ADDENDUM I

INSPECTION PLAN
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I INSPECTION PLAN

I.1 Inspection Plan

The purpose and intent of implementing inspection procedures at the 325 Hazardous Waste Treatment Unit (HWTU) are to prevent malfunctions, deterioration, operator errors, and/or discharges that might cause or lead to the release of regulated waste to the environment or threats to human health.

I.1.1 General Inspection Requirements

The content and frequency of inspections performed at the 325 HWTUs are described in this section. Also described is maintenance of inspection records.

Observations made and deficiencies and corrective actions noted during an inspection are recorded on the inspection checklist. The checklist includes the inspector’s printed name, signature, date, and time. Once approved, the checklist is placed in the 325 HWTUs unit-specific operating record. The inspection records and dates are used to help determine any necessary corrective actions. Problems identified during the inspections are prioritized and addressed in a timely fashion as appropriate to mitigate health risks to workers, and to maintain integrity of waste management units.

I.1.1.1 Types of Problems

Inspections are performed at the 325 HWTUs daily, weekly, quarterly, once every four months, and annually. The types of problems addressed by each of these inspections are described as follows.

I.1.1.2 Daily Inspections

Daily inspections will be performed whenever waste packaging, transfer, shipping, or movement operations are conducted. Unit personnel will monitor container condition and integrity and the containment system area(s) where waste is handled. Specific inspection points include:

- Container integrity
- Unlabeled or opened containers
- Improper storage (e.g., incompatible waste storage)
- Disorderliness or uncleanness of storage unit
- Accumulation of waste in containment systems

Results of these daily inspections will be documented as part of the 325 HWTUs operating record.

I.1.1.3 Weekly Inspections

Weekly inspections will be performed of both safety and operating equipment in the 325 HWTUs. Safety and emergency equipment will be inspected for functionality and adequacy of supply. The weekly and daily inspections are usually conducted on or before the last working day of each week, and have the same inspection points. Results of these weekly inspections will be documented as a part of the 325 HWTUs operating record.

I.1.1.4 Annual/Quarterly Inspections

Annual inspections will be performed of the sprinkler system, smoke detectors, heat detectors, and pull boxes.

Quarterly inspections will be performed of the emergency eyewash/shower units, the fume hoods, and other ventilation system components. Records of these safety equipment inspections and the results, as well as documentation of any required corrective actions, will be maintained by the appropriate facilities and operations staff.
I.1.1.5 Frequency of Inspections

The frequency of inspections is based on specific regulatory requirements and on the rate of possible deterioration of equipment and probability of environmental or human health incidents.

Areas where dangerous and mixed waste are actively handled, including all of the hot cells, the front and back face of the Shielded Analytical Laboratory (SAL), and Rooms 520, 524, and 528 in the HWTU are considered to be areas subject to spills. These areas will be inspected daily when in use as required by WAC 173-303-320(2)(c).

The primary and secondary containment systems (i.e., floors, troughs, and sumps) will be inspected daily when in use for accumulation of spilled material. The containment systems will be inspected weekly for structural integrity (i.e., no cracks, gaps, leaks that could result in environmental release of waste in the event of a spill). This frequency is based on the need to perform timely corrective actions in the event that problems are noted.

Aisle space between containers will be inspected weekly, when applicable. As the objective of the aisle space requirement is to allow for unobstructed movement of personnel and equipment in case of an emergency, the aisle space requirements do not apply to the hot cells, shielded cubicles, or storage cabinets. If quantities of waste are packaged in large containers or drums, temporarily stored before a transfer, a minimum aisle space of 76 centimeters is maintained in accordance with WAC 173-303-340(3), As-Low-As-Reasonably-Achievable (ALARA) concerns, and with applicable standards of the Uniform Building Code and Life Safety Code. Weekly inspections, where applicable, allow container spacing problems to be identified and corrected.

Emergency and safety equipment and personal protective equipment will be inspected weekly to assure this equipment is available and in adequate supply.

I.1.2 Specific Process Inspection Requirements

The following sections detail the inspections that will be performed at the 325 HWTUs.

I.1.2.1 Container Inspection

Dangerous and mixed waste containers stored in the 325 HWTUs will be inspected daily where waste handling activities are performed for leakage, evidence of damage or deterioration, and proper lid and bung closure. Any observations made during the inspections, including any repairs or remedial actions taken, will be documented in the logbook with the date, time, and printed name and signature of the inspectors. This logbook will be maintained in the 325 HWTUs for at least 5 years from the date of inspection. Areas subject to spills will be inspected daily when in use. Structural integrity of the containment systems will be checked weekly.

I.1.2.2 Tank System Inspection

The SAL tank located in Room 32 is used to store mixed waste generated because of waste treatment activities. Routine inspections of the SAL tank system will be conducted in accordance with WAC 173-303-640. Inspections involve a combination of visual, mechanical, and electronic means. Due to ALARA considerations, visual inspections of the tank system will be conducted by remotely operated cameras mounted in Room 32. These visual inspections are limited to areas of the tank system that can be observed by the camera. In the event of a camera system malfunction, the tank system will be visually inspected from the doorway of Room 32 until the malfunction has been corrected. A mirror is mounted on the back wall of Room 32 to allow viewing the rear of the tank from the window in the door. A logbook or inspection sheet of all inspections will be maintained in the operating record for at least 5 years from the date of the inspection.

I.1.2.2.1 Tank System External Corrosion and Releases

Aboveground portions of the SAL tank will be inspected each operating day to detect corrosion or releases of waste.
I.1.2.2.2 Tank System Construction Material and Surrounding Area

The SAL tank is double walled and constructed of corrosion resistant stainless steel, with a capacity of 1,218 liters. The outer wall is a cylindrical stainless steel tank that provides containment sufficient to contain 100 percent of the inner tank volume. The construction materials of the tank and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment systems, will be inspected during use to detect erosion or signs of releases of mixed waste (e.g., wet spots).

Any deteriorations or malfunctions observed during inspection of the tank system will be corrected. Any release to the environment will be reported immediately to Ecology, as required by WAC 173-303-640(7)(d)(i), and to the National Response Center as required by 40 CFR 302.

I.1.2.2.3 Tank System Overfilling Control Equipment

The tank controls for the SAL tank include two high-level alarm systems that respond to overfill conditions. The initial tank high-level alarm is activated by a conductivity probe, the second by a capacitance probe. The conductivity probe high-level alarm and associated functions can be tested electrically by depressing a button on the main control panel in Room 201. Activation of this alarm results in a visible red light and audible alarm on the main control panel in Room 201, an alarm condition on the annunciator panel on the second floor of the 325 Building, and closure of electric solenoid valves on all inlet water supply lines to the hot cell area and tank system. Activation of the capacitance probe alarm results in a red light and audible alarm.

I.1.2.2.4 Tank System Monitoring and Leak Detection Equipment

The leak detection conductivity probe for the SAL tank is located between the primary and secondary shells of the double walled tank. The leak detection probe signal activates if any liquids collect in the annulus between the two walls of the tank. The leak detection probe can be functionally tested electrically by depressing a test button on the main control panel in Room 201. A leak detection sensor is also installed in the secondary containment pan underneath the SAL tank and activates if liquids are detected in the pan.

I.1.3 Inspection Log

Copies of the completed inspection checklists will be provided to operations personnel and maintained in the Hanford Facility Operating Record, 325 HWTUs File. Any corrective actions noted or deterioration or malfunctions in equipment discovered by the inspector will be delegated to responsible individuals in the operations group. Corrective actions identified must be completed within 2 weeks unless there is documentation and reason for further delay. Examples of problems that could be identified and the corresponding remedial action are listed in Table I.1. Inspection reports and corrective action response documentation will be retained at the 325 HWTUs for a minimum of 5 years.
Table I.1. Remedial Actions for Major Problems

<table>
<thead>
<tr>
<th>Major Problems</th>
<th>Remedial Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containment system failures</td>
<td></td>
</tr>
<tr>
<td>Cracks in floor of container storage area</td>
<td>Remove containers from area and cease use until cracks are repaired.</td>
</tr>
<tr>
<td>Cracks in floor of SAL cell liner</td>
<td>Remove containers from area and cease use until cracks are repaired, or provide secondary containment for containers holding liquid waste.</td>
</tr>
<tr>
<td>Leaking container in container storage area</td>
<td>Transfer waste to another container. Clean up spill.</td>
</tr>
<tr>
<td>Leaking tank or ancillary equipment</td>
<td>For minor leaks or drips, conduct inspection of affected equipment every 12 hours. For major leaks, immediately remove all waste from tank system. Prevent addition of waste to tank system until repaired. Notify Building Emergency Director. Initiate contingency plan if appropriate.</td>
</tr>
<tr>
<td>Spills</td>
<td></td>
</tr>
<tr>
<td>Minor spills in container storage area</td>
<td>Clean up spill according to contingency plan.</td>
</tr>
<tr>
<td>Major spills in container storage areas</td>
<td>Notify Building Emergency Director. Initiate contingency plan if appropriate.</td>
</tr>
</tbody>
</table>
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