CAPSULE INTERIM STORAGE UNIT
ADDENDUM I
INSPECTION PLAN

CHANGE CONTROL LOG

Change Control Logs ensure that changes to this unit are performed in a methodical, controlled, coordinated, and transparent manner. Each unit addendum will have its own change control log with a modification history table. The "**Modification Number**" represents Ecology's method for tracking the different versions of the permit. This log will serve as an up to date record of modifications and version history of the unit.

Modification History Table

Modification Date	Modification Number
02/20/2020	8C.2020.1F

This page intentionally left blank.

ADDENDUM I
INSPECTION PLAN

This page intentionally left blank.

ADDENDUM I
INSPECTION PLAN

TABLE OF CONTENTS

TABLE

This page intentionally left blank.

I.1 Inspection Plan

In accordance with Washington Administrative Code (WAC) 173-303-806(4)(a)(v), Dangerous Waste Regulation, *Final facility permits*, WAC 173-303-320, *General inspection*, and WAC 173-303-340, *Preparedness and prevention*, this inspection plan is designed to prevent malfunctions, deterioration, operator errors, and discharges at the Capsule Interim Storage (CIS) Operating Unit Group which may cause or lead to the release of dangerous waste constituents to the environment or a threat to human health. This inspection plan is designed to provide early warning of the potential for such events to make timely corrections or take preventive actions.

I.1.1 General Inspection Requirements

Inspections within the schedule are performed by qualified personnel according to a frequency that has been developed through both regulatory requirements and operating experience (Table I-1). For frequencies that are not defined by specific regulatory requirements, a justification for the frequency will be documented and maintained in the Hanford Facility Operating Record (CIS portion) in accordance with WA7890008967, Hanford Facility Resource Conservation and Recovery Act Permit (hereinafter referred to as Hanford Facility RCRA Permit) Condition II.I. During an inspection, inspectors evaluate each inspection item against its associated acceptance criteria, defined in the schedule (Table I-1). The results of the inspections are documented in inspection logs that are dated and signed, handwritten or electronically, by the inspector, and retained in the Hanford Facility Operating Record (CIS portion) for at least 5 years.

This inspection plan addresses the following unit group specific items:

- General facility.
- Casks.

Management-level staff are responsible for implementation and training according to the inspection plan. These staff may include the Facility Director or Facility Manager personnel. All inspectors shall have the appropriate training as outlined in Addendum G, “Personnel Training.”

I.1.2 Inspection Log [WAC 173-303-320(2)(d)]

Inspections implemented through operating requirements will be documented on inspection checklists or log sheets in accordance with WAC 173-303-320(2)(d). Inspection checklists or log sheets will note the date and time of the inspection and the items that will be assessed during each inspection. Any problems or discrepancies identified during the inspection, and the date and nature of any repairs or remedial actions taken, are recorded on the inspection checklist or log sheet, reported to the operating organizations, and prioritized and addressed in a timely fashion, as described in Section I.1.3.

When the inspection is completed, the inspector’s full name is printed and signed on the inspection checklist or log sheet. The schedule and inspection records will be maintained and stored in the Hanford Facility Operating Record (CIS portion) in accordance with the record retention requirements of WAC 173-303-320(2)(d) and WAC 173-303-380(1)(e), *Facility recordkeeping*. The schedule will be electronically available at building 212H.

I.1.3 Remedy Schedule [WAC 173-303-320(3)]

Problems and unanticipated substandard conditions identified by the inspector are documented on the inspection log and reported to facility management for prioritization, and scheduling of remedial actions to prevent environmental or human health incidents. Problems identified during inspections are categorized into three general areas and addressed accordingly. The areas include imminent hazards to human health and the environment, problems that can be easily remedied with little or no planning, and maintenance items that require planning and coordination to correct:

- When an identified problem poses an imminent risk to human health or the environment, actions are taken immediately to mitigate the hazard and may include activation of the Building Emergency Plan for CIS (located in CIS Addendum J, "Contingency Plan") and the Hanford Emergency Management Plan (located in Hanford Facility RCRA Permit Attachment 4, *Hanford Emergency Management Plan*), when contingency plan action levels are exceeded. Problems that warrant immediate action include active releases of mixed waste to the environment (i.e., cask leak).
- Problems identified during inspections that are easily corrected (e.g., no maintenance planning required), such as sign replacement, will be corrected within 24 hours or tracked until completion.
- Other problems that cannot be easily corrected are addressed on a prioritized schedule. Actions to assess and remedy such problems are assigned and a schedule for completion is determined.

Inspections are completed by using either inspection logs or through a job control database. Problems identified using an inspection log are noted on the inspection log and either corrected during the time of the inspection or tracked on each subsequent inspection log until corrected. Problems identified using the job control database are noted on the inspection form and either corrected during the time of the inspection or the problem is added to the job control database to be addressed according to a remedy schedule.

An overall schedule for remedying problems would include time to develop a maintenance instruction in conjunction with any schedule constraints, such as parts availability, fabrication, and environmental or facility access limitations. The time to develop a maintenance instruction depends on several factors including nuclear, radiological, and industrial safety hazards associated with the task; complexity of the task; human factors and performance considerations; skill of worker(s); and risk to the worker(s), public, or the environment.

The inspection problem resolution process may include preparing an inspection data sheet that identifies the criteria for the inspection; relaying identified problems onto an action tracking list; and developing maintenance instructions for problems based on the actions tracking list. The remedies for problems identified are developed using maintenance instructions and prioritized on a schedule as described previously. Problems pending resolution, and their associated tracking designation, will be noted until the remedy is complete.

Information from the inspection checklist or log sheet will be maintained in the Hanford Facility Operating Record (CIS portion) in accordance with the Hanford Facility RCRA Permit Condition II.I.

I.1.4 Summary and Frequency of Dangerous Waste Management Unit Items to be Inspected [WAC 173-303-320(2)(c)]

The capsules, which are stored within a CSS, contain no liquid waste, and remain stationary due to the CSS design configuration. Therefore, the Capsule Storage Area (CSA) Dangerous Waste Management Unit (DWMU) is not subject to spills and daily inspections per WAC 173-303-320(2)(c) are not required.

Based on possible localized radiation fields at the CSA DWMU, physical access to the casks should be minimized. In-person weekly inspections (pursuant to WAC 173-303-630(6), *Use and management of containers*) of the casks would cause unnecessary risks to workers and contradict *Atomic Energy Act of 1954* radiation safety requirements. Therefore, remote inspection of the CSA DWMU will be accomplished through monitoring of the temperature monitoring equipment associated with the CSS passive ventilation system. Temperature monitoring will be performed on work days to determine if the CSS outlet air vent temperature is within an acceptable range; thus, verifying the cooling vents are clear of debris (e.g., soil, vegetation) and wildlife.

The items subject to inspection and their respective evaluation criteria are identified at Table I-1.

Table I-1 Capsule Interim Storage Inspection Schedule

Inspection Item/Area	Frequency	Types of Problems and Evaluation Criteria
General Facility		
Posted Warning Signs[a]	A	Problem: Dangerous waste warning signs missing, not in proper location, not visible, or not in good condition. Check condition of dangerous waste warning signs. Ensure signs are visible, in good condition, and verify the location of the signs.
Exterior Surfaces of the Casks and Storage Pad[a]	A	Problem: Cracks, gaps, or other degradation of the casks and concrete storage pad, which could compromise the integrity of the storage system. Evidence of spills or leaks. Check for deterioration, structural damage, and settlement. Visually inspect for any evidence of spills present on or near the casks.
General Area	M	Problem: Damage to fence and gates. Abnormal conditions within DWMU. Verify outer fence and gates are intact with no unexpected openings, and check for accumulated debris (e.g., tumbleweeds). Visually inspect the DWMU for abnormal conditions from all sides of the outer fence line.
Two-way Radios	M	Problem: Two-way radios not operational. Verify that equipment is operational by checking for power and function.
Casks		
Cooling Vents[b]	A	Problem: Debris and wildlife blocking the casks' cooling vents. Verify that cooling vents are clear of defects and obstructions.
Cask Labels	A	Problem: Labels not present, difficult to read, altered, or falling off. Ensure labels are intact. Assess legibility of labels, note any impediments to visibility and off-normal condition of labels. Ensure labels are visible and legible.
Temperature Monitoring System Annunciator	W	Problem: High temperature beacon not functional. Visually verify that high temperature beacon is functional.

Table I-1 Capsule Interim Storage Inspection Schedule

Inspection Item/Area	Frequency	Types of Problems and Evaluation Criteria
Temperature Monitoring	D[d]	Problem: Equipment not operational. Temperature out of normal operating range. Verify that equipment is operational and within the acceptable range.

Cask Type	Temperature Difference[c]
Sr (14.6 kW)	114°F
Sr (17.6 kW)	131°F
Sr (22.3 kW)	114°F
Cs (3.52 kW)	110°F
Cs (15.6 kW)	110°F

a. Inspection will continue during and through closure activities until final certification.

b. Due to localized radiation fields, physical inspections of cooling vents will be conducted on an annual basis. Temperature monitoring will occur daily and used as an indicator for the cooling vents.

c. Allowable temperature difference between the ambient temperature and the cask outlet temperature.

d. Inspections will be on scheduled work days excluding Hanford Facility closure days.

Note: Unless otherwise noted, inspection frequencies are defined by the following periodicities:

Daily (D) = Once per calendar day.

Weekly (W) = Once per calendar week with a period that runs from Sunday to Saturday.

Monthly (M) = Once per calendar month.

Annually (A) = At least once per 12-month period ±30 days from the time of the last annual inspection.

1