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Richland Operations Office
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OCT 29 2001

02-RCA-017

Ms. Laura E. Ruud, Permit Specialist
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
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Dear Ms. Ruud:

FISCAL YEAR (FY) 2001 PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND/OR POSTCLOSURE FOR HANFORD FACILITY TREATMENT, STORAGE, AND/OR DISPOSAL UNITS

Enclosed is the FY 2001 Projections of Anticipated Costs for Closure and/or Postclosure for Hanford Facility Treatment, Storage, and/or Disposal Units (annual report). This annual report is being submitted by October 31, 2001, the compliance due date established in Conditions II.H.1 and II.H.2 of the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion.

Should you have any questions regarding this annual report, please contact Ellen M. Mattlin, of the RL Regulatory Compliance and Analysis Division, on (509) 376-2385.

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RCA:EMM

Enclosure

cc: See page 2

ENCLOSURE

Fiscal Year 2001 Projections of Anticipated Costs for Closure and/or Postclosure
for Hanford Facility Treatment, Storage, and/or Disposal Units

including

Table 1,
Status of Treatment, Storage, and/or Disposal Units
in the Hanford Facility Resource Conservation and Recovery Act Permit,
Dangerous Waste Portion, Revision 6

Consisting of 8 pages, including coversheet

FISCAL YEAR 2001 PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND/OR POSTCLOSURE FOR HANFORD FACILITY TREATMENT, STORAGE, AND/OR DISPOSAL UNITS

INTRODUCTION AND BACKGROUND:

The Hanford Facility Resource Conservation and Recovery Act Permit (HF RCRA Permit), Dangerous Waste Portion (DW Portion), conditions II.H.1. and II.H.2, require an annual report updating projections of anticipated costs for closure, postclosure, postclosure monitoring and maintenance for treatment, storage, and/or disposal (TSD) units incorporated into Part III, Part V, or Part VI of the HF RCRA Permit.

The organization of this annual report is consistent with the approach that was approved by Mr. Moses N. Jarayssi, who represented the State of Washington, Department of Ecology (Ecology) at the October 3, 1995, HF RCRA Permit Steering Committee Meeting, and confirmed by an Ecology memo dated January 12, 1996. This approach entails the estimated cost of closure and/or postclosure of the 27 TSD units currently in the HF RCRA Permit, DW Portion, Revision 6, and are categorized as follows:

- Anticipated closure cost projection has been submitted for a TSD unit in a previous annual report; no significant change in the approach to closure has been made since that submittal; the cost projection includes an escalation factor applied to the dollar figure reported in the previous annual report
- Anticipated closure cost projection has been submitted for a TSD unit in a previous annual report; a significant change in the approach to closure has been made since that submittal, warranting a full cost projection revision
- Clean closure certification documentation has been submitted for a TSD unit; however, administrative or indefinite (referred to as "other") costs remain
- Clean closure certification documentation has been submitted for a TSD unit; no additional costs remain, and an update of an anticipated closure cost projection is no longer needed
- No anticipated closure cost projection has previously been submitted for a TSD unit; a new cost projection is provided

Table 1 delineates which TSD units fall into each of these categories. The second and last categories above are combined into the column entitled "New Estimate Provided." Previous annual reports may be reviewed for historical information.

DEVELOPMENT DESCRIPTION:

For the following discussion, refer to Table 1 of this annual report. Please note that any projections of anticipated costs are estimates, and are based on knowledge that is current during issuance of this annual report. Projections of anticipated costs may change in subsequent annual reports based on change in any of the following: costs of labor and materials, negotiated closure

strategy, Hanford Site budgetary priorities, or an expanded knowledge of estimate details reported in previous annual reports.

The Permittees co-operating a TSD unit with the U.S. Department of Energy, Richland Operations Office, appear in parenthesis following the name of the TSD unit for which that Permittee had management responsibilities during fiscal year (FY) 2001: Bechtel Hanford Inc. (BHI), Fluor Hanford (FH), or Pacific Northwest National Laboratory, in Table 1.

There were no new units to report for FY 2001. Fourteen "escalation only" projections are included in this report for the TSD units that have been incorporated into the HF RCRA Permit, DW Portion, for which the original strategy of pursuing closure has not been changed. One TSD unit has its entire estimate deferred until a future date.

In addition to the projection of anticipated costs discussed, twelve TSD units currently incorporated into the HF RCRA Permit have been accepted by Ecology as clean closed. No further costs are anticipated; therefore, none are presented in this report. Additionally, if the TSD unit was presented in a previous annual report with no further costs pending, the separate report on that individual TSD unit will no longer be provided in this annual report.

Each of the anticipated closure and/or postclosure cost projections has been reviewed by BHI, Pacific Northwest National Laboratory, and FH, for the respective TSD units they manage.

UPDATING OF PROJECTIONS OF ANTICIPATED CLOSURE AND/OR POSTCLOSURE COSTS:

Projections of anticipated closure and/or postclosure costs that are updated with an escalation factor are based on previously submitted cost estimates and the latest revision of the closure and/or postclosure plans, adjusted for inflation for FY 2001. The escalation factor does not take into account changes in specific cost elements included in previous estimates; it is an overall factor applied to the total of the previous estimate. Projections of anticipated costs also will be updated if a change to the closure and/or postclosure plan affects the cost of closing the unit. These projections will be updated annually to reflect the current status of the TSD unit in terms of closure and/or postclosure plan documentation or actual closure and/or postclosure activities. The escalation factor provided for FY 2001 is 2.3 percent. The cost estimates have been rounded to three significant figures to reflect the appropriate level of accuracy.

**Table 1: Status of Treatment, Storage, and/or Disposal Units
in the Hanford Facility Resource Conservation and Recovery Act Permit,
Dangerous Waste Portion,
Conditions II.H.1. and H.2., Revision 6.**

TSD Unit Name (Managing Subcontractor Name)	Previously Provided; Escalation Factor Only	New Estimate Provided (Combined Category)	Administrative or Other Costs Remaining	Clean-Closed (FY); No Estimate Needed	Closure and/or Postclosure Costs Based on FY 2001
616 Nonradioactive Dangerous Waste Storage Facility (FH)			X		\$0
305-B Storage Facility (PNNL)	X				\$3,710,000
LERF (FH)	X				\$5,210,000
200 Area ETF (FH)	X				\$1,140,000
242-A Evaporator (FH)	X				\$7,750,000
325 Hazardous Waste Treatment Units (Pacific Northwest National Laboratory)	X				\$2,000,000
183-H Solar Evaporation Basins (BHI)	X				\$817,000
105-DR Large Sodium Fire Facility (BHI)	X				\$334,000
303-K Storage Facility (FH)	X				\$3,330,000
300 Area Process Trenches (BHI)	X				\$16,700,000 ¹
1325-N Liquid Waste Disposal Facility (BHI) Costs combined with 1301-N	X				\$1,710,000 ²
1301-N Liquid Waste Disposal Facility (BHI)	X				
1324-N Surface Impoundment (BHI) Costs combined with 1324-NA	X				
1324-NA Percolation Pond (BHI)	X				

**Table 1: Status of Treatment, Storage, and/or Disposal Units
in the Hanford Facility Resource Conservation and Recovery Act Permit,
Dangerous Waste Portion,
Conditions II:H.1. and H.2., Revision 6.**

TSD Unit Name (Managing Subcontractor Name)	Previously Provided; Escalation Factor Only	New Estimate Provided (Combined Category)	Administrative or Other Costs Remaining	Clean-Closed (FY); No Estimate Needed	Closure and/or Postclosure Costs Based on FY 2001
PUREX Storage Tunnels (FH)			X		\$0
300 Area Solvent Evaporator (FH)				X (1995)	\$0
2727-S Storage Facility (FH)				X (1995)	\$0
Simulated High-Level Waste Slurry Treatment/Storage (PNNL)				X (1995)	\$0
218-E-8 Borrow Pit Demolition Site (FH)				X (1996)	\$0
200 West Area Ash Pit Demolition Site (FH)				X (1996)	\$0
2101-M Pond (FH)				X (1996)	\$0
216-B-3 Expansion Ponds (FH)				X (1995)	\$0
Hanford Patrol Academy Demolition Sites (FH)				X (1996)	\$0
304 Concretion Facility (FH)				X (1996)	\$0
4843 Alkali Metal Storage Facility (FH)				X (1997)	\$0
3718-F Alkali Metal Treatment and Storage Area (FH)				X (1998)	\$0
100 D Ponds (BHI)				X (1999)	\$0
TOTAL					\$42,701,000

Note 1: Costs to complete the closure verification and to backfill the 1324-N/NA units are included with the cost estimate for 1301-N and 1325-N.

Note 2: The 1324-N/NA estimate only includes postclosure costs.

616 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY

A complete cost estimate was submitted for 616 Nonradioactive Dangerous Waste Storage Facility in the FY 1994 annual report, October 31, 1994, based on the approved closure plan in effect at that time. The total estimated cost for closure under this plan is approximately \$1.89 million (2001 dollars). A revision to the closure plan was submitted to Ecology in May 1999 for incorporation into the HF RCRA Permit during FY 2000. In FY 2001 all of the physical closure activities and closure certificate submittal to Ecology occurred. With only some administrative things being left, the closure cost estimate is shown as zero dollars.

305-B STORAGE FACILITY

The closure strategy/approach has not changed for this TSD unit for the time period through FY 2001. The total cost for closure was estimated to be approximately \$3.71 million (2001 dollars).

LIQUID EFFLUENT RETENTION FACILITY

The closure strategy/approach has not changed for this TSD unit for the time period through FY 2001. The total estimated costs for closure does not include the cost to operate the 200 Area Effluent Treatment Facility to treat waste generated during Liquid Effluent Retention Facility (LERF) closure activities. The total cost for closure was estimated to be approximately \$3.88 million (2001 dollars).

200 AREA EFFLUENT TREATMENT FACILITY

The closure strategy/approach has not changed for this TSD unit for the time period through FY 2001. The total cost for closure was estimated to be approximately \$1.33 million (2001 dollars).

242-A EVAPORATOR

The closure strategy/approach has not changed for this TSD unit for the time period through FY 2001. The total cost for closure was estimated to be approximately \$1.14 million (2001 dollars).

325 HAZARDOUS WASTE TREATMENT UNITS

The closure strategy/approach has not changed for this TSD unit for the time period through FY 2001. The total cost for closure was estimated to be approximately \$7.75 million (2001 dollars).

183-H SOLAR EVAPORATION BASIN

183-H Solar Evaporation Basins (183-H) postclosure and groundwater monitoring plans were approved and incorporated into the HF RCRA Permit in FY 1997. The plans call for a 30-year controlled period during which postclosure activities will be performed. Postclosure activities are scheduled to be completed in FY 2027 and will culminate in postclosure certification. A modified groundwater monitoring program has been accepted because groundwater beneath 183-H is within the hydraulic influence of a pump-and-treat operation. For the remainder of the estimating period, it is assumed that the monitoring network originally proposed for the unit will be re-established (beginning in FY 2003). The total cost for the remaining postclosure activities was estimated at approximately \$2.0 million (2001 dollars).

105-DR LARGE SODIUM FIRE FACILITY

Decommissioning and decontamination (D&D) activities began in FY 1999 with D&D of the 116-DR Exhaust Stack. Interim safe storage of the 105-DR Reactor Building will be completed in FY 2002. The current plans are to complete D&D of the remaining portions of the 105-DR Large Sodium Fire Facility (LSFF) (the 117-DR Exhaust Filter Building, and associated tunnels), by the end of FY 2003. The D&D activities at the LSFF must be completed by September 2005, in accordance with the 105-DR Action Memorandum. The estimate consists of all D&D activities including mobilization, preparatory work, sampling and analysis, monitoring, decontamination, dismantlement, disposal of waste at the Environmental Restoration Disposal Facility (ERDF), recycling, and site close out. The estimate also includes administrative permit compliance activities such as cost estimating, reporting, and maintenance of the operating record. The cost to complete closure activities was estimated at \$817,000 (2001 dollars).

303-K STORAGE FACILITY

The closure strategy/approach has not changed for this TSD unit for the time period through FY 2001. Total cost for closure was estimated to be approximately \$334,000 (2001 dollars).

300 AREA PROCESS TRENCHES

The 300 Area Process Trenches modified closure/postclosure plan was approved and incorporated into the HF RCRA Permit in FY 1997. In May 1998, closure activities at the 300 Area Process Trenches were completed, and postclosure began. Postclosure will continue for a 30-year period, culminating in postclosure certification in FY 2028. The cost of remaining postclosure activities was estimated at \$3.3 million (2001 dollars).

1301-N AND 1325-N LIQUID WASTE DISPOSAL FACILITIES

The 1301-N and 1325-N Liquid Waste Disposal Facilities closure/postclosure plan was approved and incorporated into the HF RCRA Permit during FY 1999. The plan calls for completion of closure activities at 1301-N and 1325-N during FY 2003, followed by a 30-year postclosure period ending in FY 2033. The 1301-N and 1325-N cost estimate includes costs associated with backfilling the 1324-N and 1324-NA sites.

Postclosure activities include periodic assessments and groundwater monitoring. Institutional controls will be required during the postclosure period. The total cost of closure and postclosure activities was estimated at approximately \$16.7 million (2001 dollars).

1324-N SURFACE IMPOUNDMENT AND 1324-NA PERCOLATION POND

The 1324-N Surface Impoundment and 1324-NA Percolation Pond closure/postclosure plan was approved and incorporated into the HF RCRA permit during FY 1999. Closure activities at 1324-N and 1324-NA will be completed during FY 2001. The 1324-N and 1324-NA sites will be backfilled in FY 2003 in coordination with the 1301-N and 1325-N sites. The costs to complete the backfill are included in the 1301-N and 1325-N cost estimate.

Postclosure activities include periodic assessments and groundwater monitoring until 2032. The postclosure estimate includes costs for groundwater monitoring; groundwater well inspection and

maintenance; and permit compliance activities. The total cost of postclosure activities was estimated at approximately \$1.7 million (2001 dollars).

PLUTONIUM-URANIUM EXTRACTION PLANT STORAGE TUNNELS

The closure strategy for this TSD unit has not been finalized and is expected to occur during decommissioning and decontamination of the Plutonium-Uranium Extraction Plant (PUREX). As agreed with Ecology, the PUREX Storage Tunnels projection of anticipated costs is deferred until a future date when a definitive closure strategy is developed. When these costs become available, they will be included in a future annual report.

Ms. Laura E. Ruud
02-RCA-017

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OCT 29 2001

cc w/encl:

Administrative Record
Ecology Library, Kennewick
EDMC, H6-08
Environmental Portal, LMSI
Hanf. Fac. Op. Record
L. J. Cusack, Ecology
L. P. Diediker, FHI
R. Gay, CTUIR
E. L. Grohs, PNNL
R. H. Gurske, FHI
R. Jim, YN
R. J. Landon, BHI
S. L. Mincey, FHI
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