work package.

The daily August 4, 2003, weekly September 6 and 12, 2003, and quarterly July 16, 2003, round sheets for T/TX/TY and U tank farms noted the following observations:

1. Page 3 of 12, one comment states that the new recorder for the 244 TX instrument building is not in service, but does not identify the recorder as an environmental requirement. These same inspection steps are identified as an environmental requirement on daily round sheet for A/AX.

2. Page 9 of 12, three comments: Comments 2 and 3 deal with power outage, the inability to take an Enraf™ reading, and reporting this situation to the shift manager; later in the day (1300 hrs) a reading was taken.
3. Page 10 of 12, four comments: Comments 1 and 2 deal with fence inspection and verification of postings at tank farm access points. These conditions were noted for the week but were voided for Sunday. No EDL or PER number was listed on the round sheet.
4. Page 5 of 7 weekly rounds sheets dated August 6, 2003, one comment: sight glass needs to be cleaned or replaced, no EDL or PER; however, there is a note referencing a work package dated January 9, 2003.
5. Page 5 of 7, weekly round sheets dated August 12, 2003, one comment dealing with sight glass needs to be replaced, no EDL or PER.
6. Page 6 of 8 quarterly round sheet dated July 16, 2003, one comment dealing with power off Enraf, [Tank No. 116 (TX)] Enraf not connected to riser, no EDL or PER number identified.

The U Tank Farm EDL had seven items with one item having no PER or work package. The oldest is for year 2001, and the latest is April 2003.

Finding RPP-ENV-LDR-2003-01-F-02: Review of completed operator rounds sheets and related EDLs shows that TFC-OPS-OPER-C-08, *Shift Routines and Operating Practices*, Section 4.8, is not consistently implemented in the field. Several rounds sheet entries pertaining to equipment deficiencies did not document associated EDL numbers. Several EDL listings identified no related PER number or work package number.

Reference: RPP-16922, *Environmental Specifications Requirements*, Section 10; WAC 173-303; and Agreement with Ecology dated February 6, 2003. Also, TFC-OPS-OPER-C-08, Rev. A-12, *Shift Routines and Operating Practices*, Section 4.8, "Operations Personnel Actions for Performing Rounds/Inspection Tours," Step 6.

The procedure for documenting and tracking corrective actions for round sheet inspections is not consistently implemented in the field as demonstrated by the observations listed in Section 3.2.5. Assessors found several apparent equipment issues listed in the round sheets that had no related EDL identified, and several EDL listings that identified no related PER or work package.

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Finding RPP-ENV-LDR-2003-01-F-03: Rounds sheets, which vary from tank farm to tank farm, sometimes omitting inspections for specific environmental requirements. Inspections sometimes omitted included: 1) checking for corrosion or leaks in the aboveground portion of the tank system, 2) inspection for RCRA-required warning signs on perimeter fencing and at access points, and 3) checking the status of alarm panels.

Reference: WAC 173-303, RPP-16922

A review of the eight tank farm rounds sheets revealed inconsistent inclusion of environmental inspections. This issue is recurrent, having been self-identified several times, as well as documented in the last ORP-conducted LDR assessment.

CH2M HILL rounds sheets are currently undergoing major revision. The environmental representative to the process is aware of this issue and is taking steps to ensure that environmental requirements are consistently and effectively addressed in each procedure.

3.2.6 Operating Records

Assessors determined that CH2M HILL has made progress in developing a means to ensure that the operating records needed to document compliance are completed, filed, and maintained. HNF-1773, *Environmental Program Description for the Tank Farm Contractor*, Section 6.3, identifies two types of records needed for environmental management. The two types were administrative and operating records. In addition TFC-ESHQ-ENV-RM-D-02, *Environmental Records*, was revised and now lists records that the TFC is required to maintain.

The assessment team determined that operating records were being retained by CH2M HILL in some form and in various locations. The following operating records were located during the assessment to assess compliance with WAC 173-303-380(1) "Operating records."

1. Package Identification Number (PIN) record files for the characterization, packaging, and shipping of waste from A/AX, AW, AZ, T/TX/TY and U tank farms.
2. Inspection records, round sheets, and tickler indexes for A/AX, T/TX/TY, U, AW and AZ tank farms.
3. Corrective actions for discrepancies found in the tank farm complex, including shift logs, notification reports, occurrence reports, EDLs, and PERs.
4. Hanford Site Mixed Waste Land Disposal Restrictions Report, which lists the location of each dangerous waste and the quantity at each location.

Observation RPP-ENV-LDR-2003-01-OB-04: TFC-ESHQ-ENV-RM-D-02, *Environmental Records*, does not reflect the transition of the 242-A Evaporator and 222-S Laboratory from FH to CH2M HILL. Updates should include company organizational and procedure changes and any updates to regulatory policy reached with the regulators on RCRA issues.

The recent transition of the two facilities and any updates to regulatory policy with regulatory agencies, have created some discrepancies in the applicability of requirements listed in the procedure to ensure a complete operating record and compliance with retention of RCRA records.

3.2.7 Container Inspections, 40 CFR 265.174

Also see Item 6, Section 3.1.

The current system of surveillances and inspections seems to be appropriately finding and correcting container management deficiencies at locations where wastes originating within DST and SST farms are being interim-stored before transfer to appropriate TSDs.

Containers and container storage areas used to store waste from the tank farms assessed in this assessment (including less than 90-day pads at 209-E and the 616 Buildings) are inspected weekly for leaks, spills, and deterioration by corrosion or other factors and annually as part of the Environmental organization's SCI program. One container management deficiency and several best-management-practice items were identified in four SCIs conducted in the last half of FY 2003.

Best-management-practice items related to lead storage, storage of batteries in wooden boxes, and fading labels.

3.2.8 Miscellaneous Records and Reports

Additional reports required by WAC 173-303-390(4) include: reports of releases of dangerous wastes, fires; interim-status groundwater monitoring data as specified in 40 CFR 265.94; and reports of facility closures.

Interim-status groundwater monitoring data, as specified in 40 CFR 265.94, is included in the closure/post-closure work plan update, submitted in June 2002, under Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-45-06-T05.

WAC 173-303-395(1)(d) requires that the operating record include the results of a yearly inspection of those areas of the facility where ignitable or reactive wastes are stored.

- The annual ignitable/reactive waste fire inspection was performed on October 28, 2003. The inspection report cited no discrepancies.

Waste manifests are required by WAC 173-303-370.

- See Section 3.2.10

3.2.9 Tank Systems, 40 CFR 265 Subpart J

3.2.9.1 Assessment of Existing Tank System's Integrity, 40 CFR 265.191

Integrity assessments for DSTs are addressed under Tri-Party Agreement Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining eight tanks are scheduled to be completed in FY 2004 and FY 2005. For FY 2004, one tank is in the process of being tested and should be completed by the end of the first quarter. Integrity assessments of SSTs are addressed in Tri-Party Agreement Milestone M-23-24.

3.2.9.2 Containment and Detection of Releases, 40 CFR 265.194

In 1999, ORP, Fluor Daniel Hanford, Inc., Lockheed Martin Hanford Corporation, and Ecology entered into a Settlement Agreement and Stipulated Order of Dismissal. The requirements of the order became effective March 15, 1999. The order defines compliant leak detection for the DST system. A compliant leak detection system for each of the 28 DSTs shall be composed of the following:

- Three annulus leak detector probes within the annulus of each DST. Each adjustable annulus leak detector probe shall be placed as equidistantly as possible within the annulus of each DST. Each probe shall be set one-quarter inch from the annulus floor with allowance for normal engineering tolerances. An annulus leak detector probe shall be a conductivity type, or equal or better device (Enraf).
- At least one in-tank surface level monitor installed within the primary tank of each DST.

All leak detection devices comprising the Leak Detection System shall be maintained and operated continuously. Downtime for preventive maintenance and periodic functional testing shall not exceed 24 hours. The AY and AZ Upgrade Project was on schedule to be completed by the end of December 2003. The AZ leak detectors need to be functionally tested and brought online and added to the daily rounds. AY leak detectors have been function tested and added to daily rounds.

Primary tank levels are monitored in SSTs without secondary containment and tanks without secondary containment monitoring as a means of leak detection. Technical basis and specifications limits of leak detection are described in OSD-T-151-00031.

3.2.9.3 General Operating Requirements and Inspections, 40 CFR 265.194 and 40 CFR 265.195

Pump interlock systems are operability tested at least quarterly. The testing is scheduled and tracked using the Preventive Maintenance Scheduling (PM/S) System. The procedures that test the master pump shutdown are the functional tests for transfer leak detectors including various pit transfer leak detectors as well as DST annulus conductivity probe leak detectors. Liquid-level monitoring devices such as Enrafs are on a routine calibration/functional test schedule of 182 days (six months) and are managed under the PM/S system. High-level probes are installed in all DSTs. These probes are on a routine functional test schedule of 365 days managed under the PM/S system.

Overfill controls for SSTs are essentially liquid-level monitoring and intrusion detection. Liquid-level monitoring devices such as Enrafs are on a routine calibration/functional test schedule of 182 days (six months) and are managed under the PM/S system.

1. The aboveground portions of the tank system. Inspections are typically recorded in daily operator round sheets. See Section 3.2.5.
2. Data gathered from monitoring equipment and leak detection equipment. Results from daily electronic monitoring of DST liquid levels are transmitted automatically to Tank Monitoring and Control System (TMACs). Liquid levels are recorded daily on operator round sheets which are reviewed, signed, and dated by the shift manager or person-in-charge.
3. The area surrounding the externally accessible portion of the tank system and secondary containment structure is monitored to detect erosion or signs of releases of hazardous waste. Inspections typically are recorded in daily operator round sheets see Section 3.2.5.

The requirement to conduct annual inspections of the Cathodic Protection System, and bimonthly inspections or testing of all sources of impressed current, is implemented through the PM/S system. The system functions well to initiate the associated work packages. However, annual inspections were missed in 2002, and two bimonthly inspections were missed in 2003, all because of equipment and/or resource shortfalls. These issues are well documented and have been entered into the corrective action management system using PERs. Associated PERs include:

- PER-2002-3158, -3375, -3773
- PER-2003-3643, -3803, -4365

Systems Engineering conducts quarterly evaluations of the Cathodic Protection System. The most recent is documented in RPP-9887, *System Health Report for the RPP Cathodic Protection System for the 3rd Quarter CY 2003*, Rev. 7.

No new PER is planned at this time. The existing PERs will be tracked. If resolution is not timely and effective, a new PER will be submitted to focus management attention on the issue.

3.2.9.4 Response to Leaks or Spills, 40 CFR 265.196

Sixty-seven of 149 SSTs are known, or are assumed, to have leaked. An interim stabilization strategy is driven by consent decree. No waste has been added since 1981; with the exception of Tank 241-C-106, which received DST supernatant as a sluicing liquid for waste retrieval.

If a leak is determined to exist in a nonstabilized tank, the operator utilizes an emergency pumping plan, which requires the initiation of waste retrieval. Daily rounds in tank farms are conducted and anomalous conditions are noted on round sheets. Notifications of releases to the environment are reported in accordance with the environmental notification procedure. SST closure and the development of closure plans are in development and scheduled in accordance with agreements and Tri-Party Agreement milestones.

3.2.9.5 Closure and Post Closure Care, 40 CFR 265.197

3.2.9.5.1 Single-Shell Tank Closure/Post Closure

The certified RPP-134774, *Single-Shell Tank (SST) System Closure Plan*, Rev. 0, was transmitted to Ecology by December 19, 2002, to meet requirements for Tri-Party Agreement Milestone M-45-06A. Ecology provided notice of deficiency comments on March 20, 2003. In response to the Ecology comments, Revision 1 of the closure plan was certified and submitted to Ecology on December 8, 2003. An approved closure plan (i.e., incorporated into the Site-Wide Permit) due by April 30, 2004, is a requirement of Tri-Party Agreement Milestone M-45-05H.

3.2.9.5.2 Double-Shell Tank Closure/Post Closure

The DST closure path is not yet defined and is essentially deferred until more information has been collected. Information necessary to aid in the development of a closure plan for the DST system are tied to work efforts within the following Tri-Party Agreement milestone series.

- M-43 (Tank Farm Upgrades)
- M-45 (SST Retrieval, Closure, and Retrieval Sequence Decisions)
- M-46 (DST Space Evaluation)
- M-47 (Waste Feed Delivery)
- M-48 (DST Integrity Assessments)
- M-62 (Waste Treatment).

Chapter 11.0 of DOE/RL-90-39, *Hanford Facility Dangerous Waste Permit Application- Double-Shell Tank System* (Rev 0b, dated August 2003), contains the current version of the DST closure plan.

3.2.9.6 Special Requirements for Ignitable and Reactive Wastes, 40 CFR 265.198

No waste has been added to the SST systems since 1981; therefore, a program or plan to address ignitable or reactive waste additions to the tanks is not necessary. In addition, there are no remaining flammable gas concerns with the close out of Tri-Party Agreement Milestone M-40. Ecology performed the M-40 closeout inspection in February 2002. For DST operations see Section 3.2.10, "Waste Characterization."

3.2.9.7 Special Requirements for Incompatible Wastes, 40 CFR 265.199

No waste has been added to the SST systems since 1981; therefore, a program or plan to address ignitable or reactive waste additions to the tanks is not necessary. For DST operations see, Section 3.2.10, "Waste Characterization."

3.2.10 Waste Designation and Waste Characterization, Designation: WAC 173-303-070 and WAC-173-303-210 (3) (a) Characterization: WAC-173-303-300, 40 CFR 265.13, 40 CFR 265.17 (b)

Prior to transfers within the tank system, waste in the associated tanks is evaluated for chemical compatibility. The implementing document, HNF-SD-WM-OCD-015, *Tank Farms Waste Transfer Compatibility Program*, requires analytical determinations for corrosion control, toxics, polychlorinated biphenyls (PCB), criticality, radiological heat load, and flammability, and requires verification of calculations. The Process Engineering group performs compatibility assessments, documenting each in a waste compatibility assessment report.

All waste transferred into a DST, regardless of its origin, must meet the acceptance criteria cited in HNF-SD-WM-EV-053, *Double-Shell Tank Waste Analysis Plan*.

In addition to tank-contained waste, the facility also manages solid wastes generated by normal tank farms operations. As documented in RPP-DI-WM-009, *Waste Characterization Supporting Documentation*, characterization of these wastes is governed by the following three documents.

- HNF-SD-WM-PLN-115, *River Protection Program Solid Waste Radionuclide Characterization Program Plan*.
- HNF-SD-WM-PLN-119, *River Protection Program Solid Waste Hazardous Chemical Characterization Guide*.
- HNF-SD-WM-ER-435, *Tank Farms Compacted Low-Level Waste*.

Specific data and information used to determine the radiological and chemical inventories for each waste package is kept in the respective PIN file. The PIN file records for mixed waste shipments typically include uniform hazardous waste manifests, radioactive shipment records, waste storage acceptance checklists, packaging instructions, container tracking records, LDR notification and certification, waste profiles and/or annual

certifications, radiological calculations, and Tank Waste Information Network System (TWINS) analytical data.

A review of the following was conducted to assess against the listed requirements:

- Seven randomly selected PIN files (one for each tank farm for shipments during the last quarter of FY 2003, not including TX Tank Farm because it had no shipments in that time frame)
- More than 100 PERs
- SCIs.

Observation RPP-ENV-LDR-2003-01-OB-05: F-contacted waste designations are inconsistent between operators (CH2M HILL) and construction (Fluor Federal Services) forces. In addition, a better job of waste segregation may be appropriate. This deficiency is identified here as an Observation rather than a Finding because CH2M HILL is not directly violating a RCRA requirement.

Both organizations generate waste in the tank farms that were assessed but do not manage mixed waste in the same manner. Review of container inventory sheets confirmed that construction forces manage all waste from tank farms as mixed waste, whereas operations manages tank farm waste as mixed only if the debris and associated wastes (e.g., paper and plastic generated in the removal of debris) directly contacted tank waste.

Waste containers that contain high-efficiency particulate air (HEPA) or breather filters from the assessed tank farms seem to be incorrectly designated as mixed waste, based on the possibility of process condensate containing methyl ethyl ketone and cresylic acid in quantities >200 mg/L. This designation may be overly conservative based on the fact that the TWINS database for these tanks has no data for organic compounds.

This issue was also identified as a concern by Ecology in a letter dated June 4, 2003 (Ecology 2003). Recent corrective actions taken by CH2M HILL include the development and implementation of a sampling and analysis plan concurred to by Ecology. Several representative HEPA or breather filters have been sampled and analyzed. CH2M HILL is in the process of presenting the data to Ecology. Based on concurrence from Ecology, the future designation of HEPA and breather filters contacted only by uncontained gases may revert to a nondangerous waste.

4.0 PERSONNEL CONTACTED

Mr. Scott Conrad, CH2M HILL	Mr. Phil Miller, CH2M HILL
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Mr. Steve Davis, CH2M HILL	Ms. Linda Chapman, CH2M HILL
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Ms. Jean Quigley, CH2M HILL	Mr. Kip George, Duratek Federal Services NW

5.0 CONCLUSIONS

CH2M HILL uses a requirements-based management system and is implementing guidance documents within the system to manage its mixed waste. Federal and state LDR requirements, as interpreted for action through the Tri-Party Agreement, are addressed.

The requirements addressed in this assessment were generally well implemented, with two exceptions:

- Lagging implementation of requirements pertaining to storage of reusable contaminated equipment
- Inconsistency in documenting equipment deficiencies and achieving timely repair.

CH2M HILL Environmental will enter the identified Findings and Observations into its corrective action system by submitting PERs for each, and will work with the responsible management toward identifying and implementing the necessary improvements.

BACKGROUND DOCUMENTATION

Reviewed For General Background
40 CFR 265, "Interim Status for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," Title 40, <i>Code of Federal Regulations</i> , Part 265, as amended.
40 CFR 268, "Land Disposal Restrictions," Title 40, <i>Code of Federal Regulations</i> , Part 268, as amended.
A-02-EMD-TF-02, <i>Land Disposal Restrictions Program and Compliance Assessment of Tank Farms BX/BY Single-Shell Tanks</i> , September 2002.
A-02-EMD-TF-03, <i>Land Disposal Restrictions Assessment of SY-Double Shell Tanks, and 244-S Double Contained Receiver Tank</i> , December 2003, River Protection Project.
DOE/RL 90-39, <i>Hanford Facility Dangerous Waste Permit Application-Double Shell Tank System</i> , U.S. Department of Energy, Richland Operations Office, Richland, Washington.
Ecology, EPA, and DOE, 1989, <i>Hanford Federal Facility Agreement and Consent Order</i> , 2 vols., State of Washington, Department of Ecology; U.S. Environmental Protection Agency; and U.S. Department of Energy, Olympia, Washington, as amended.
Plan for Assessment #RPP-LDR-03-01, <i>Calendar Year 2003 Assessment of Tank Farm Contractor Compliance with Mixed Waste Storage Requirements and Land Disposal Restrictions</i> , November 2003.
Shift Logs for Closure Project Shift Managers Log August 2003, and Waste Feed Operations Shift Managers Log for August 2003.
Tri-Party Agreement Milestones, Series M-43 (Tank Farm Upgrades), M-45 (SST Retrieval, Closure, and Retrieval Sequence Decisions), M-46 (DST Space Evaluation), M-47 (Waste Feed Delivery), M-48 (DST Integrity Assessments), and M-62 (Waste Treatment).
WA7890008967, <i>Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the Hanford Site</i> , Revision Number 6, Washington State Department of Ecology, Olympia, Washington.
WAC 173-303, "Dangerous Waste Regulations," <i>Washington Administrative Code</i> , as amended, State of Washington, Department of Ecology, Olympia, Washington.
Reviewed for Personnel Training
DOE/RL-91-28, <i>Hanford Facility Dangerous Waste Permit Application, General Information Portion</i> , Rev. 5C, November 2002, U.S. Department of Energy, Richland Operations, Richland, Washington.

<p>“Key Control Checkout Forms, Single Shell Tanks Work Release Station,” dated July 1, 2003 through November 2, 2003.</p>
<p>TFC-BSM-TQ_MGT-C-02, <i>Integrated Training Electronic Matrix (ITEM) Administration</i>, Rev. A2, March 13, 2003.</p>
<p>TFC-PLN-07, Rev A2. <i>Dangerous Waste Training Plan</i>, issued May 14, 2003.</p>
<p style="text-align: center;">Reviewed for Security and Hazards</p>
<p>RPP-SCI-03-006, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 209E, 616, 244-C Vault</i>, June, 2003.</p>
<p>RPP-SCI-03-007, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-T/TX/TY Tank Farms</i>, August, 2003.</p>
<p>RPP-SCI-03-011, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AN/AP/AW Tank Farms</i>, August, 2003.</p>
<p>RPP-SCI-03-012, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AY/AZ/AX/A Tank Farms</i>, October/November, 2003.</p>
<p>RPP-SCI-03-013, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, U Tank Farm</i>, October, 2003.</p>
<p>See round sheets listed under the General Inspection document list.</p>
<p style="text-align: center;">Reviewed for Preparedness and Prevention</p>
<p>DOE/RL-94-02, <i>Hanford Emergency Management Plan</i>.</p>
<p>HNF-IP-0263-TF, <i>Building Emergency Plan for Tank Farms</i>.</p>
<p style="text-align: center;">References Reviewed for Contingency Planning and Emergencies</p>
<p>DOE/RL-94-02, <i>Hanford Emergency Management Plan</i>.</p>
<p>HNF-IP-0263-TF, <i>Building Emergency Plan for Tank Farms</i>.</p>
<p style="text-align: center;">Reviewed for General Inspection Requirements:</p>
<p><i>A Farm Equipment Deficiency List</i>, date printed July 5, 2003.</p>
<p><i>AW Farm Equipment Deficiency List</i>, date printed June 6, 2003, August 12, 2003, and August 19, 2002.</p>
<p><i>AZ Farm Equipment Deficiency List</i>, date printed July 5, 2003, August 8, 2003 and September 28, 2003</p>
<p>Index Reports of open and selected ticklers for Waste Feed Operations and Closure Project.</p>

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TF-OR-A-03, <i>AP and AW Tank Farms Daily Rounds</i> , release date June 6, 2003, date of inspection August 4, 2003.
TF-OR-EF-AAX-D, <i>A and AX Tank Farms Daily Rounds</i> , release date August 1, 2003, date of inspection August 4, 2003.
TF-OR-EF-AAX-Q, <i>A and AX Tank Farms Quarterly Rounds</i> , release date October 1 2002, date of inspection July 7, 2003.
TF-OR-EF-AAX-W, <i>A and AX Tank Farms Weekly Rounds</i> , release date August 2, 2003, dates of inspection, August 5, 2003, and August 13, 2003.
TF-OR-EF-AYAZ-D, <i>AY, AZ Tank Farms Daily Rounds and A-350 Catch Tank</i> , release date August 8, 2003, date of inspection August 4, 2003.
TF-OR-EF-AYAZ-M, <i>AY and AZ Tank Farms Monthly Rounds</i> , release date October 9, 2002, dates of inspection August 2, 2003, and July 1, 2003.
TF-OR-EF-AYAZ-W, <i>AY and AZ Tank Farms Weekly Rounds</i> , release date October 27, 2003.
TF-OR-EF-AYAZ-W, <i>AY, AZ Tank Farms Weekly Rounds and A-350 Catch Tank</i> , release date October 9, 2002, dates of inspection August 4, 2003, and August 11, 2003.
TF-OR-WF-B-D, <i>B, BX, BY Tank Farm and 244-BX DCRT Daily Rounds</i> , release date October 27, 2003.
TF-OR-WST-02-D, <i>T, TX, TY, U Farms, 244-TX DCRT and Catch Tank Day Shift Rounds</i> , release date August 1, 2003, date of inspection August 4, 2003.
TF-OR-WST-02-Q, <i>West Tank Farm Quarterly Rounds</i> , release date April 4, 2003, date of inspection July 14, 2003.
TF-OR-WST-02-W, <i>West Tank Farm Weekly Rounds</i> , release date August 1, 2003, dates of inspection, August 3, 2003, and August 9, 2003.
<i>U Farm Equipment Deficiency List</i> , date printed July 13, 2003.
<i>West Stationary Operating Engineer Equipment Deficiency List</i> , date printed July 13, 2003.
Reviewed for Operating Records
DOE/RL-2002-20, <i>Hanford Site Mixed Waste Land Disposal Restrictions Report</i> .
TFC-ESHQ-ENV-RM-D-02, "Environmental Records," date October 30, 2003.
Reviewed for Miscellaneous Records and Reports:
McKenna, P.J., 2002, <i>CY 2002 Hanford Fire Department Ignitable/Reactive Waste Fire Inspection- 8/20/02</i> .

Reviewed for Tank Systems:
DOE/RL-90-39, Rev 0A, <i>Hanford Facility Dangerous Waste Permit Application Double-Shell Tank System</i> , date January 2000.
OSD-T-151-00031, <i>Operating Specifications for Tank Farm Leak Detection and Single Shell Tank Intrusion Detection</i> , September 2003.
RPP-16922, <i>Environmental Specifications Requirements</i> , November 2003.
RPP-DI-WM-009, <i>Waste Characterization Supporting Documentation</i> .
Reviewed for Waste Characterization:
HNF-SD-WM-EV-053, <i>Double Shell Tank Waste Analysis Plan</i> .
PIN Files FFS-03-090-05; CPO-03-035-11; DST-03-118-03; SST-03-133-01; SST-03-133-02; DST-03-134-02; and SST-03-147-02.
RPP-DI-WM-009, <i>Waste Characterization Supporting Documentation</i> .
RPP-SCI-03-006, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 209E, 616, 244-C Vault</i> , June, 2003.
RPP-SCI-03-007, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-T/TX/TY Tank Farms</i> , August, 2003.
RPP-SCI-03-011, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AN/AP/AW Tank Farms</i> , August, 2003.
RPP-SCI-03-012, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AY/AZ/AX/A Tank Farms</i> , October/November, 2003.
RPP-SCI-03-013, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, U Tank Farm</i> , October, 2003.
SD-WM-OCD-015, <i>Tank Farm Waste Transfer Waste Compatibility Program</i> .
Reviewed for Federal Land Disposal Restrictions
RPP-SCI-03-007, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-T/TX/TY Tank Farms</i> , August, 2003.
RPP-SCI-03-012, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AY/AZ/AX/A Tank Farms</i> , October/November, 2003.
RPP-SCI-03-011, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AN/AP/AW Tank Farms</i> , August, 2003.

RPP-SCI-03-013, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, U Tank Farm, October, 2003.</i>
RPP-SCI-03-006, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 209E, 616, 244-C Vault, June, 2003.</i>
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Reviewed for General Waste Analysis
HNF-IP-084, <i>Management of Contaminated Equipment under Radcon Requirements.</i>
HNF-SD-WM-PLN-119, <i>River Protection Project Solid Waste Hazardous Chemical Characterization Guide.</i>
RPP-SCI-03-006, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 209E, 616, 244-C Vault, June, 2003.</i>
RPP-SCI-03-007, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-T/TX/TY Tank Farms, August, 2003.</i>
RPP-SCI-03-011, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AN/AP/AW Tank Farms, August, 2003.</i>
RPP-SCI-03-012, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AY/AZ/AX/A Tank Farms, October/November, 2003.</i>
RPP-SCI-03-013, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, U Tank Farm, October, 2003.</i>
<i>Tank Farms General Inventory of Reusable Equipment, September 9, 2003.</i>
TFC-ESHQ-ENV_PP-C-01, <i>Contaminated Equipment Management Practices.</i>
WHC-EP-356, <i>Single-Shell Tank Waste System Waste Analysis Plan.</i>
Referenced Reviewed for Container Management
RPP-SCI-03-006, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 209E, 616, 244-C Vault, June, 2003.</i>
RPP-SCI-03-007, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist 241-T/TX/TY Tank Farms, August, 2003.</i>
RPP-SCI-03-011, <i>River Protection Project Environmental Surveillance/Compliance Inspection Checklist, 241-AN/AP/AW Tank Farms, August, 2003.</i>

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RPP-SCI-03-013, *River Protection Project Environmental Surveillance/Compliance Inspection Checklist, U Tank Farm*, October, 2003.

6.0 REFERENCES

- 40 CFR 261.2 (b) (3), Title 40, *Code of Federal Regulations*, Part 261.2 (b) (3), "Standards."
- 40 CFR 265, Title 40, *Code of Federal Regulations*, Part 265, "Interim Status for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities."
- 40 CFR 268.50, Title 40, *Code of Federal Regulations*, Part 268.5, "Prohibitions on Storage of Restricted Wastes."
- DOE/RL 94-02, *Hanford Emergency Management Plan*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE/RL-2002-21, *Calendar Year 2001 Hanford Site Mixed Waste Land Disposal Restrictions Report*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE/RL-90-39, *Hanford Facility Dangerous Waste Permit Application- Double-Shell Tank System* (Rev 0b, dated 08/03) U.S. Department of Energy, Richland Operations Office, Richland, Washington.
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- Ecology, 2000, "Final Determination pursuant to the Hanford Federal Facility Agreement and Consent Order (HFFACO) regarding the U. S. Department of Energy's (DOE) compliance with Land Disposal Restriction (LDR) requirements of Washington State's Hazardous Waste Management Act (HWMA) and the federal Resource Conservation and Recovery Act (RCRA), DOE's annual Land Disposal Restrictions Report, and HFFACO milestone M-26-01." Letter to R. French, U.S. Department of Energy, Office of River Protection, and K. Klein, U.S. Department of Energy, Richland Operations Office, from Washington State Department of Ecology, March 29, 2000.
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- HNF-IP-0263-TF, *Building Emergency Plan for Tank Farms.*
- HNF-IP-0263-TF, *Building Emergency Plan for Tank Farms.*
- HNF-SD-WM-ER-435, *Tank Farms Compacted Low-Level Waste.*
- HNF-SD-WM-EV-053, *Double-Shell Tank Waste Analysis Plan.*
- HNF-SD-WM-OCD-015, *Tank Farms Waste Transfer Compatibility Program.*
- HNF-SD-WM-PLN-115, *River Protection Program Solid Waste Radionuclide Characterization Program Plan.*
- HNF-SD-WM-PLN-119, *River Protection Program Solid Waste Hazardous Chemical Characterization Guide.*
- Implementation Plan, Contaminated Equipment Management Practices, August 2003.*
- ORPID 220.1-3, "AMSQ Mixed Waste Storage Assessments."
- Resource Conservation and Recovery Act of 1976, 42 USC 6901, et seq.*
- RPP-134774, *Single-Shell Tank (SST) System Closure Plan.*
- RPP-16922, *Environmental Specifications Requirements.*
- RPP-9887, *System Health Report for the RPP Cathodic Protection System for the 3rd Quarter CY 2003, Rev. 7.*
- RPP-DI-WM-009, *Waste Characterization Supporting Documentation.*
- Tank Farms General Inventory of Reusable Equipment, Reusable Equipment List, August 2003 (hard copy available in Shift Office).*
- TFC-ESHQ-ENV_PP-C-01, "Contaminated Equipment Management Practices."
- TFC-ESHQ-ENV-RM-D-02, "Environmental Records."
- TFC-OPS-OPER-C-08, Rev. A-12, "Shift Routines and Operating Practices."
- WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended, Washington State Department of Ecology, Olympia, Washington.

APPENDIX A
ASSESSOR BIOGRAPHIES

John D. Doughty
Environmental Scientist

Mr. Doughty has 19 years of environmental/engineering experience including facility assessments, facility environmental compliance, environmental monitoring, chemical management, facility closure, contaminant delineation and remediation, environmental permitting, and engineering studies. Twelve years of his experience have been at Hanford. He is currently the assessment program coordinator for the CH2M HILL Environmental organization, and has served in that capacity for two years.

Prior to his current position with CH2M HILL, Mr. Doughty was a senior consultant with Columbia Energy & Environmental Services and with Advanced Sciences, Inc. During his tenure, he provided environmental and engineering services on the Hanford site for Waste Management, the Spent Nuclear Fuel Project, and Tank Farms. He also provided environmental and engineering support to commercial clients, including preparation of a Radionuclide Air Emissions License application for a small commercial laboratory, and delineation of subsurface contamination resulting from an unplanned release of low-level radioactive effluent from a research reactor.

Mr. Doughty also served as an environmental scientist with Prindle-Hinds Environmental, conducting environmental assessments of more than 75 commercial and industrial facilities, and delineating, characterizing, and remediating contamination in soils and groundwater.

Thomas J. McLaughlin
Project Manager

Mr. McLaughlin has 29 years of experience in managing, negotiating, and contributing to environmental, energy, and waste management projects at the Hanford Site. He is a recognized expert in permitting, hazardous/radioactive waste, technology development, environmental impact assessments, and project management. Currently, he is a Program Manager at Battelle Pacific Northwest National Laboratory in Richland, Washington.

Mr. McLaughlin was the original Project Manager for the Hanford Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Program that led to the nomination of the site to the National Priorities List and a cleanup budget exceeding \$500M/year. He has been the project lead for investigations related to compliant management of hazardous and radioactive wastes in active and inactive facilities in the River Corridor Project. He has assisted with the certified submittal of >200 emission points under a sitewide Air Operating Permit. He was the Project interface for the U.S. Department of Energy, Richland Operations Office's first "streamlined" Environmental Impact Statement related to Hanford solid waste.

Mr. McLaughlin has been the lead contributor and manager of a wide variety of energy research and development and Hanford waste management projects, including hazardous waste generation for all industries in the U.S. Environmental Protection Agency Region X, environmental impact assessment of tertiary oil and gas recovery, and numerous environmental impact assessments of newly proposed U.S. Department of Energy federal actions. He was Project Manager for Hanford's first permitted Resource Conservation and Recovery Act (RCRA) closure in the 1100 Area, which involved the solidification and cleanup of simulated high-level waste from the plutonium-uranium extraction (PUREX) process.

Mr. McLaughlin has extensive regulatory background, including serving as the Company Environmental Compliance Officer responsible for conformance with Clean Air Act, Clean Water Act, Toxic Substances Control Act, and RCRA permits and the compliant management of a wide variety of laboratory wastes, including high-level waste, low-level waste, RCRA hazardous, and radioactive and mixed wastes.

Mr. McLaughlin has been the primary or contributing author to more than numerous publications on subjects related to treatment and handling of Hanford Site waste.

Michael J. Silvia, EnergX
Project Manager, Operations and Environmental Management

Mr. Silvia has more than 20 years of experience, 10 years of service in the United States Air Force, mostly missile operations, training and environmental management. Mr. Silvia joined EnergX in 1999 and is currently working on contracts for the Hanford Site Contractor CH2M HILL, Inc. Mr. Silvia has been involved with the CH2M HILL since December 2000 when he was assigned as a team member for the Independent Performance Evaluation (IPE) assessment of the tank farm contractor. Since that time he has assisted with corrective actions from the IPE assessment, worked for the environmental services organization on task for the Hanford Air Operating permit reports and certifications, management assessments, procedures, environmental impact statement, and facility transitions.

In his position with the Hanford Site Facility Evaluation Board as an assessor for Environmental Programs and qualified Team Lead, Mr. Silvia led the assessments for the Waste Management Project and Waste Encapsulation and Storage Facility under the Fluor Hanford contract. He was responsible for conducting assessments under the Environmental Programs area that includes environmental protection, waste management, and transportation and packaging. These three functional areas cover federal, state, local and U.S. Department of Energy requirements for ensuring facility compliance with Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, National Environmental Policy Act, Emergency Planning and Community Right-to-Know Act, Toxic Substance and Control Act and Department of Transportation regulations.

Mr. Silvia was part of the ISMS Validation Team for the Hanford Site infrastructure support organization and assisted with U.S. Department of Energy Headquarters, Fluor Hanford Phase I and II, and the Plutonium Finishing Plant Integrated Safety Management Verification Assessments at the Hanford Site. Integrated Safety Management Verification Assessments address Environmental Protection, Chemical Management, and Work Planning. Mr. Silvia also assisted on the Office of River Protection (Tank Waste Remediation System) Phase II and the Spent Nuclear Fuel Project Phase I and II Verification.

APPENDIX B
ASSESSMENT CHECKLIST

APPENDIX B**ASSESSMENT CHECKLIST**

This checklist is based on the LDR assessment checklists prepared and used by the DOE Office of River Protection in its most recent LDR assessments of Double-Shell Tank farms and Single-Shell Tank farms. The information documented in the comments column was gathered during the 4th Quarter 2003 LDR assessment, and during surveillance compliance inspection of the farms conducted between May and November 2003. The table below defines the status codes used.

Y	appear to be in compliance, with sufficient documentation
N	a) no evidence of non-compliance, but implementation and/or documentation are of concern, OR b) non-compliant
NA	a) not assessed, OR b) not applicable (see comments column for clarification)

No.	Requirement	Status	Comment
	Federal Land Disposal Restrictions		
LDR-1	For each dangerous waste, has a determination been made whether the waste has to be treated before it can be land disposed? Do WAC 173-303-140 standards apply? Does this determination include determining if the dangerous waste meets the treatment standards in 40 CFR 268.40, 268.45, or 268.49? How does CH2M HILL verify that the treatment standards have been met prior to disposal?	Y	<p>CH2M Hill Waste Management Services is responsible for the designation of all wastes originating from tank farms (although they are not the generator). A review of 7 PIN files revealed no instances where wastes should have been, but were not, designated as LDR-type wastes (although some wastes may have been overly-conservatively designated as LDR when process knowledge would indicate they were not-see GWA-6).</p> <p>Four SCIs conducted in the months of August through November 2003 were reviewed. Few deficiencies were noted related to contaminated equipment. The SCI process does not address this question to any significant extent.</p>
LDR-2	For dangerous wastes that do not meet the treatment standards, is a one-time written notice sent to the receiving treatment facility or storage facility for each initial shipment of waste, and a copy of this notice placed in the record file? Does the notice include the applicable information required by the Generator Paperwork Requirements Table in 268.7(a)(4) in the 268.7(a)(2) column?	NA	As the TSD provider, Fluor Hanford is responsible for meeting this requirement.
LDR-3	For dangerous wastes that do meet the treatment standards at the original point of generation, is a one-time written notice sent to the receiving TSD facility for each initial shipment of waste, and a copy of this notice placed in the record file? Does the notice include the applicable information required by the Generator Paperwork Requirements Table in 268.7(a)(4) in the 268.7(a)(2) column and a certification statement? Are new notices sent when the waste changes? How does CHG verify that the treatment standards have been met prior to disposal?	NA	As the TSD provider, Fluor Hanford is responsible for meeting this requirement.

No.	Requirement	Status	Comment
LDR-4	For any dangerous waste for which LDR exceptions exist, is a one-time written notice sent to the receiving land disposal facility for each initial shipment of waste, and a copy of this notice placed in the record file? Does the notice include the applicable information required by the Generator Paperwork Requirements Table in 268.7(a)(4) in the 268.7(a)(2) column?	NA	As the TSD provider, Fluor Hanford is responsible for meeting this requirement.
LDR-5	If the waste or contaminated soil has been determined to be restricted based solely on knowledge of the waste, is all supporting data used to make this determination retained on-site per 268.7(a)(6)?	NA	As the TSD provider, Fluor Hanford is responsible for meeting this requirement.
LDR-6	If the waste or contaminated soil has been determined to be restricted based on testing the waste (or extract), is all supporting analysis data used to make this determination retained on site per 268.7(a)(6)?	NA	As the TSD provider, Fluor Hanford is responsible for meeting this requirement.
LDR-7	Are notices, certifications, analytical data, and other documentation produced pursuant to 268.7 being retained in record files for at least 3 years (longer if extended by the regulatory agency) per 268.7(a)(8)? What programs, plans or procedures implement the generator record keeping requirements?	NA	As the TSD provider, Fluor Hanford is responsible for meeting this requirement.
LDR-8	Where a dangerous waste has been designated by the dangerous waste lists in WAC 173-303-080 and the waste also exhibits a characteristic, has the generator determined the underlying hazardous constituent associated with standard operations in lieu of the characteristic treatment standard, of for D001 nonwastewaters treated by COMBS, RORGS, or POLYM of 40 CFR 268.42, Table 1 and 268.9(a)?	Y	Based upon review of 7 PIN files.
LDR-9	Is hazardous debris being treated for each "contaminant subject to treatment" according to 268.45(b) using the technologies identified in Table 1 of 268.42? Is debris that is contaminated with two or more contaminants subject to treatment being treated for each contaminant using one or more treatment technologies identified in Table 1?	Y	CH2M HILL has contracts with Pacific Ecological Solutions) (PEcoS) for providing treatment services. They also perform some of these services themselves under Treatment-by-Generator (TBG) provisions of the WAC (no TBG operations were conducted during the report period and scope of this assessment).

No.	Requirement	Status	Comment
General Waste Analyses			
GWA-1	(tank waste) Are periodic analyses of all dangerous wastes to be treated, stored or disposed of performed according to a written detailed waste analysis plan per 40 CFR 265.13(b) and WAC 173-303-300(5)?	Y	See WHC-EP-0356, "Single-Shell Tank Waste System Waste Analysis Plan" and HNF-SD-WM-PLN-119, "River Protection Project Solid Waste Hazardous Chemical Characterization Guide".
GWA-2	(tank waste) Is the waste analysis plan kept on-site per 40 CFR 265.13(b) and WAC 173-303-380(5)?	Y	Per interview.
GWA-3	Are all solid wastes checked against the applicable designation procedures of WAC 173-303-070(3) and has a determination been made whether the wastes are DW or EHW per WAC 173-303-070(1)(a) and 40 CFR 265.170(1)(a)?	Y	A September 9, 2003 listing of "Tank Farms General Inventory of Reusable Equipment" indicated that there were "old power poles on NW side of U Farm" as "items that should be considered for waste disposal." According to interviews, some of the poles were removed as non-DW within the 180 days specified in WAC 173-303-071(3)(g)(ii).
GWA-4	Are designation determinations based on test data, material or process knowledge, or a combination of these methods? Has designation been documented and can this information be provided? Is the documentation complete and adequate? WAC 173-303-070(3)[c]	Y	The SCI process identified one instance whereby an appropriate waste designation was not adequately performed. The SCI led to a PER at U Farm where an inherently-like aerosol paint can was found under a saltwell equipment skid. The problem was immediately rectified by designating it as waste.
GWA-5	Are records of test results, waste analyses, or other determinations made to designate wastes being maintained from at least 5 years from the date the waste was last transferred for on-site or off-site treatment, storage or disposal per WAC 173-303-210(3)?	Y	Per interview.

B-5

RPP-ENV-LDR-2003-01

No.	Requirement	Status	Comment
GWA-6	Has the owner or operator obtained a detailed chemical, physical, and/or biological analysis of a DW, before he stores, treats, or disposes of it? Does this analysis contain the information necessary to manage the waste in accordance with the requirements of this chapter 173-303 WAC? (This required analysis may include or consist of existing published or documented data on the dew, or on waste generated from similar processes, or data obtained by testing, if necessary).	N	<p>Three of seven PIN files (one shipment each in the last quarter of FY03 from A, AW, AX, AZ, T, TY, and U farms-TX had no shipments; SST-003-133-01, DST-03-118-03, and SST-03-147-02) revealed that breather and HEPA filters from TY, U, and A Farms are designated as DW because the tank condensate that passes through the them could entrain MEK (D035) and cresylic acid (D026) and that "it is assumed that MEK and cresylic acid are present in HEPA filters at equal or greater than regulatory threshold of 200 mg/l for both compounds." The designation may be overly conservative based upon the fact that TWINS data base does not include organic compounds for the tanks that the filters originated from. In addition, all three PIN files reviewed included container inventory sheets that revealed other wastes (PPE, plastic, paper, etc.) that probably could not designate as DW (segregation was not occurring at the point of origination). Records review revealed a similar "concern" identified by an Ecology inspection of 209-E for a HEPA filter generated in SST farms in a June 4, 2003 letter to Messrs. Schepens and Aromi.</p> <p>In addition, the use of F-001 through F-005 tank contacted codes seems to be inconsistent, depending if the CH2M HILL or a construction contractor originated the container request sheet. Of 4 PIN files reviewed, 3 clearly had tank contacted metallic debris and were correctly designated by process knowledge. The other PIN file (FFS-03-090-05) only had plastic, paper, PPE, and cloth and probably should have been designated as LLW.</p>

No.	Requirement	Status	Comment
GWA-7	Is reusable equipment managed appropriately, including proper labeling, prevention of releases of dangerous waste to the environment, and designation as a dangerous waste per WAC 173-303-070?	N	<p>Previous ORP assessments of BX/BY and SY tank farms (A-02-EMD-TF-02 and -03, respectively) and subsequent PERs have documented that reusable equipment management as a finding and concern. These assessments resulted in the CH2M HILL issuance of new procedures and implementation plans based upon TFC-ESHQ-ENV-PP-C-01, "Contaminated Equipment Practices". The basis of these new internal requirements is the identification of all reusable equipment in the farms and a "Usable Equipment Justification Checklist".</p> <p>A review of 4 current-year SCIs revealed issues related to reusable equipment. Plastic wrapping and rad labels on cover blocks stored as reusable equipment at U Farm had deteriorated. Approximately 14 unused, treated power poles were being stored inside U Farm (12 have now been removed).</p> <p>Several preliminary observations have surfaced during this assessment: 1) It is unclear where CH2M HILL "draws the line" regarding the tracking of reusable equipment (e.g. equipment in pits and individual tools are not included), 2) the process does not focus in on equipment that has failed or has become so contaminated (i.e. abandoned or inherently waste-like) that it is no longer usable, 3) the new procedure and implementation plan may be too complicated for field use (e.g. inspecting and inventorying hundreds of hand tools), 4) the "Justification Checklist" does not prescribe the process for redesignating equipment to a waste category, 5) the level of equipment inventory detail is inconsistent between tank farms (depending upon the person completing the form) 6) Environmental Programs field personnel do not have routine access to locked Conex boxes where reusable equipment is stored, 7) the Waste Planning Checklist and "J5" processes do not provide definitive guidance regarding the specifics of when reusable equipment may become waste, and 8) "Management of Contaminated Equipment under Radcon Requirements" (HNF-IP-084) does not address the waste question.</p>

No.	Requirement	Status	Comment
GWA-7 Con't	See above.		[Continuation from above] The process for tracking reusable equipment is in a state of transition and has not been fully implemented in the field as described by CH2M HILL procedures and plans. In one instance, the survey identified surplus telephone poles stored in the northwest corner of U Farm.
Security			
S-1	Are there means to prevent the unknowing entry, and minimize the possibility for the unauthorized entry onto the active portion of the site per 40CFR 265.14(a) and WAC 173-303-310 (3)?	Y	All Tank Farms are surrounded with fences (Barrier) which are locked (means to control entry) when unmanned. Entry can be made only with a key (through the change trailers) from shift office. Individuals with proper training can be "Aced-in" at the shift offices and are permitted entry by signing in at the change trailers and donning the appropriate PPE. Inspections of the fences are conducted daily and recorded in operator round sheets.
S-2	Is there either a 24-hour surveillance system which continuously monitors and controls entry on the active portions of the site or a natural or artificial barrier which completely surrounds the active portions of the facility per 40CFR 265.14(b) and WAC 173-303-310 (2)(b)and(c)?	Y	All Tank Farms are surrounded with fences (Barrier) which are locked (means to control entry) when unmanned. Entry can be made only with a key (through the change trailers) from shift office. The four Tank Farm surveillances conducted in 2003 found no discrepancies for this requirement.
S-3	Does each entrance have a sign, legible at a distance of 25 feet, which reads "Danger Unauthorized Personnel Keep Out", or words to similar effect per 40CFR 265.14(c) and WAC 173-303-310(2)(a) ?	Y	"Danger-Unauthorized Personnel Keep Out" signs are in place on Tank Farm fences. Signs are inspected daily on operator round sheets. The four Tank Farm surveillances conducted in 2003 found no discrepancies for this requirement. Not found on every round sheet checklist to inspect and document findings/observations.

No.	Requirement	Status	Comment
General Inspection Requirements			
I-1	Is reusable equipment being stored, surveyed, labeled and packaged to prevent releases of DW constituents to the environment, or a threat to human health and the environment?	Y	There is a procedure used to determine if equipment used in the tank farms is reusable and a checklist inserted in each work package to ensure proper storage or disposition. The procedure is new for 2003 and has gone under a phased approach in its implementation. The four Tank Farm surveillances conducted in 2003 had no discrepancies for this requirement.
I-2	Is the facility inspected for malfunctions and deterioration, operator error, and discharges which may cause releases of hazardous waste constituents to the environment, or a threat to human health and the environment per 40CFR 265.15(a) Per WAC 173-303-320 (1)?	Y	Inspection schedules, round sheets and tickler inspection sheets comprise CH2M HILL's current methods for implementing and documenting required inspections. RPP-SCI-03-007 the surveillance for T/TX/TY farms noted that a spill cleanup was underway for an unknown spill in the northeast corner of TX farm. RPP-SCI-03-011 documented that spill pans were not in use for some of the portable equipment in the farm at the time of the surveillance. The other two surveillance conducted in 2003 indicated that there were no signs of leaks or spills in the farm areas. Not found on every round sheet checklist to inspect and document findings/observations.
I-3	Are inspections conducted at a frequency to identify problems in time to correct them before they harm human health or the environment per 40CFR 265.15(a) and WAC 173-303-320 (2)(c)?	Y	Inspection schedules, round sheets and tickler inspection sheets comprise CH2M HILL's current methods for implementing and documenting required inspections.
I-4	Is there a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices and operating equipment?	Y	Inspection schedules include the types of problems to be looked for and frequencies. Many required inspections are recorded on round sheets. Other inspections are tracked via tickler sheets. RPP-16922 lists the requirements for inspections.
I-5	Does the inspection schedule identify the types of problems to look for per 40CFR 265.15(b)(3) and WAC 173-303-320 (2)(b)?	N	Inspection schedules include the types of problems to be looked for and frequencies. Many required inspections are recorded on round sheets. Other inspections are tracked via tickler sheets. RPP-16922 lists the requirements for inspections. Not every general inspection requirement (RPP-16922) is listed on round sheet checklist.

No.	Requirement	Status	Comment
I-6	Does the inspection schedule identify the frequency of inspection for specific items per 40CFR 265.15(b)(4) and WAC 173-303-320 (2)(c)	Y	Inspection schedules include the types of problems to be looked for and frequencies. Many required inspections are recorded on round sheets. Other inspections are tracked via tickler sheets. RPP-16922 lists the requirements for inspections.
I-7	Does the inspection schedule identify the frequency of inspection for specific items per 40CFR 265.15(b)(4) and WAC 173-303-320 (2)[c]?	Y	Inspection schedules include the types of problems to be looked for and frequencies. Many required inspections are recorded on round sheets. Other inspections are tracked via tickler sheets. RPP-16922 lists the requirements for inspections.
I-8	Are areas subject to spills, such as loading and unloading areas, inspected at least daily per 40CFR 265.15(b)(4) and WAC 173-303-320 (2)[c]?	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered.
I-9	Is a daily inspection log maintained at the facility per 40CFR 265.15(b)(2) and WAC 173-303-320 (2)(d)?	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions.
I-10	Are ALL daily inspection logs retained for at least five years per 40CFR 265.15(d) and WAC 173-303-320 (2)(d)?	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions.
I-11	Does the daily inspection log include the date and time of inspection per 40CFR 265.15(d) and WAC 173-303-320 (2)(d)?	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions.
I-12	Does the daily inspection log include the inspector's name per 40CFR 265.15(d) and WAC 173-303-320 (2)(d)?	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions.

No.	Requirement	Status	Comment
I-13	Does the daily inspection log include the inspector's observations per 40CFR 265.15(d) and WAC 173-303-320 (2)(d)?	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions.
I-14	Does the daily inspection log include the date and nature of repairs or remedial actions per 40CFR 265.15(d) and WAC 173-303-320 (2)(d)?		Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions. A review of several round sheets revealed that operations procedures were not followed and equipment deficiency lists were not properly annotated with numbers or PER/work package numbers.
I-15	Are repairs to dangerous waste storage areas made promptly when any deterioration or malfunction is discovered per 40CFR 265.15(c) and WAC 173-303-320 (3)?	N	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. The Environmental Specification Requirements, RPP-16922, Section 10 lists the process to be followed by operations to document and track any discrepancies and corrective actions. RPP-SCI-03-013 indicated that 43 Problem Evaluation Requests were processed for U farm for the period 12/16/02 through 10/8/03 and no outstanding issues existed at the time of the surveillance. The other three Tank Farm surveillances did not review this requirement during the surveillance. A review of several round sheets revealed that operations procedures were not followed and equipment deficiency lists were not properly annotated with numbers or PER/work package numbers.

No.	Requirement	Status	Comment
	Personnel Training		
T-1	Do site personnel successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in compliance with applicable requirements per 40CFR 265.16(a)(1) and WAC 173-303-330 (1)?	Y	<p>Training coordinators tie job titles to one of four current employee job categories, based on job description. Three categories have specific dangerous waste related training requirements, established with input from the Environmental Compliance Officer, who identifies course materials and pertinent procedures. Training is then assigned and tracked via the computer.</p> <p>Section 3.1 of the Dangerous Waste Training Plan (DWTP) stipulates that "TFC operations management is responsible for ensuring that personnel are trained and required qualifications are maintained."</p> <p>Section 2.1 states that each Tank Farm Contractor (TFC) Waste Management unit manager has overall responsibility for training at the Rover Protection Project (RPP)-TFC unit under their control.</p>
T-2	Have ALL facility personnel who handle dangerous waste in any manner participated in an initial training course related to their management of dangerous waste within six months of beginning employment and 40CFR 265.16(b) per WAC 173-303-330 (1)(c)(ii)?	Y	Requirement is called out in Section 3.1 of the DWTP, and tracked in the training database. The ACES access control program restricts access waste storage areas. Only those with appropriate training are allowed unescorted access to perform work. Access is allowed for untrained personnel only when properly escorted and supervised.
T-3	Has each employee participated in an annual review of his or her training per 40CFR 265.16(c) and WAC 173-303-330 (1)(b)?	Y	Requirement is called out in Section 3.1 of the DWTP. ITEM tracks compliance. ACES controls entry to waste storage areas.

No.	Requirement	Status	Comment
T-4	Was the initial training and annual review directed by a person trained in dangerous waste management per 40CFR 265.16(a)(2)?	Y	As stated in DOE/RL-91-28, the program is not directed by a single person. Section 2 of the DWTP assigns responsibilities as follows. TFC Waste Management Unit managers have ultimate responsibility for ensuring that appropriate training is identified and completed for personnel working at facilities under their control. The Environmental Compliance Officer (ECO) is responsible for supporting the managers in developing a compliant program, and for periodic evaluation of the program. Waste Services responsibilities include ensuring that the training reflects current regulatory requirements and guidance. This system ensures sufficient expertise in directing the training.
T-5	Are records of each current employee's training maintained at the site and 40CFR 265.16(d)(4) and WAC 173-303-330 (2)?	Y	Hard copies are maintained, as well as electronic copies (ITEM database). Non-record copies are stored at TFC Training. Record copies are provided to Fluor Hanford, Inc., Training and are initially maintained in Richland, WA, prior to shipment to the permanent record storage area in Renton, WA. The DWTP states that training records are maintained in accordance with DOE/RL-91-28.
T-6	Are records of former employee training maintained for at least three years after they leave per 40CFR 265.16(e) and WAC 173-303-330 (3)?	Y	The DWTP stipulates that records are maintained in accordance with DOE/RL-91-28, which requires retention for 10 years post closure.
T-7	Are personnel assigned in dangerous waste management areas generally familiar with emergency equipment and systems, and emergency procedures including implementation of the site contingency plan per 40CFR 265.16(a)(3) and WAC 173-303-330 (1)(d)?	NA	<p>Not Assessed. This requirement is addressed in dangerous waste training, but this assessment did not attempt to assess the effectiveness of that training. PER-2003-1721 documents ongoing waste management compliance issues, and points to training as a potential factor. The corrective action plan for that PER calls out revisions to training and to testing methodologies for web-based training. Appropriate changes to the program were developed and made ready for implementation in October 2003, and await upper management approval to proceed.</p> <p>Ecology inspectors assessed the DWTP in September 2003 and cited no deficiencies.</p>

No.	Requirement	Status	Comment
T-8	Are personnel assigned in dangerous waste management areas generally familiar with procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment per 40CFR 265.16(a)(3) and WAC 173-303-330 (1)(d)(i)?	NA	See T-7
T-9	Are personnel assigned in dangerous waste management areas generally familiar with key parameters for automatic waste feed cut-off systems?) per WAC 173-303-330 (1)(d)(ii)?	NA	See T-7
T-10	Are personnel assigned in dangerous waste management areas generally familiar with communications or alarm systems per 40CFR 265.16(a)(3) and WAC 173-303-330 (1)(d)(iii)?	NA	See T-7
T-11	Are personnel assigned in dangerous waste management areas generally familiar with response to fires or explosions per 40CFR 265.16(a)(3) and WAC 173-303-330 (1)(d)(iv)?	NA	See T-7
T-12	Are personnel assigned in dangerous waste management areas generally familiar with response to ground-water contamination incidents per 40CFR 265.16(a)(3) and WAC 173-303-330 (1)(d)(v)?	NA	See T-7
T-13	Are personnel assigned in dangerous waste management areas generally familiar with shutdown of operations per 40CFR 265.16(a)(3) and WAC 173-303-330 (1)(d)(vi)?	NA	See T-7
T-14	Are documents containing the following information maintained on site: job title, written job description and name of employee for each position related to dangerous waste management per 40CFR 265.16(d)(2) and WAC 173-303-330 (2)(a)?	Y	This information is maintained in the ITEM database. Hard copy files are available on request, but are not maintained as the current record copy because of frequent changes (sometimes daily) in personnel and training status. Training personnel stated that Ecology inspectors have verbally agreed that this is an acceptable approach under these conditions.

No.	Requirement	Status	Comment
T-15	Are documents containing the following information maintained on site: written description of type and amount of training (including continual training) that will be given to person filling a position related to dangerous waste management per 40CFR 265.16(d)(3) and WAC 173-303-330 (2) (b)?	Y	This information is documented both in the Dangerous Waste Training Plan (Section 4) and in the ITEM database.
Preparedness and Prevention			
PP-1	Does the facility maintain any of the following equipment to ensure safety from fire, explosion or unplanned releases of waste: internal communications or alarm system? Is such equipment present and available for use? Is the equipment maintained properly and periodically tested per 40CFR 265.32(a) and WAC 173-303-340 (1)(a)	Y	See HNF-IP-0263-TF and operator round sheets, tickler system or other database tracking/scheduling system.
PP-2	Does the facility maintain any of the following equipment to ensure safety from fire, explosion or unplanned releases of waste: telephone or two-way radio to summon outside help? Is such equipment present and available for use? Is the equipment maintained properly and periodically tested per 40CFR 265.32(b) and WAC 173-303-340 (1)(b)?	Y	See HNF-IP-0263-TF and operator round sheets, tickler system or other database tracking/scheduling system.
PP-3	Does the facility maintain any of the following equipment to ensure safety from fire, explosion or unplanned releases of waste: fire extinguishers and other fire control equipment? Is such equipment present and available for use? Is the equipment maintained properly and periodically tested per 40CFR 265.32(c) and WAC 173-303-340 (1)(c)?	Y	See HNF-IP-0263-TF and operator round sheets, tickler system or other database tracking/scheduling system.

No.	Requirement	Status	Comment
PP-4	Does the facility maintain any of the following equipment to ensure safety from fire, explosion or unplanned releases of waste: water at adequate volume and pressure? Is the equipment maintained properly and periodically tested per 40CFR 265.32(d) and WAC 173-303-340 (1)(d)?	Y	Responsibility of the Hanford Fire Department
PP-5	Is sufficient aisle space maintained for unobstructed movement of personnel, fire and other emergency or spill response equipment per 40CFR 265.35 and WAC 173-303-340 (3)?	NA	Not addressed under this assessment.
PP-6	Have arrangements been made, and documented, with applicable local and state emergency authorities (police, fire, hospitals, emergency response teams) to familiarize them with the Hanford site, dangerous waste handled there, and emergency procedures per 40CFR 265.37 and WAC 173-303-340 (4)(a),(b),(c),(d)?	Y	See DOE/RL 94-02.
	Contingency Plan and Emergency Procedures		
EP-1	Is there a contingency plan maintained on site which is designed to minimize hazards to health or the environment from fires, explosions or unplanned releases of dangerous waste? 40CFR 265.51(a) & 40CFR 265.53(a) Per WAC 173-303-350 (1) & (2)	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-2	Does the contingency plan provide that it must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment? 40CFR 265.51(b) Per WAC 173-303-350 (1)	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-3	Does the contingency plan describe the actions personnel must take in response to fires, explosions or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility? 40CFR 265.52(a) Per WAC 173-303-350 (3) (a)	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).

No.	Requirement	Status	Comment
EP-4	Does the contingency plan describe arrangements with local police, fire departments, hospitals and state and local emergency response teams per 40CFR 265.53(c) and WAC 173-303-350 (3)(b)?	Y	See DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-5	At all times, is an emergency coordinator on the premises or on call per 40CFR 265.55 and WAC 173-303-360 (1)?	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-6	Does the contingency plan list ALL pieces of emergency equipment and their locations and capabilities? 40CFR 265.52(e) Per WAC 173-303-350 (3)(e)	Y	Generic listings of both fixed and portable emergency equipment and their locations can be found in HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-7	Does the contingency plan include an evacuation plan? 40CFR 265.52(f) Per WAC 173-303-350 (3)(f)	Y	See HNF-IP-0263-TF.
EP-8	Have copies of the contingency plan been sent to local police and fire departments, hospitals and state and local emergency response teams per 40CFR 265.53(b) and WAC 173-303-350 (4)(b)?	Y	See DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-9	Has the contingency plan been reviewed and amended if the plan failed in an emergency? 40CFR 265.54(b) Per WAC 173-303-350 (5)(b)	Y	Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements. It is unclear if the emergency procedure plans and manuals should incorporate new fire, explosion, or unplanned release scenarios driven by potential terrorists.
EP-10	Has the contingency plan been reviewed and amended if the facility(s) changed (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increased the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents, or changed the response necessary in an emergency? 40CFR 265.54(c) Per WAC 173-303-350 (5)(c)	Y	HNF-IP-0263-TF is routinely revised, including 3 times in the past 12 months (primarily due to facility management organizational changes). Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-11	Has the contingency plan been reviewed and amended if the list of emergency coordinators changed? 40CFR 265.54(d) Per WAC 173-303-350 (5)(d)	Y	See EP-10 comment.

No.	Requirement	Status	Comment
EP-12	Has the contingency plan been reviewed and amended if the list of emergency equipment changed? 40CFR 265.54(e) Per WAC 173-303-350 (5)(e)	Y	See EP-10 comment.
EP-13	Has the contingency plan been reviewed and amended if the applicable regulations have been revised? 40CFR 265.54(a) Per WAC 173-303-350 (5)(a)	NA	Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-14	If the contingency plan has been revised, describe when and how plan was reviewed and amended.	Y	See EP-10 comment.
EP-15	Has the facility had a dangerous waste emergency since the last assessment (i.e. spill, sudden release, leak, explosion, or ignition of any dangerous waste)?	N	Per interview.
EP-16	In the event of an emergency, is the available and applicable information recorded? 40CFR 265.56(j) Per WAC 173-303-360 (2)(k)	Y	See HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-17	In the event of an emergency, is the internal communications response action initiated? 40CFR 265.56(a)(1) per WAC 173-303-360 (2)(a)(i)	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-18	In the event of an emergency, is the local agency alert response action initiated? 40CFR 265.56(a)(2) per WAC 173-303-360 (2)(a)(ii)	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-19	In the event of a release, fire, or explosion, does the emergency coordinator immediately identify the character, exact source, amount, and area extent of any released materials? 40CFR 265.56(b) per WAC 173-303-360 (2)(b)	Y	See HNF-IP-0263-TF and DOE/RL 94-02 (Appendix A provides a crosswalk of thirty WAC 173-303 citations against EP requirements).
EP-20	In the event of a release, fire, or explosion, does the emergency coordinator assess possible hazards to human health and the environment? 40CFR 265.56(c) per WAC 173-303-360 (2)(c)	Y	See HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.

No.	Requirement	Status	Comment
EP-21	In the event of a release, fire or explosion which could threaten human health or the environment outside the facility, does the emergency coordinator report his/her findings appropriately? 40CFR 265.56(d) per WAC 173-303-360 (2)(d)	Y	See HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-22	In the event of an emergency, does the emergency coordinator take all reasonable measures to ensure that fires, explosions, and releases do not occur, recur, or spread? 40CFR 265.56(e) per WAC 173-303-360 (2)(f)	Y	See HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements. In the past year, two new portable decontamination trailers have been activated and made available for emergency decontamination of personnel. These trailers are portable and are currently located near the A and S tank farm complexes.
EP-23	In the event that the facility stops operations in response to a fire, explosion, or release, does the emergency coordinator monitor for leaks, pressure buildup, gas generation, or ruptures wherever appropriate? 40CFR 265.56(f) per WAC 173-303-360 (2)(g)	Y	See HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-24	Immediately after an emergency, does the emergency coordinator provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water? 40CFR 265.56(g) per WAC 173-303-360 (2)(h)	Y	See HNF-IP-0263-TF. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-25	In the event of an emergency, is the EPA and/or Ecology notified that the facility is in compliance with the requirements before operations are resumed? 40CFR 265.56(i) per WAC 173-303-360 (2)(j)	Y	See HNF-IP-0263-TF and other CH2M HILL notification procedures. Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.
EP-26	In the event of an emergency, is the EPA and/or Ecology notified in writing within 15 days? 40CFR 265.56(j) per WAC 173-303-360 (2)(k)	Y	See HNF-IP-0263-TF and TFC-ESHQ-ENV-ES-C-01 ("Environmental Notifications"). Appendix A of DOE/RL 94-02 provides a crosswalk of thirty WAC 173-303 citations against EP requirements.

No.	Requirement	Status	Comment
Operating Record			
OR-1	Is a written operating record maintained at the site? 40CFR 265.73(a) Per WAC 173-303-380 (1)	Y	HNF-1773, <i>Environmental Program Description for the Tank Farm Contractor</i> , Section 6.3 identifies two types of records needed for environmental management. The two types were administrative and operating records. In addition to HNF-1773, a procedure revision to <i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-2	Is a description and quantity of each hazardous waste received, the waste management methods, and the dates of waste management recorded in the operating record? 40CFR 265.73(b)(1) Per WAC 173-303-380 (1)(a)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-3	Is the location of each dangerous waste within the facility and the quantity at each location recorded in the operating record? 40CFR 265.73(b)(2) Per WAC 173-303-380 (1)(b)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-4	Are records and results of waste analyses recorded in the operating record? 40CFR 265.73(b)(3) Per WAC 173-303-380 (1)(c)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-5	Are summary reports and details of all incidents that required the implementation of the contingency plan recorded in the operating record? 40CFR 265.73(b)(4) Per WAC 173-303-380 (1)(d)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-6	Are inspection reports recorded in the operating record? 40CFR 265.73(b)(5) Per WAC 173-303-380 (1)(e)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-7	Are required monitoring, testing, or analytical data recorded in the operating record? 40CFR 265.73(b)(6) Per WAC 173-303-380 (1)(f)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
OR-8	Are LDR notices, certifications, and/or demonstrations (if applicable) recorded in the operating record? 40CFR 265.73(b)(10) & (14) Per WAC 173-303-380 (1)(l)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.

No.	Requirement	Status	Comment
OR-9	Is the operating record made available to representatives of the EPA and/or Ecology upon their request? 40CFR 265.74(a) Per WAC 173-303-380 (3)(a)	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
Use and Management of Containers			
CM-1	Are the containers in good condition (not leaking, bulging, rusting, damaged, or dented)? 40CFR 265.171, WAC 173-303-630(2)	Y	The four Tank Farm surveillances conducted in 2003 had no discrepancies noted for this requirement.
CM-2	Is the container storage area inspected weekly? 40CFR 265.174, WAC 173-303-630(6)	Y	See "Operating Record"
CM-3	Are results of weekly inspections for leaks and deterioration recorded? 40CFR 265.15(d), WAC 173-303-630(6)	Y	See "Operating Record"
CM-4	Does the inspection record for leaks and deterioration include the date and time of inspection? 40CFR 265.15(d), WAC 173-303-630(6)	Y	See "Operating Record"
CM-5	Does the inspection record for leaks and deterioration include the name of the inspector? 40CFR 265.15(d), WAC 173-303-630(6)	Y	See "Operating Record"
CM-6	Does the inspection record for leaks and deterioration include the observations made? 40CFR 265.15(d), WAC 173-303-630(6)	Y	See "Operating Record"
CM-7	Does the inspection record for leaks and deterioration include the nature of remedial actions? 40CFR 265.15(d), WAC 173-303-630(6)	Y	See "Operating Record"
CM-8	Are containers kept closed except when used? 40CFR 265.173(a), WAC 173-303-630(6)	Y	The four Tank Farm surveillances conducted in 2003 had no discrepancies noted for this requirement. RPP-SCI-03-006 reviewed waste containers stored at SAAs and <90 day storage facilities located at 209E, 616, and 244-C Vault and found no discrepancies for this requirement. The first two facilities are used for interim waste storage of DST and SST wastes prior to transfer to FH TSDs.

No.	Requirement	Status	Comment
CM-9	Is the container and/or its lining compatible with the waste? 40CFR 265.171, WAC 173-303-630(4)	Y	RPP-SCI-03-006 reviewed waste containers stored at SAAs and <90 day storage facilities located at 209-E, 616 Building, and 244-C Vault and found that batteries stored for recycling were in wooden boxes and corrosive salts were forming, material was to be transferred to plastic buckets. No discrepancies for this requirement were noted.
CM-10	Is the container handled and stored properly so as not to be ruptured or caused to leak? 40CFR 265.173(b), WAC 173-303-630(5)(b)	Y	The four Tank Farm surveillances conducted in 2003 had no discrepancies noted for this requirement. RPP-SCI-03-006 reviewed waste containers stored at SAAs and <90 day storage facilities located at 209E, 616, and 244-C Vault and found no discrepancies for this requirement.
CM-11	If a container is found to be leaking, is a procedure in place to transfer the dangerous waste from the leaking container or transfer the leaking drum to a recovery drum? 40CFR 265.56	Y	See "Operating Record"
CM-12	Are the containers labeled to adequately identify the major risks associated with the contents? Are labels clearly readable and not obscured or otherwise removed? WAC 173-303-630(3)	N	The four Tank Farm surveillances conducted in 2003 had no discrepancies noted for this requirement. RPP-SCI-03-006 reviewed waste containers stored at SAAs and <90 day storage facilities located at 209E, 616, and 244-C Vault and found several labels were faded or falling off of containers, operators fixed at the time of the surveillance.
CM-13	Does the container storage area have a containment system capable of collecting and holding leaks and spills, plus if uncovered, capable of holding maximum precipitation? WAC 173-303-630(7)(a)	NA	Not addressed in this assessment.
CM-14	Is the base of the containment system free of cracks or gaps and sufficiently impervious to leaks, spills, and rainfall? WAC 173-303-630(7)(a)(i)	NA	Not addressed in this assessment.
CM-15	Is the base sloped to drain, or are the containers elevated or otherwise protected from accumulated liquids? WAC 173-303-630(7)(a)(i)	NA	Not addressed in this assessment.
CM-16	Is the containment system designed for positive drainage control? WAC 173-303-630(7)(a)(ii)	NA	Not addressed in this assessment.

No.	Requirement	Status	Comment
CM-17	Does the containment system have sufficient capacity to contain 10% of the volume of all containers or the volume of the largest container, whichever is greater? WAC 173-303-630 (7)(a)(iii)	NA	Not addressed in this assessment.
CM-18	Is run-on into the containment system prevented? WAC 173-303-630 (7)(b)	Y	The four Tank Farm surveillances conducted in 2003 had no discrepancies noted for this requirement.
CM-19	If EHW is managed, is it protected from the elements by a building or protective covering? WAC 173-303-630 (7)(d)	NA	No EHW managed.
CM-20	Are containers holding ignitable or reactive wastes located at least 15 feet from the Hanford facility boundary? 40CFR 265.176	Y	None of the tank farms or catch tanks within the scope of this assessment are close to site boundaries.
CM-21	Are containers holding ignitable or reactive wastes separated and protected from sources of ignition or reaction? 40CFR 265.17(a)	NA	Not addressed in this assessment.
CM-22	While ignitable and reactive waste are being handled, are smoking and open flames confined to specifically designated areas and are "No Smoking" signs conspicuously placed near the ignitable or reactive wastes? 40CFR 265.17(a), WAC 173-303-395(1)(a)	NA	Not addressed in this assessment.
CM-23	Are incompatible wastes and/or materials placed in the same container? 40CFR 265.177(a), WAC 173-303-630(9)(a)	Y	RPP-SCI-03-012 found two pieces of lead improperly placed in a waste container. Operations were to correct the problem or develop a problem evaluation request to develop corrective actions. The other three Tank Farm surveillances had no discrepancies noted for this requirement.
CM-24	Are wastes placed in unwashed containers that previously held incompatible wastes and/or materials? 40CFR 265.177(b), WAC 173-303-630(9)(b)	NA	Not addressed in this assessment.

No.	Requirement	Status	Comment
CM-25	Are containers that are stored nearby incompatible wastes or materials separated from the other wastes/materials by means of dike, berm, wall or other device? 40CFR 265.177[c], WAC 173-303-630(9)[c]	N	RPP-SCI-03-006 reviewed waste containers stored at SAAs and <90 day storage facilities located at 209E, 616 Building, and 244-C Vault and found two incompatible drums being stored on the same pallet, one was a flammable drum and the other was a corrosive drum, operators moved and separated the drums at the time of the surveillance (PER-2003-2668). A PER was written against HNF-IP-0842, Vol. 18, Sec 2.6 for not having the requirement to store incompatible waste in separate areas (PER-2003-2680).
CM-26	Are containers arranged such that a separation of thirty-inches is maintained between the aisles of containers holding DW? Are the rows of drums no more than two drums wide? WAC 173-303-630(5)[c]	NA	Not addressed in this assessment.
CM-27	At least yearly the owner or operator must inspect those areas of his facility where ignitable or reactive wastes are stored. The inspection must be performed in the presence of a profession who is familiar with the Uniform Fire Code or in the presence of the local, state or federal fire marshal. The inspection must include date, time, name of inspector, observations, remedial actions taken. WAC 173-303-395(1)(d)	Y	Per interview of waste personnel.
	Tank Systems		
TS-1	Is dangerous waste treated or stored in tanks?	Y	
TS-2	Does the tank system have a secondary containment system? 40CFR 265.193(a)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-3	Is the secondary containment system constructed of materials compatible with the waste to be stored? 40CFR 265.193(c)(1)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-4	Does the secondary containment system have sufficient structural strength and thickness to prevent failure due to pressure gradients, climatic conditions and other factors? 40CFR 265.193(c)(1)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.

No.	Requirement	Status	Comment
TS-5	Is the secondary containment system placed on a foundation or base capable of providing support? 40CFR 265.193(c)(2)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-6	Is the secondary containment system provided with a leak-detection system that will detect failure to either the primary or secondary containment structure or release of hazardous waste within 24 hours or earliest practical time? 40CFR 265.193(c)(3)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-7	Is the level monitoring instrumentation functional and calibrated?	NA	Not addressed under this assessment
TS-8	Is the secondary containment system sloped to drain and remove liquids? 40CFR 265.193(c)(4)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-9	Does the secondary containment system include an external tank liner? 40CFR 265.193(d)(1)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-10	Is the liner designed or operated to contain 100% of the capacity of the largest tank? 40CFR 265.193(e)(1)(i)	NA	Not addressed under this assessment
TS-11	Is the liner designed or operated to prevent run-on or infiltration of precipitation into secondary containment? 40CFR 265.193(e)(1)(ii)	NA	Not addressed under this assessment
TS-12	Is the liner free of cracks or gaps? 40CFR 265.193(e)(1)(iii)	NA	Not addressed under this assessment
TS-13	Is the liner designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tanks? 40CFR 265.193(e)(1)(iv)	NA	Not addressed under this assessment
TS-14	Does the secondary containment system include a vault?	NA	Not addressed under this assessment
TS-15	Is the vault designed or operated to contain 100% of the capacity of the largest tank? 40CFR 265.193(e)(2)(i)	NA	Not addressed under this assessment
TS-16	Is the vault designed or operated to prevent run-on or infiltration of precipitation into secondary containment? 40CFR 265.193(e)(2)(ii)	NA	Not addressed under this assessment
TS-17	Is the vault constructed with chemical resistant water stops? 40CFR 265.193(e)(2)(iii)	NA	Not addressed under this assessment

No.	Requirement	Status	Comment
TS-18	Is the vault provided with an impermeable interior coating or lining that is compatible with the waste and will prevent migration of the waste into the concrete? 40CFR 265.193(e)(2)(iv)	NA	Not addressed under this assessment
TS-19	Is the vault provided with a means to protect against the formation of the ignition of vapors within the vault? 40CFR 265.193(e)(2)(v)	NA	Not addressed under this assessment
TS-20	Is the vault provided with an exterior moisture barrier or otherwise designed or operated to prevent the migration of moisture into the vault if the vault is subject hydraulic pressure? 40CFR 265.193(e)(2)(vi)	NA	Not addressed under this assessment
TS-21	Does the secondary containment system include a double-walled tank?	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-22	Is the double-walled tank designed as an integral structure so that any release from the inner liner is contained by outer shell? 40CFR 265.193(e)(3)(i)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-23	If the double-walled tank is constructed of metal, is it protected from both corrosion of the primary tank interior and the external surface of the outer shell? 40CFR 265.193(e)(3)(iii)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-24	Is the double-walled tank provided with a leak detection system) capable of detecting a release within 24 hours? 40CFR 265.193(e)(3)(iii)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-25	Does the secondary containment system include an equivalent device to external tank liners, vaults, or double-walled tanks, which is approved by EPA and/or Ecology?	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.

No.	Requirement	Status	Comment
TS-26	If the tank does not have a secondary containment system, was an assessment made of the tank's integrity by 1/12/88? 40CFR 265.191(a)	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-27	Was this tank integrity assessment documented in writing and records maintained? 40CFR 265.191(a)	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-28	Does the tank integrity assessment determine that the tank system has sufficient structural integrity and compatibility with the wastes to be treated and stored to ensure it will not collapse, rupture, or fail? 40CFR 265.191(b)	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-29	Has the tank integrity assessment been reviewed and certified by an independent, qualified professional engineer? 40CFR 265.191(a)	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.

No.	Requirement	Status	Comment
TS-30	What were the conclusions of the tank integrity assessment?	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-31	Describe any remedial actions taken as a result of the tank integrity assessment.	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-32	If the assessment reveals that the tank system is leaking or unfit for use was a proper response taken? 40CFR 265.193(5)((i) (4)	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-33	When will a secondary containment system be installed?	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-34	Is the secondary containment installation date within EPA and/or Ecology-mandated deadlines? 40CFR 265.193(3)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.

No.	Requirement	Status	Comment
TS-35	Are leak tests or tank integrity inspections being performed at least annually until the secondary containment system is installed? 40CFR 265.193(5) (i) (1)	Y	Integrity Assessments for DSTs are addressed under HFFACO Milestone M-48-00 which requires the assessment of the structural integrity of all 28 DSTs at Hanford by September 30, 2006. Currently ultrasonic testing has been conducted on 20 of the 28 DSTs. The remaining 8 eight tanks are scheduled to be completed in FY04 and Y05. For FY04 one tank is in the process of being tested and should be completed by the end of the first quarter of the fiscal year. Integrity assessments of SSTs are addressed in TPA Milestone M-23-24 and RPP-10435.
TS-36	Is the tank system's ancillary equipment provided with full secondary containment? 40CFR 265.193(3)(f)	NA	See Section 3.2.9.2 of the LDR Assessment Report for 2003.
TS-37	Within six months of installation, and annually thereafter, is the cathodic protection system inspected? Are all sources of impressed current inspected or tested every other month ? 40CFR 265.195 (b)	N	<p>These requirements are implemented in the preventive maintenance system, which functions well to initiate the associated work packages. Systems Engineering conducts quarterly evaluations of the Cathodic Protection System. The most recent is documented in RPP-9887, Rev. 7, "System Health Report for the RPP Cathodic Protection System for the 3rd Quarter CY 2003."</p> <p>However, annual inspections were missed in 2002, and two bimonthly inspections were missed in 2003, all due to equipment and/or resource shortfalls. These issues are well documented, and have been entered into the corrective action management program using the Problem Evaluation Request (PER) program. Associated PERs include:</p> <p>PER-2002: -3158, -3375, -3773</p> <p>PER-2003: -3643, -3803, -4365</p> <p>No new PER is planned at this time. The existing PERs will be tracked. If resolution is not timely and effective, a new PER will be submitted to focus management attention on the issue.</p>
TS-38	If the tank is uncovered, is it operated to ensure sufficient freeboard to prevent overtopping by wind or precipitation?	NA	Not addressed under this assessment

No.	Requirement	Status	Comment
TS-39	Are tank covers lifted and tank and area visually inspected on a daily basis?	NA	Not addressed under this assessment
TS-40	Are tank discharge control equipment (e.g. waste feed cutoffs, by-pass systems) inspected daily? 40CFR 265.195 (a)(1)	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered.
TS-41	Are data gathered from monitoring equipment (e.g. pressure and temperature) inspected daily? 40CFR 265.195 (a) (3)	Y	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered.
TS-42	Are the above-ground portions of the tank inspected daily for corrosion or leaking? 40CFR 265.195 (a)(4)	N	Daily inspections conducted on round sheets. Abnormal conditions are noted on daily round sheets when discovered. Not listed on every round sheet checklists.
TS-43	Are the construction materials of, and the area immediately surrounding, discharge confinement structures (e.g. dikes) inspected daily for erosion or leaking? 40CFR 265.195 (a)(4)	NA	Not addressed under this assessment
TS-44	Does the tank system have spill and overflow prevention controls? 40CFR 265.194 (b)(1) (2)	NA	Not addressed under this assessment
TS-45	Are overflow/spill control equipment inspected daily? 40CFR 265.195 (a)(1)	NA	Not addressed under this assessment
TS-46	Are the results of inspections recorded in the operating record? 40CFR 265.195 [c]	Y	<i>Environmental Records</i> , TFC-ESHQ-ENV-RM-D-02 was revised and now lists the RCRA records required to be maintained for the tank farm complex.
TS-47	Are dangerous wastes and treatment reagents that could cause the tank system to rupture, corrode, or fail prevented from being placed in the tank? 40CFR 265.194 (a)	Y	Waste Characterization Program.
TS-48	If ignitable or reactive wastes are placed in tanks, are the wastes treated, rendered or mixed before or immediately after placement in the tank so that the mixture no longer meets the definition of ignitable or reactive, or is the waste protected from sources of ignition or reaction?	Y	Waste Characterization Program.

No.	Requirement	Status	Comment
TS-49	If incompatible wastes are to be placed in a tank, is there a written procedure in place to assure that adequate cleaning or purging is performed or that dangerous reactions are otherwise prevented?	Y	Waste Characterization Program.
TS-50	Are the tanks properly labeled, including "Hazardous Waste" or "Dangerous Waste" and applicable major risk labels? WAC 173-303-640 (5) (d)	NA	Not addressed under this assessment
TS-51	Are tank labels visible from at least 50 feet? WAC 173-303-640 (5) (d)	NA	Not addressed under this assessment.