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Change Number	Federal Facility Agreement and Consent Order Change Control Form	Date
M-19-95-01	Do not use blue ink. Type or print using black ink.	December 20, 1995

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Class of Change

[X] I - Signatories [ ] II - Executive Manager [ ] III - Project Manager

Change Title

Revise M-19 Milestones to Allow for Alternate Treatment and Direct Disposal Options for Low Level Mixed Wastes

Description/Justification of Change

This change request proposes an alternative to constructing and operating the WRAP 2A facility on the Hanford site. The revised strategy would employ several parallel paths to accomplish the WRAP 2A mission for treating Contact Handled Low Level Mixed Waste. The new milestones will require that waste treatment and/or direct disposal begin by the same date planned for WRAP 2A and continue at a rate that equals or exceeds the cumulative throughput previously planned for WRAP 2A. A new major milestone establishes this treatment/disposal rate as a requirement through Fiscal Year (FY) 2002.

(continued)

Impact of Change

This change request creates a new major milestone (M-19-00) which sets specific requirements for treating and/or disposing of at least 1,644 cubic meters of Contact Handled Low Level Mixed Waste by the end of FY 2002. The previous major milestone, M-19-00, "Complete WRAP Module II Construction and Initiate Operations," due September 1999, is replaced by interim milestone M-19-01, which requires that treatment and/or direct disposal of waste be initiated by the same date, September 1999. The previous milestone M-19-01, "Complete WRAP Module II Construction," is deleted. Additional interim milestones and target dates are established for the treatment and disposal of Contact Handled Low Level Mixed Waste.

Affected Documents

Hanford Federal Facility Agreement and Consent Order, Fourth Amendment, January, 1994, Appendix D (Table D, pages D-41 and D-42, and Action Plan Work Schedule, page 13 of 40.)

Approvals

DOE	Date	___ Approved	___ Disapproved
EPA	Date	___ Approved	___ Disapproved
Ecology	Date	___ Approved	___ Disapproved

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Description/Justification (cont.)

The new strategy will utilize a combination of several different approaches as described below:

1. Contracts with commercial firm(s) to provide stabilization of Contact Handled Low Level Mixed Waste (CH-LLMW) on a fixed unit price basis. These contracts will provide required treatment for all of the waste streams originally designated for WRAP 2A, except for four small waste streams which will constitute less than two percent of the CH-LLMW projected for treatment in WRAP 2A. These small streams will be treated on site using laboratory scale equipment per approach 2 and/or via a second commercial contract for treating high mercury subcategory waste as discussed in approach 4. Contracts will be maintained (extended or recompeted) until no longer needed to meet regulatory requirements. The stabilization contract will require that treatment begin during September 1999, and continue for a base period of five years with five optional one-year extensions.

2. Onsite treatment in WRAP 1, 2706-T or another permitted TSD facility using macro-encapsulation and/or a small scale deactivation/stabilization capability. Certain waste streams, such as radioactive elemental lead and debris, will require Ecology concurrence with macro-encapsulation using sealed polyethylene containers. However, the commercial contract option can be utilized for any or all of these waste streams if regulator concurrence is not obtained or the commercial approach is determined to be more cost effective.

3. Direct disposal of certain waste streams in compliance with applicable regulations, without any additional treatment. Three waste streams are candidates for this option. In each case additional sampling and analysis will be required to demonstrate that the streams meet LDR treatment requirements for disposal in the RMW landfill. Preliminary testing has shown that these streams, previously categorized as requiring additional treatment, will meet LDR treatment standards. One of the streams, 183 H Basin Solidified Liquids, will require a variance for trace amounts of formic acid. This variance was also planned in order to treat 183 H Basin wastes in the WRAP 2A facility. Any of these waste streams that are found unsuitable for direct disposal by the regulator will default to the commercial contract for treatment.

4. In addition, additional contracts may be let for treatment services for small quantities of waste not within the scope of the WRAP 2A project or for high mercury waste (discussed in approach 1) which is not included in the stabilization contract.

The revised M-19 milestones use the WRAP-2A treatment plan (Ref: WHC-SD-W100-RD-001 Rev-1, *Waste Receiving and Processing Module 2A, Feed Specification*, November 1994) as the basis for the type and volume of waste to be treated and/or disposed. This basis was used in the WRAP-2A requirements document (Ref: WHC-SD-W100-FDC-001 Rev-2, *Functional Design Criteria, Waste Receiving and Processing Facility Module 2A, Project W-100*, October 1993) to establish a treatment throughput rate of 822 cubic meters per year. Facility implementation plans called for operating at 30% of capacity in the first year (FY 2000), 70% in the second, and 100% thereafter. Thus, the revised milestones are based upon annual treatment and/or disposal rates of 246 cubic meters in FY 2000, 575 cubic meters in FY 2001, and 822 cubic meters for FY 2002 and beyond until compliance is reached with the RCRA storage time limitation for land disposal restricted waste. The treatment and/or disposal requirements are stated on a cumulative basis as shown in Milestone M-19-00 below.

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Description/Justification (cont.)

This new strategy will be consistent with the site treatment planning approach prescribed by the Federal Facilities Compliance Act and with offsite generator Site Treatment Plans approved prior to October 6, 1995.

Revised Milestones

Delete existing Milestones M-19-00 and M-19-01 as follows:

M-19-00	Complete WRAP Module II Construction and Initiate Operations	9/30/1999
	The WRAP Module II will include waste treatment capabilities to minimize land disposal of Low-Level Radioactive Waste and Radioactive Mixed Waste. The September 1999 completion date of WRAP Module II is critical to achieving compliance for the management of wastes that are prohibited from land disposal and extended storage. WRAP Module 2 will provide for treatment of secondary solid waste resulting from treated effluent disposal systems.	
M-19-01	Complete WRAP Module II Construction	9/30/1998

Add revised Milestones M-19-00 and M-19-01 as follows:

M-19-00	Complete treatment/and or direct disposal of at least 1,644 cubic meters of Contact Handled Low Level Mixed Waste already in storage as of October 1, 1995 as well as newly generated Hanford Site low level mixed waste.	September 2002
	Cumulative treatment and/or direct disposal rates will be at least 246 cubic meters by the end of FY 2000, 822 cubic meters by the end of FY 2001, and 1,644 cubic meters by the end of FY 2002. These treatment/disposal rates are contingent upon Ecology approval of the variance from treatment standards for formic acid per M-19-02 below.	
	For the purpose of these M-19 series milestones, direct disposal of low-level mixed waste via use of the waivers and variances described below, will be considered equivalent to treatment.	
M-19-01	Initiate Treatment of Contact Handled Low Level Mixed Wastes	September 1999
	Treatment of Contact Handled Low Level Mixed Waste will begin on or before September 30, 1999.	

Additional Target Dates and Interim Milestones are established as follows:

M-19-01-T01	Complete the determination of the level of NEPA documentation that will be required for commercial treatment contractor(s).	May 1996
M-19-01-T02	Award a commercial contract for stabilization of Contact Handled Low Level Mixed Waste.	July 1996
M-19-01-T03	Complete all NEPA requirements related to the commercial contract for stabilization of Contact Handled Low Level Mixed Waste.	September 1997

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Description/Justification (cont.)

M-19-02	Obtain Ecology decision regarding acceptability of a treatment variance for 183H Basin formic acid waste.	September 1996
M-19-02A	Submit petition to Ecology for variance from treatment standards for formic acid.	April 1996

This treatment variance for trace amounts of formic acid is required for both commercial stabilizaton treatment of 183H sludge and crystalline solids, and direct disposal of 183H solidified liquids. The variance was also required and planned for the WRAP 2A project. If the treatment variance is not granted, the 183H waste stream will require thermal treatment prior to stabilization and/or disposal.

M-19-03	Complete sampling and analysis to determine if Backlog Soils meet LDR treatment standards and/or MTCA risk based concentrations.	December 1996

If additional sampling and analysis demonstrates that backlog soils meet MTCA risk based concentrations, they will be disposed of in the non-regulated LLW landfill. If the soils fail MTCA risk based concentrations, but meet LDR treatment standards, they will be disposed in the RMW landfill. Otherwise, stabilization using the commercial contract will be required before disposing of the soils.

M-19-04	Obtain Ecology decision on the acceptability of the existing solidification treatment of 183H Solidified Liquids as LDR treatment.	December 1996
M-19-04A	Submit justification for accepting existing solidification treatment of 183H Solidified Liquids to Ecology.	July 1996

Ongoing sampling and analysis of 183H Solidified Liquids indicates that the existing grouted waste form meets applicable RCRA stabilization treatment standards and all TCLP requirements. Additional sampling and analysis will be utilized to determine if the waste stream meets applicable standards for direct disposal in the RMW landfill.