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**ADDENDUM C
PROCESS INFORMATION**

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**ADDENDUM C
PROCESS INFORMATION**

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C LOW-LEVEL BURIAL GROUNDS CLOSING UNITS "GREEN ISLANDS"

This addendum will contain the facility description for the Closure Group #26, Low-Level Burial Ground, "Green Islands". The "Green Island" phrase originates from the fact that the location of this dangerous waste was marked as green spots on the maps of the Low-Level Burial Grounds.

None of these locations are operational dangerous waste units, and no waste handling or treatment is performed relating to the Green Islands. Thus, this addendum will contain only the facility description.

There are 24 radioactive solid waste burial grounds in the central part (200 Area) of the Hanford facility. Hanford Federal Facility Agreement and Consent Order (HFFACO) Action Plan Appendix C organizes the 24 into the 200-SW-2 OU. Appendix C designates the unit type as "burial ground." Three waste management activities were conducted in these 24 burial grounds:

1. Radioactive solid waste was disposed. Releases and potential releases from disposed waste are subject to HFFACO requirements and schedules for investigation and cleanup of the 200-SW-2 OU.
2. Radioactive mixed wastes were stored. Retrievably stored waste (RSW) will be retrieved, and then designated as either low-level radioactive waste, mixed low-level waste, or transuranic mixed waste. Designation requirements and schedules are required by the HFFACO M-091 milestone series. The M-091 definition of retrieval includes the action of transferring the waste to a permitted and compliant treatment, storage, or disposal unit or the Environmental Restoration Disposal Facility (ERDF). Because designation as dangerous waste occurs after transfer of the waste to another unit or the ERDF, no waste handling or treatment occurs within these closure units.
3. Radioactive mixed waste was disposed at the locations of the "Green Islands," also called "regulated areas." The Green Islands are subject to the requirements and schedules included in the permit conditions for Closure Group #26.

C.1 Facility Description

There are 24 radioactive solid waste burial grounds in the central part (200 Area) of the Hanford facility. The burial grounds were generally constructed as individual trenches; there are an estimated 333 total trenches. Dangerous wastes were disposed in 5 of these burial grounds (Table C.1) under three scenarios:

Table C.1: Disposal and Storage of Dangerous Wastes by Trench

TSD Burial Ground	Disposed Mixed Waste "Green Island" Trench # ^{1,2,3}	Retrievably Stored Waste Trench #
218-E 10	9	
218-E-12B		17, 27
218-W-3A	19, 6S	1, 4, 5, 6, 8, 10, 15, 17, 23, 30, 32, 34, 6S, 9S
218-W-3AE	5, 8	
218-W-4B		7, 11, 14 (caissons)
218-W-4C	NC, 14, 58	1, 4, 7, 20, 24, 29
218-W-5	22	

¹ Green Islands due to the mixed waste effective date changing from 11/23/87 to 8/19/87. For this category, the acceptance date into the landfill occurred between the three month period. The mixed waste effective date change occurred by the Washington Attorney's General Office letter on September 24, 1996.

² Green Islands from purposely disposing mixed waste to unlined trenches. The practice of disposing of mixed waste to unlined trenches occurred for disposal packages in 1988, 1989, and 1993. The practice of disposing mixed waste to unlined trenches was described in a January 14, 1988 Strategy, and administratively discontinued on January 11, 1996 when DOE sent a letter to Ecology (96-SWT-020) informing Ecology that mixed waste disposal will comply with all applicable requirements.

³ Green Islands due to Lawrence Berkley National Livermore (LBNL) waste: Certain LBNL waste was disposed of as non-dangerous radioactive waste in 1990, 1994, and 1995. LBNL informed DOE of additional process knowledge that these wastes were mixed waste. DOE informed Ecology in March 1996 of the new process knowledge. Ecology determined that some of the process knowledge did not warrant a listed waste designation, but the waste streams cannot be differentiated in the burial records, so it is all presumed to be mixed waste.

The Administrative Record contains burial records for the “green islands.” The records include the containers and locations forming the basis for the maps in the Part A (Addendum A).

The disposed wastes are located within portions of individual trenches. Table C.1 shows mixed wastes were disposed in portions of 9 trenches out of 333 total trenches. Thus once stored wastes are retrieved according to the M-91 compliance schedule; disposed mixed waste will affect a relatively small proportion of the total volume of the burial grounds.

USDOE requested and Ecology approved of the ongoing disposal of dangerous wastes in 2 currently operating units, the Trench 31/34 dangerous waste management unit and the Trench 94 dangerous waste management unit. These permitted operating units can be found in this permit as OUG # 16 and OUG#17.

C.1.1 Regulatory Pathway

HFFACO Appendix C groups the 24 burial grounds as the 200-SW-2 OU. HFFACO Appendix D includes a compliance schedule for USDOE to submit an investigation work plan (M-015-93A), and submit a proposed corrective action decision and [CERCLA] proposed plan (M-015-93B) to Ecology. Developing a plan to investigate the 24 burial grounds is complicated by the anticipated expense and hazards inherent in the radioactive and chemical wastes disposed in the burial grounds. Likewise developing a corrective action decision will be complicated by the expense and hazards inherent in those radioactive and chemical wastes.

Recognizing the inherent difficulty of investigating and remediating the radioactive and chemical wastes in the 24 burial grounds, Ecology considers it prudent to coordinate permit conditions for disposed mixed waste with developing a corrective action decision/proposed plan for all 24 burial grounds. This coordinated approach is supported by HFFACO Action Plan Section 5.5., which allows for past-practice investigation reports to identify proposed closure/post-closure activities for closely associated TSD units. Therefore, Ecology proposes to use the results of the 200-SW-2 OU investigation to develop permit conditions for closure. Ecology anticipates structuring dangerous waste permit conditions for closing burial grounds using a compliance schedule:

- Identify information necessary to prepare closure plans (M-15-93A).
- Propose closure actions (M-15-93B).
- Propose closure schedule one year after M-15-93B: includes 6 months to develop corrective action decision/record of decision and 6 months to develop remedial design report/remedial action work plan (RDR/RAWP).

C.1.2 Topographic Map

Refer to Addendum A, Part A Permit, for topographic map.

C.1.3 Release from Solid Waste Management Units

Information concerning the location of the solid waste management units (SWMUs) can be found on the topographic map referenced in the Part A application. Releases from these low level burial grounds have not been detected by the groundwater monitoring network. Groundwater will continue to be monitored in accordance with the applicable Interim Groundwater Monitoring Plans as required by this permit.

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