

Change Number M-24-00-01A	Federal Facility Agreement and Consent Order Change Control Form <small>Do not use blue ink. Type or print using black ink.</small>	Date June 12, 2000
Originated By: J. Hedges, Ecology		Phone (509) 736-3016 0053368
Class of Change <input type="checkbox"/> I - Signatories <input checked="" type="checkbox"/> II - Executive Manager <input type="checkbox"/> III - Project Manager		
Change Title Establish calendar year 2000 RCRA well installation interim milestones (under Tri-Party Agreement Major Milestone M-24-00L), and initial well installation interim milestones for the period January 1, 2001 through April 30, 2001 (under Tri-Party Agreement Major Milestone M-24-00M).		
Description/Justification of Change Introduction: Regulatory requirements applicable to the generation, transport, storage, treatment, and/or disposal of hazardous and mixed wastes are established by the <i>Resource Conservation and Recovery Act (RCRA)</i> , as amended. The Hanford Facility RCRA Permit was issued by the Washington State Department of Ecology (Ecology) and the United States Environmental Protection Agency (EPA) in August 1994. Ecology and EPA designated the Hanford Site as a single RCRA facility with over 60 individual liquid and solid waste treatment, storage and disposal (TSD) units. The Tri-Party Agreement recognized that all of the TSD units cannot be permitted simultaneously and set up a schedule for submitting unit-specific Part B RCRA/dangerous waste permit applications and closure plans to Ecology and EPA.		
Impact of Change Modifies regulatory requirements governing groundwater monitoring at Hanford site hazardous waste facilities.		
Affected Documents Hanford Federal Facility Agreement and Consent Order Action Plan – Appendix D and Hanford Site planning documents (e.g., USDOE and USDOE Contractor Baseline Change Control documents, Multi-Year Work Plans, Project Management Plans, and the Hanford Site Integrated Priority List (IPL)).		
Approvals W. Wassenaar 6-26-00 <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved DOE Date N/A _____ <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved EPA Date Muhlstein 6/14/00 <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved Ecology Date		Page 1 of 3

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Twenty-four TSD units are monitored under RCRA to determine if they are impacting groundwater. The TSD units, located in various parts of the Hanford Site, include:

100 AREA	200 EAST AREA	200 WEST AREA	300 AREA
(1) 1301-N LWDF	(5) 216-A-29 Ditch	(15) 216-S-10 Pond & Ditch	(23) 316-5 Process Trenches
(2) 1324-N/NA LWDF	(6) 216-B-63 Trench	(16) 216-U-12 Crib	
(3) 1325-N LWDF	(7) 216-B-3 Pond	(17) WMA S-SX	
(4) 183-H Solar Evaporation Basins	(8) LERF	(18) WMA T	
	(9) 216-A-10 Crib ^(a)	(19) WMA TX-TY	<u>600 Area</u>
	(9) 216-A-36-B Crib ^(a)	(20) WMA U	(24) NRDWL
	(9) 216-A-37-1 Crib ^(a)	(21) LLWMA 3	
	(10) WMA A-AX	(22) LLWMA 4	
	(11) WMA B-BX-BY		
	(12) WMA C		
	(13) LLWMA 1		
	(14) LLWMA 2		

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- (a) Combined into one RCRA Monitoring Unit.
 LERF = Liquid effluent-retention facility.
 WMA = Waste management area.
 LLWMA = Low-level waste management area.
 LWDF = Liquid waste-disposal facility.
 NRDWL = Nonradioactive dangerous waste landfill.

RCRA groundwater monitoring requirements for TSD units fall under one of two categories: interim status or final status. A permitted or closed RCRA TSD unit requires final status groundwater monitoring as specified in 40 CFR 264. Non-permitted RCRA units require interim status groundwater monitoring as specified in 40 CFR 265. Ecology was authorized by the EPA to implement its dangerous waste program in lieu of the EPA's. Ecology's interim status TSD requirements, established in WAC 173-303-400, invoke 40 CFR 265 governing RCRA groundwater monitoring activities. RCRA final status TSD facilities follow WAC 173-303-645, which specifies the groundwater monitoring requirements.

Both interim and final status groundwater monitoring are conducted under one of three possible phases: 1) indicator parameter (interim status)/detection (final status), 2) assessment (interim status)/compliance (final status), and 3) corrective action (interim or final status). Initially, a detection-level program is developed to determine and monitor the impact of facility operations on the groundwater. If the detection monitoring results indicate a statistical increase in the concentrations of key indicator parameters or dangerous waste constituents in the groundwater, then an assessment (interim status) or compliance (final status) phase of monitoring and investigation is initiated. If the source of the contaminants is determined to be the TSD unit, and those concentrations exceed maximum contaminant levels as defined in the monitoring program plan or permit, the Ecology may require corrective action to reduce the contaminant hazards to the public and environment.

The apparent narrow shape of contaminant plumes flowing from the tank farms, the potential geologic control on the lateral dispersion of the plumes and the changing groundwater conditions at Hanford have required that monitoring systems throughout the site be upgraded. Changes to the groundwater flow regime have been most pronounced in the 200 East and West Areas, due primarily to the dissipation of large groundwater mounds. These areas also contain the single-shell tank farms, which have impacted the groundwater with mixed wastes and/or mixed waste constituents and will continue to impact groundwater for the foreseeable future. Due to the risk to human health and the environment posed by releases from the 200 West Area tank farms, Ecology has focused its attention for Calendar Year (CY) 2000 monitoring well installation on those facilities. Therefore, the majority of the identified CY 2000 monitoring well locations are sited along the perimeters of the 200 West SST WMAs. When Ecology has determined that the monitoring wells comprising the indicator parameter monitoring systems will be able to detect groundwater plumes emanating from the tank farms, the primary focus of well construction will switch from interim status indicator parameter monitoring to assessment monitoring, and the delineation of plumes downgradient of these facilities.

The following CY 2000 RCRA well locations are in support of Tri-Party Agreement Major Milestone M-24-00, "Install RCRA groundwater monitoring wells at the rate of up to 50 per year" after 1991 "as specified by agreed interim milestones." These agreed upon locations are based on RCRA permitting and indicator parameter and assessment monitoring requirements. The justification for well construction is as follows: (1) improve the detection capability of the monitoring systems by decreasing the spacing between monitoring wells at facility perimeters; (2) replace dry groundwater monitoring wells; (3) install monitoring wells at new locations as a response to changes in flow directions; and (4) install wells for the purpose of defining groundwater plumes downgradient of TSD units.

In April 2000, USDOE and Ecology agreed on the installation of fifteen (15) RCRA groundwater monitoring wells under Tri-Party Agreement Major Milestone M-24-00L. Due to the prolonged negotiations prior to the agreement and in spite of available funding, USDOE could not contractually meet negotiated well installation commitment in CY 2000. Ecology agreed to extend the completion date from December 31, 2000 to April 30, 2001. This extension was part of the M-24-00L dispute resolution settlement and was intended to apply only to those wells required to satisfy Tri-Party Agreement Major Milestone M-24-00L (i.e., RCRA groundwater monitoring wells installed during CY 2000). However, this extension did not administratively adhere to the Tri-Party Agreement Major Milestone M-24-00 which is based on a calendar year schedule. Both parties have agreed that ten (10) RCRA groundwater monitoring wells will be installed by December 31, 2000 under Tri-Party Agreement Major Milestone M-24-00L (interim milestones M-24-46, M-24-47, M-24-48). In addition, both parties have agreed that five (5) RCRA groundwater monitoring wells will be installed January 1, 2001 through April 30, 2001 under Tri-Party Agreement Major Milestone M-24-00M (interim milestones M-24-49, M-24-50). Both parties also agreed to issue additional Tri-Party Agreement interim milestones under Tri-Party Agreement Major Milestone M-24-00M for the RCRA groundwater monitoring wells to be installed May 1, 2001 to December 31, 2001. This agreement assumes USDOE will meet fiscal year (FY) 2000 (October 1, 1999 to September 30, 2000) funding and CY 2000 (January 1, 2000 to December 31, 2000) RCRA groundwater well installation obligations.

M-24-00L Interim Milestones established on approval of this Agreement modification:

M-24-46	Install two (2) additional wells at SST WMA S-SX	Dec 2000
M-24-47	Install four (4) additional wells at SST WMA T	Dec 2000
M-24-48	Install four (4) additional wells at SST WMA TX-TY	Dec 2000

M-24-00M Interim Milestones established on approval of this Agreement modification:*

M-24-49	Install four (4) additional wells at SST WMA S-SX	April 2001
M-24-50	Install one (1) additional well at SST WMA TX-TY	April 2001

*In approving this Agreement modification the Parties recognize that additional RCRA groundwater well installations will be required during the remainder of CY 2001 (May through December). Workshops to identify the number and specific location of these (additional) M-24-00M monitoring wells, and to develop a process for the timely identification of wells to be installed in the outyears will be completed by December 2000. During these workshops, efforts will focus on defining a long-term planning basis for improving monitoring capabilities along the perimeters of the SST WMAs and for establishing the wells needed for groundwater assessment purposes. The circumstances that drive the design of the groundwater monitoring network have changed since the Tri-Party Agreement Major Milestone M-24-00 was emplaced. The issues of a declining water table, changing groundwater flowpaths and distinguishing contaminant sources at the SST WMAs have complicated decisions on the number and placement of monitoring wells. Therefore, during a series of workshops, USDOE and Ecology will draft an Agreement in Principle (AIP) which establishes a process for Ecology and USDOE to review and evaluate technical data quality objectives and establish outyear Tri-Party Agreement milestones for RCRA monitoring wells. This process will frame the remaining milestones and will focus on early joint prioritization, planning and schedule efforts to integrate the technical, regulatory, and fiscal issues into a mutually agreed-to path forward.