USQ Not Required – ETF is a <Hazard Category 3 Radiological Facility

Ownership matrix

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1.0 PURPOSE AND SCOPE

(7.1.1) This procedure defines the steps to determine whether new or existing waste streams meet the process, safety, and regulatory requirements for receipt at the Liquid Effluent Retention Facility (LERF) and the Effluent Treatment Facility (ETF) for storage and treatment.

This procedure also provides steps for review/re-evaluation of previously approved waste streams to ensure the characterization is current and meets LERF and ETF requirements.

This procedure applies to all new waste streams that are being considered for storage or treatment at LERF and ETF, and to waste streams that have previously been accepted and are being re-evaluated because of changing conditions or new sample analyses.

2.0 IMPLEMENTATION

This procedure is effective on the date shown in the header.

3.0 RESPONSIBILITIES

3.1 ETF Operations Manager

Authorize acceptance of a new waste stream at LERF and ETF. The ETF Manager may delegate this authorization to other facility personnel.

3.2 ETF Engineering Manager

Designate knowledgeable personnel to complete all evaluations necessary to determine if a new waste stream is acceptable for receipt at LERF and ETF, to approve an acceptance checklist for the new waste stream, and to re-evaluate approved waste streams with changing conditions or new sample analyses.

Approve new waste stream acceptance checklist.

3.3 ETF Environmental Field Representative

Approve new waste stream acceptance checklist.

3.4 ETF Radiological Control Manager (or delegate)

Approve the new waste stream acceptance checklist.

3.5 ETF Industrial Hygiene

Approve the new waste stream acceptance checklist.

3.6 Waste Technical Services

Evaluate impact to secondary waste stream disposal and approve the new waste stream acceptance checklist.
4.0 **PROCEDURE**

New streams are required to meet the requirements set forth in HNF-3172, “Liquid Waste Processing Facilities Waste Acceptance Criteria,” which includes the completion and certification of a waste profile sheet (WPS) by the generator.

4.1 **Waste Acceptance Process**

**Engineer**

1. Receive a WPS (see example in HNF-3172) from the prospective generator to initiate a new waste stream evaluation.

2. Complete the New Waste Stream Acceptance Checklist (Attachment A) with all supporting information attached.

3. Submit the checklist for approval in accordance with the checklist instructions in Attachment A.

**ETF Engineering Manager, Radiological Control Manager, ETF Industrial Hygienist, Waste Technical Services, Environmental Field Representative**


**Engineer**

5. Complete a waste acceptance approval (WAA) for documentation to the generator (see example in HNF-3172).

6. Send the WAA to the generator.

7. Issue the completed acceptance package in accordance with TFC-ENG-DESIGN-C-25.

4.2 **Routine Waste Stream Sample Review and Re-Evaluation**

Sample results of waste streams that are received on a routine basis shall be reviewed at least annually, except 242-A Evaporator process condensate, which shall be reviewed after each campaign, and wastes that flow through LERF, which shall be sampled and reviewed quarterly. Completion of the review must be documented. Attachment B is used to provide this documentation.

Waste streams that are received on a routine basis must be re-evaluated to determine if they meet the requirements set forth in HNF-3172 in the following situations:

- ETF personnel have been notified, or have reason to believe, that the process generating the wastewater has changed.

- ETF personnel note an increase or decrease in the concentration of a constituent in a wastewater, beyond the range of concentrations that was described, or predicted in the characterization of the wastewater.
• Changing conditions at LERF/ETF which may impact the ability of the facility to safely and compliantly store and process the wastewater.

An approved waste stream that is sent in batches that exceed a year in a frequency shall have each batch re-evaluated. A New Waste Stream Acceptance Checklist approval is not required unless warranted by a change in process or other conditions.

ETF personnel shall notify the wastewater generating facility if a re-evaluation is initiated. When this evaluation is complete a new WAA is sent to the generator according to Section 4.1, steps 5 through 7.

5.0 DEFINITIONS

No terms or phrases unique to this procedure are used.

6.0 RECORDS

The following records are generated during the performance of this procedure:

• New Waste Stream Acceptance Checklist and any supporting data
• Waste Stream Review Data Sheet and any supporting data
• Waste Acceptance Approval.

The record custodian identified in the Company Records Inventory and Disposition Schedule is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

7.0 SOURCES

7.1 Requirements


7.2 References

1. TFC-BSM-IRM_DC-C-02, “Records Management.”
ATTACHMENT A - NEW WASTE STREAM ACCEPTANCE CHECKLIST (AND INSTRUCTIONS)

New Waste Stream Acceptance Checklist for: (b)

New Feed ID Number: NF-XXXX-XX-X (a) Regulatory File Number: 1406.xx (c)

Checklist Completed by: (d) Date: ____________________________

Environmental Field Representative: (e) Date: ____________________________

Industrial Hygiene/Safety: (f) Date: ____________________________

Waste Technical Services: (g) Date: ____________________________

Radiological Control Manager: (h) Date: ____________________________

Engineering Manager: (i) Date: ____________________________

Facility Operations Manager: (j) Date: ____________________________
This checklist shall be completed for each new waste that may be received at the Liquid Effluent Retention Facility (LERF) or the 200 Area Effluent Treatment Facility (ETF). The checklist along with all supporting documentation shall be kept on file at the ETF Records Control Center.

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Has the generator's Waste Profile Sheet (WPS) been reviewed and accepted? Attach copy of WPS to the checklist along with any supporting documentation and analytical data.</td>
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<tr>
<td>2.</td>
<td>Is storage/treatment of the waste compliant with the LERF and/or ETF National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) documents? If no, state recommended action under &quot;Comments.&quot;</td>
<td></td>
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<tr>
<td>3.</td>
<td>Is the waste acceptable for receipt under the LERF/ETF Resource Conservation and Recovery Act (RCRA) permit?</td>
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<tr>
<td>4.a</td>
<td>Are constituents in the waste within the delisting exclusion (Condition 1a/1b) treatability envelope either as a direct feed to ETF or as an aggregate within LERF?</td>
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<tr>
<td>4.b</td>
<td>If the waste is a direct feed to ETF, will the feed remain within the envelope of the current waste processing strategy?</td>
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<tr>
<td>5.a</td>
<td>Are any constituents in the waste above Land Disposal Restriction (LDR) treatment standards?</td>
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<tr>
<td>5.b</td>
<td>If the waste is transferred to LERF, will receipt of the waste start the annual cleanout requirement in the LDR regulations? If yes, notify management that the cleanout date must be added to the master schedule, and note the proposed receipt date under Comments.</td>
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<tr>
<td>No.</td>
<td>Subject</td>
<td>Yes</td>
<td>No</td>
<td>Comments</td>
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<tr>
<td>6.</td>
<td>When treated in the ETF will this waste result in a discharge that is compliant with permit ST0004500 discharge limits? If yes, attach or reference applicable documentation.</td>
<td></td>
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<tr>
<td>7.</td>
<td>When transferred to LERF or ETF, is the resulting waste within the allowable radionuclide annual possession quantity in the Notice of Construction approval letter (AIR-14-302/303/304/305) and Air Operating Permit? Attach supporting documentation.</td>
<td></td>
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<tr>
<td>8.</td>
<td>Will processing the waste meet the approval conditions in the toxic air emissions Notice of Construction approval order, DE07NWP-003 (as amended) and Air Operating Permit? Attach supporting documentation.</td>
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<tr>
<td>No.</td>
<td>Subject</td>
<td>Yes</td>
<td>No</td>
<td>Comments</td>
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<td>9.</td>
<td>If the waste will be transferred to LERF, is the waste within the bounds of the LERF Auditable Safety Analysis (ASA)? Attach supporting documentation.</td>
<td></td>
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<td></td>
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<tr>
<td>10.</td>
<td>If the waste will be transferred to LERF or ETF via the Load-In Station, is the waste within the ETF inventory allotted for the Load-In Station? Reference the current inventory batch number and attach supporting documentation.</td>
<td></td>
<td></td>
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<tr>
<td>11.</td>
<td>If the waste will be transferred directly to ETF, does the ETF radionuclide inventory batch need to be updated to include this waste?</td>
<td></td>
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<tr>
<td>12.</td>
<td>If the waste will be transferred to LERF, is the fissile material content of the resulting waste within the requirements of the ASA? Attach supporting documentation.</td>
<td></td>
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<tr>
<td>13.</td>
<td>If the waste will be transferred to LERF via the groundwater transfer system is the waste within the source inventory in HNF-SD-LWPF-SAD-001?</td>
<td></td>
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</tr>
<tr>
<td>No.</td>
<td>Subject</td>
<td>Yes</td>
<td>No</td>
<td>Comments</td>
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<tr>
<td>14.</td>
<td>Is the radionuclide mix consistent with an approved technical evaluation issued by Radiological Control?</td>
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<td>15.</td>
<td>Does the waste contain detectable levels of beryllium? If yes, contact the Engineering Manager to address beryllium monitoring in the waste processing strategy.</td>
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</tr>
<tr>
<td>16.a</td>
<td>Will the waste be transferred to a LERF Basin? If yes, state method of transfer (pipeline, tanker, etc.) and the LERF basin that will receive the waste, under &quot;Comments.&quot;</td>
<td></td>
<td></td>
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<tr>
<td>16.b</td>
<td>Is the waste compatible with the LERF liner? If no, state under “Comments” what actions are required (i.e., blending) to receive the waste.</td>
<td></td>
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<tr>
<td>16.c</td>
<td>Is the waste compatible with the current LERF inventory that the waste will be blended with?</td>
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<tr>
<td>17.a</td>
<td>Will the waste be transferred directly to ETF? If yes, state method of transfer (tanker, containers, etc.) and the load-in point (surge tank, concentrate tanks, etc.) under &quot;Comments.&quot;</td>
<td></td>
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<tr>
<td>17.b</td>
<td>Is the waste compatible with the ETF materials of construction? If no, state under &quot;Comments&quot; what actions are required (i.e., blending or adjusting processing conditions) to receive the waste.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>17.c</td>
<td>Is the waste compatible with the current ETF inventory that the waste will be blended with?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Subject</td>
<td>Yes</td>
<td>No</td>
<td>Comments</td>
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</tr>
<tr>
<td>18.</td>
<td>Does this waste or the generated secondary waste introduce new or elevated hazards during waste handling that require additional IH monitoring or controls?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>19.</td>
<td>If the waste will be received by tanker, is the waste compatible with the ETF Load-in Station materials of construction?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>If the waste will be received in the Load-In Station East Bay is the waste within the RPP-59453 Table 2 characterization? If no, refer to RPP-59453 Section 6 for actions.</td>
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<td></td>
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</tr>
<tr>
<td>21.</td>
<td>If the waste will be received by tanker, is the waste compatible with the tanker materials of construction?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>If the shipment will be received in tankers/containers, will the total radionuclide quantity in each shipment be within the DOT A2 values (sum-of-the-fraction less than one)?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>23.</td>
<td>Can ETF treat the waste without process modifications? If no, state what actions (blending, reconfiguration, etc.) would be required for this waste to be treated at ETF.</td>
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</tr>
<tr>
<td>24.a</td>
<td>Is the generator required to pretreat (e.g., filter) the waste before transfer to the LERF and/or ETF? If yes, state what type of pretreatment is required under &quot;Comments.&quot;</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>24.b</td>
<td>Has the generator been notified of the need for pretreatment?</td>
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<td></td>
</tr>
</tbody>
</table>
### ATTACHMENT A - NEW WASTE STREAM ACCEPTANCE CHECKLIST (AND INSTRUCTIONS) (cont.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.</td>
<td>Will addition of this waste to LERF or ETF require sampling for polychlorinated biphenyls (PCBs) in the effluent discharge and secondary wastes? If yes, notify the sample coordinator.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>26.</td>
<td>Will addition of this waste to the LERF and/or ETF produce a secondary waste that is within the existing Environmental Restoration Disposal Facility (ERDF) waste profile, ETF001? If no, provide documentation to Waste Technical Services.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>27.</td>
<td>Will addition of this waste to LERF or ETF produce a secondary waste with constituents below their LDR treatment standards?</td>
<td></td>
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</tbody>
</table>

Additional comments:
ATTACHMENT A - NEW WASTE STREAM ACCEPTANCE CHECKLIST (AND INSTRUCTIONS) (cont.)

Directions for Attachment A

The letters and numbers of the steps below correspond to the preceding checklist:

(a) Assign a waste ID No. by the following:
   NF-XXXX-XX-X
   NF-Facility-Year-Number
   Facility: The facility or location of the generator
   Year: 05, 06, etc.
   Number: Sequential starting with first waste from a given area as 1

(b) New waste stream source.

(c) The regulatory file name will be 1406.XX, with XX sequential with the first new waste stream given 1406.1.

(d) Name and approval date of ETF Engineering personnel completing the new waste stream acceptance checklist (checklist).

(e) Name and approval date of the EFR approving the new waste stream acceptance checklist.

(f) Name and approval date of the Industrial Hygienist approving the new waste stream acceptance checklist.

(g) Name and approval date of the Waste Technical Services person approving the new waste stream acceptance checklist.

(h) Name and approval date of the Radiological Control manager (or delegate) approving the new waste stream acceptance checklist.

(i) Name and approval date of the ETF Engineering Manager (or delegate) approving the new waste stream acceptance checklist.

(j) Name and approval date of the ETF Operations Manager (or delegate) approving the new waste stream acceptance checklist.
ATTACHMENT A - NEW WASTE STREAM ACCEPTANCE CHECKLIST (AND INSTRUCTIONS) (cont.)

1.0 Waste Profile Sheet

Before a new waste can be accepted at LERF and/or ETF, the generator shall provide a completed and certified Waste Profile Sheet. The reviewer shall make sure that:

- Supporting documentation and analytical data are attached.
- EPA approved analytical methods, listed in the LERF/ETF Waste Analysis Plan in the Hanford Facility Dangerous Waster Permit, WA7890008967, Operating Unit 3, were used.
- Process knowledge is adequate when used in lieu of or conjunction with analytical data.

If the waste will be received routinely over a period of time, ETF Engineering shall evaluate the need for a continuing sampling program to ensure that the waste characterization is kept updated. ETF Engineering shall review results of continuing sampling and place them in the appropriate regulatory file.

2.0 NEPA/SEPA

Before a waste stream can be accepted at LERF or ETF Engineering must review applicable National Environmental Policy Act (NEPA) documentation to ensure the activity has been adequately reviewed against environmental documentation:

- DOE/EIS-0391, Tank Farm Closure & Waste Management Environmental Impact Statement
- DOE/EA 0383, Environmental Assessment, Hanford Environmental Compliance Project.

3.0 Hanford Facility Dangerous Waste Permit

Before a dangerous waste or mixed waste can be accepted at LERF or ETF, the waste codes on the WPS must be checked against the list of acceptable waste codes in the LERF/ETF portion of the Hanford Facility Dangerous Waste Permit, WA7890008967, Operating Unit 3.

4.0 Delisting Exclusion

Before a waste stream can be accepted into the ETF, it must meet the conditions of the delisting exclusion (40 CFR 261, Appendix IX). The constituents in the waste must be within ETF treatability envelope as defined in Conditions 1a and 1b of the delisting exclusion. Processing of the waste must also be within the current processing strategy as defined in Condition 1.d.ii; if not, a new waste processing strategy must be developed prior to receipt of new waste.

If the waste is to be transferred to the LERF, the aggregate must meet the conditions of the delisting exclusion prior to being treated at the ETF. If the waste is not within the ETF treatability envelope as defined in Conditions 1a/1b, then an evaluation is need to determine whether the aggregate feed from LERF to ETF is within the treatability envelope. If not, EPA’s approval is required to expand the treatability envelope.
5.0 Land Disposal Restriction (LDR) Waste

A waste with constituents above LDR treatment standards that is to be received at the LERF is managed under additional regulatory requirements. Such a waste must be removed from the LERF basins within one year of addition if, after one year of treatment in LERF, the basin inventory will still exceed LDR treatment standards.

For wastes received into LERF that exceeds LDR treatment standards, management must be notified of the receipt date so that the master schedule can be modified to include the pending annual cleanout date. Reference: R.J. Julian, State of Washington, Department of Ecology, to T.K. Teynor, RL, et al., “The Washington State Department of Ecology (Ecology) Regulatory Interpretation of the Liquid Effluent Retention Facility (LERF) Land Disposal Restriction Exemption,” dated September 9, 1996

6.0 State Waste Discharge Permit No. ST 4500

To be accepted at LERF or ETF a waste stream characterization must be within the envelope that will result in a discharge in compliance with the discharge limits in State Waste Discharge Permit ST0004500. Constituents in the waste are compared to a constituent list that was included in previous versions of the permit as influent criteria. The list is based on operational data and experience, testing data, and process mass balance evaluation. If the waste contains constituents that do not fit this envelope a specific evaluation on that constituent demonstrating compliance with the ST0004500 permit limits must be included.

7.0 Radioactive Air Emissions

Before a waste can be added to the existing waste at LERF or ETF, a check is required to ensure the combined waste is within the annual possession quantity in most recent Department of Health FF-01 License for the facility. The curie content of each radionuclide in the waste is added to the existing annual possession quantity of radionuclide at LERF (or ETF, for waste going directly to ETF) and compared to the annual possession quantity limits.

8.0 Toxic Air Pollutant Air Emissions

Before a waste stream can be accepted at LERF and ETF, the waste characterization data shall be compared to the requirements in the Criteria and Toxic Air Emissions Notice of Construction (NOC) Approval Order, DE07NWP-003. When considering compliance to the NOC approval order, the cumulative effects of combining multiple streams must be considered.

The approval order includes a variety of requirements, such as VOC limits of 0.5 grams per minute and 4,000 pounds per year. The two most significant requirements are 1) waste constituents which are Toxic Air Pollutants (TAPs) listed in WAC 173-460 must be approved by Ecology before initial receipt. The approved constituents are listed in DE07NWP-003, including Amendments 1 and 2; and 2) all TAPs emissions must meet the Acceptable Source Impact Levels in WAC 173-460. Source impact levels can be determined at the point of emission (the ETF stack) or by dispersion modeling. As an alternate to calculating the source impact levels, TAPs are considered acceptable if their emissions are below the Small Quantity Emission rates in WAC 173-460-080.
9.0 LERF Safety Documentation

A waste cannot be accepted in the LERF unless it meets the bounds of HNF-SD-LEF-ASA-002, “242AL Liquid Effluent Retention Facility Auditable Safety Analysis Report.” Radionuclide concentrations are compared to the levels in Table 3-2 of the ASA. Individual radionuclides may exceed the concentrations in the ASA provided the modeled doses do not exceed the dose values in the ASA. These values are: 3.50 rem from a pressurized spray release and 1.32 rem from a pool release.

10.0 ETF Safety Documentation for the Load-In Station

A waste cannot be accepted in the LERF or ETF via the Load-In Station unless it meets the bounds of the HNF-SD-ETF-ASA-001, “200 Area ETF Auditable Safety Analysis Report.” Compliance with the ETF ASA is determined at the start of each campaign by calculating a Category 3 inventory sum-of-the-fractions per TFC-ENG-FACSUP-P-32, “ETF Radionuclide Inventory Management.” This calculation includes a sum-of-the-fractions inventory for the Load-In Station. Waste transferred to LERF (or directly to ETF) via the Load-In Station must be within the existing sum-of-the-fractions inventory for the Load-In Station. If the calculated inventory for the new waste exceeds the current inventory, the current inventory must be updated.

11.0 ETF Safety Documentation for Wastes Received at ETF

As discussed in item 10.0 above, compliance with the ETF ASA is determined at the start of each campaign by calculating a Category 3 inventory sum-of-the-fractions. Waste transferred directly to ETF via the Load-In Station or drums/containers must be within the existing sum-of-the-fractions inventory for ETF. If the calculated inventory exceeds the current inventory, the current inventory must be updated.

12.0 LERF/ETF Fissile Material Content

Waste cannot be added to the waste at LERF unless the combined waste is within the fissile material limits specified in TFC-ENG-FACSUP-P-35, “LERF Fissile Material Inventory.” Compliance with the ETF fissile material limits is not checked because wastes which are below the Category 3 sum-of-the-fractions (item 12.0) are within their fissile material limits.

13.0 ETF Safety Documentation for Groundwater Transfer System

A waste cannot be accepted for transport into LERF via the Groundwater Transfer System (GTS) unless it meets the requirements of HNF-SD-LWPF-SAD-001, “200 Area Effluent Treatment Facility Groundwater Transfer System Final Hazard Category Determination.” The radiological inventory of the waste must be within the limits to maintain the GTS as a less than Category 3 facility. If the calculated inventory for the waste exceeds the current inventory, the current inventory must be updated.

14.0 Radiological Protection Evaluation

The ETF Radiological Control must evaluate the waste material entering LERF and ETF to determine if the radionuclide mix is consistent with an approved technical evaluation. Radiological Control must approve the checklist before the waste can be received.
15.0  **Beryllium Monitoring**

The presence of beryllium in waste received at LERF or ETF may require beryllium monitoring. If beryllium is present in the waste, Engineering and Industrial Hygiene must be notified so the issue can be addressed in the waste processing strategy for the LERF campaigns. The waste processing strategy may include requirements for sampling liquid or powder, and industrial hygiene monitoring. Beryllium in containers unloaded directly into ETF would be addressed by item 18.0.

16.0  **Compatibility with LERF Liner and Waste Inventory**

Before waste can be accepted at LERF, the characterization data shall be compared against the general limits for liner compatibility outlined in the Waste Analysis Plan for LERF/ETF (Hanford Facility Dangerous Waste Permit, WA7890008967, Part III, Operable Unit 3, Addendum B). To ensure compatibility, the waste may be blended with other wastes.

Before waste can be accepted at LERF, the characterization data shall be evaluated to determine the potential for the waste to react with another existing waste that it will be blended with. 40 CFR 264, Appendix V, “Examples of Potentially Incompatible Wastes,” provides a guideline for making such evaluations. In general, waste received at LERF/ETF is considered caustic wastewater (Group 1-A) or acid and water (Group 1-B).

17.0  **Compatibility with ETF Materials and Waste Inventory**

Before a new waste stream can be accepted at LERF and ETF, the characterization data must be evaluated to ensure the waste is compatible with the ETF materials of construction, so the waste will not compromise the integrity of the tank systems. To ensure compatibility, the waste may be blended with other wastes, or the process may be adjusted (for example, reducing the degree of concentration in the evaporator).

Before a waste can be accepted at ETF, the characterization data shall be evaluated to determine the potential for the waste to react with another waste that it will be blended with. 40 CFR 264, Appendix V, “Examples of Potentially Incompatible Wastes,” provides a guideline for making such evaluations. In general, waste received at LERF/ETF is considered caustic wastewater (Group 1-A) or acid and water (Group 1-B).

18.0  **Industrial Hygiene Analysis**

ETF Industrial Hygiene must evaluate the waste to determine if the waste or the secondary waste generated from the treatment may introduce new or elevated hazards that require analysis. The evaluation should determine if existing IH monitoring practices and controls are adequate and the prescribed personal protective equipment are appropriate. As a reference, hazards involved in transferring waste from drums and carboys directly to the ETF are identified in a Job Hazards Analysis (JHA) for POP-60J-005, “Concentrate Tank System Operation,” and the hazards involved in powder handling are identified in a JHA for procedure POP-60J-001, “Thin Film Dryer Operation.”
ATTACHMENT A - NEW WASTE STREAM ACCEPTANCE CHECKLIST (AND INSTRUCTIONS) (cont.)

19.0 Compatibility with Load-In Facility Materials of Construction

Before a new waste stream can be accepted through the ETF Load-in Facility, the characterization data shall be evaluated to ensure the waste is compatible with the facility materials of construction so it will not compromise the integrity of the system.

20.0 Load-In Purgewater System Tank System Integrity Characterization

The Load-In Purgewater (East Bay) system was subject to a tank integrity assessment in 2016. RPP-59453, “The Independent Qualified Registered Professional Engineer Integrity Assessment Report For the ETF Purgewater System,” had recommendations to compare waste streams to the characterization used in the assessment. If the new waste stream is outside the characterization in Table 2 of RPP-59453 the applicable action from section 6 of the report shall be noted in the comments and executed as appropriate.

21.0 Compatibility with Tanker Materials of Construction

Before a new waste stream can be transferred to a tanker, the characterization data shall be evaluated to ensure the waste is compatible with the tanker materials of construction.

22.0 Radionuclide Requirements for Shipping

Waste received at LERF/ETF in tankers or containers must meet certain U.S. Department of Transportation (DOT) requirements depending on the total radionuclide content of each shipment. Therefore, before a waste is accepted at LERF/ETF, the total quantities of each radionuclide are calculated, based on the volume per shipment.

These values are compared to the A2 values in, “Table of A1 and A2 Values for Radionuclides,” in 49 CFR 173.435, using sum-of-the-fractions method. If the sum-of-the-fractions is greater than 1, additional documented evaluations are required before the waste may be received.

23.0 Treatability

ETF Engineering shall review the waste characterization data to determine if the ETF can treat the new waste stream to below the discharge limits (in State Waste Discharge Permit ST0004500 and 40 CFR 261, Appendix IX) without compromising the integrity of ETF tank systems. In addition, the secondary waste produced from treating the waste must meet certain criteria (items 24.0 and 25.0).

24.0 Pretreatment Requirements

ETF Engineering shall review the waste characterization data to determine if pretreatment of the waste is required before it can be accepted at LERF or ETF. Typically, pretreatment consists of filtration though a 5 micron filter before receipt at LERF. This is often required because all waste received into LERF must be filtered to prevent the accumulation of debris that may contain LDR constituents. The ETF Load-In Station has limited filtration capability, so the generator may be asked to filter as well. The generator should be notified as soon as possible that pretreatment is required.
25.0 Sampling for Polychlorinated Biphenyls (PCBs)

Some wastes accepted into LERF or ETF contain PCBs, or are subject to the Toxic Substance Control Act (TSCA). When these wastes are treated at ETF, the verification tanks and secondary waste generated must be sampled for PCBs. If sampling for PCBs is required, the sample coordinator should be notified.

26.0 Waste Profile of Secondary Waste

All secondary waste (powder and maintenance debris) generated at ETF must be designated based on sample results and process knowledge. Waste profiles already exist for the primary wastes treated at ETF. Before a new waste stream is received at LERF or ETF, the expected composition and regulatory designation of the powder generated should be evaluated to determine if it is within the existing waste profile. If not, Waste Technical Services should be notified so the waste profile can be modified.

27.0 Land Disposal Restrictions Requirements

Powder generated from treatment of a waste at ETF may exceed LDR treatment standards in 40 CFR 268. Such powder is not acceptable for disposal at ERDF or the Mixed Waste Burial Trench. Before a new waste stream is accepted into LERF or ETF, the expected composition of the powder generated shall be evaluated to determine if it exceeds LDR concentrations.
**ATTACHMENT B - WASTE REVIEW DATA SHEET**

<table>
<thead>
<tr>
<th>Date</th>
<th>Waste Stream/Regulatory File Number</th>
<th>Reason for review</th>
<th>Does waste meet existing profile?*</th>
<th>Does waste meet acceptance criteria?*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2006</td>
<td>ERDF Leachate</td>
<td>Annual review</td>
<td>Y</td>
<td>Y</td>
<td>Increase in gross beta.</td>
</tr>
</tbody>
</table>

* If waste exceeds existing profile, place documentation showing the waste is acceptable for receipt in the regulatory file for that waste stream.

Reviewer’s Signature: ___________________________ Date: ___________________