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Change Number	Federal Facility Agreement and Consent Order Change Control Form	Date
M-45-95-01	Do not use blue ink. Type or print using black ink.	May 11, 1995

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Class of Change

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

Change Title: New Interim Milestones M-45-08, M-45-09 and Completion of M-45-07B

Description/Justification of Change

A new interim milestone series (M-45-08) is established for single-shell tank leak mitigation during retrieval sluicing operations. The M-45-08 interim milestone is the follow-up activity to the M-45-07B interim milestone through which the parties have agreed that the application of large scale subsurface barriers is not warranted due to poor cost/benefit. Consequently this modification results in the completion and closure of open interim milestones in the M-45-07 series.

The TWRS baseline system technology for retrieving waste from Hanford Single Shell tanks includes sluicing as a retrieval technology. The SSTs have exceeded their original design life and their containment integrity is unknown.

(continued)

Impact of Change

Addition of new M-45-08 and M-45-09 interim milestones, and closing of the M-45-07 interim milestone series. Remaining M-45 milestones are not affected by this change.

Affected Documents

Hanford Federal Facility Agreement and Consent Order Action Plan, Appendix D.

Approvals

DOE	5-15-95 Date	V Approved	___ Disapproved
EPA	5/16/95 Date	V Approved	___ Disapproved
Ecology	5-16-95 Date	V Approved	___ Disapproved

Description/Justification of Change (continued)

Of the 149 SSTs, 67 have been declared assumed leakers, while 107 have been interim stabilized to minimize future leakage. Sluicing SSTs will therefore incur risk of significant waste leakage to the environment. The M-45-08 interim milestone series provides for mitigating the risk of SST leakage during sluicing operations and identification of actions necessary to comply with hazardous waste laws.

The following are the new interim milestones and target dates:

M-45-08: Establish full scale capability for mitigation of waste tank leakage during retrieval sluicing operations. June, 2003.

M-45-08-T01: Provide preliminary assessment report for projected SST leakage. Such assessment to project expected environmental contamination and groundwater health risk using existing waste data. October, 1995.

M-45-08-T02: Establish the criteria through stakeholder participation and Ecology approval for:(1) determining allowable leakage volumes, and (2) acceptable leak monitoring/detection and mitigation measures necessary to permit sluicing operations.

Consistent with authorities granted by EPA to the state under its delegated hazardous waste management program, Ecology will have final authority in determining acceptable criteria for this target activity. April, 1997.

M-45-08A: Complete system design and operating strategy for tank leak monitoring and mitigation for systems to be used in conjunction with initial retrieval systems for SSTs. December, 2000.

M-45-08B: Complete demonstration and installation of leak monitoring and mitigation systems for initial SST retrieval. June, 2003.

M-45-09: Submit annual progress reports on the development of waste tank leak monitoring/detection and mitigation activities in support of M-45-08 (commencing September 1996).

Reports will provide a description of work accomplished under M-45-08, technologies, applications, cost, schedule, and technical data. Reports will also evaluate demonstrations performed by DOE and private industry for applicability to SST retrieval and provide recommendations for further testing for use in retrieval operations. September, 1996 (annually thereafter to 2003)

Description/Justification of Change (continued)

The new target date to establish leak mitigation performance criteria is commensurate with interim milestone M-45-04A, Complete Conceptual Design for the Initial SST Retrieval Systems (April 1997). The new interim milestone for completing the design of leak mitigation systems is commensurate with target milestone M-45-04-T02, Complete Design for the Initial SST Retrieval Systems (December 2000). The new interim milestone to demonstrate and install leak monitoring systems is commensurate with the target milestone M-45-04-T03, Complete Construction for the Initial SST Retrieval Systems (June 2003).

Milestone M-45-07, Complete Evaluation and Demonstration Testing of Small Scale Sub-surface Barriers (September 1997), provides opportunity to evaluate and demonstrate subsurface barriers as a measure to minimize environmental impact of SST leakage during retrieval sluicing. Milestone M-45-07B requires a decision by Ecology, EPA and DOE whether to proceed with a sub-surface barrier demonstration. This decision is supported by WHC-SD-WM-ES-300, Rev 1, Feasibility Study of Tank Leakage Mitigation Using Sub-surface Barriers, prepared in accordance with Milestone M-45-07A. Ecology, EPA and DOE have agreed that the study shows current applications of sub-surface barriers, based on the assumptions used in the study, would provide minimal reduction in environmental damage and human health risk, while increasing cost significantly, and decreasing worker safety.

However, Ecology, EPA and DOE recognize that provisions for leak mitigation to minimize environmental impact is appropriate for evaluation and demonstration. Continued investigation of technologies to mitigate tank leaks is pursued under the new Milestones M-45-08 and M-45-09, Establish Monitoring, Assessment and Mitigation Actions in Response to Tank Leakage during Retrieval Sluicing Operations (June 2003).

Ecology, EPA and DOE therefore agree that Milestone M-45-07B is complete and that the decision is to not proceed with sub-surface barrier demonstration testing. In accordance with the M-45-07B milestone, this decision results in the closure of the M-45-07 milestone and associated open interim milestones and target dates in the M-45-07 series.

In deleting the remaining M-45-07 milestone series the three parties recognize that demonstrations may be performed at Hanford or at other sites. Demonstrations performed at Hanford ensures that technologies will perform under Hanford-specific conditions. The three parties agree that the technology demonstrations assessed under M-45-09 and intended for support of M-45-08, that occur at sites other than Hanford, will be considered for use at Hanford.

The three parties agree that the decision not to proceed with a sub-surface barrier demonstration at Hanford will not be used as grounds for dismissing potential technologies, and that the assessment reports under M-45-09 will include a discussion of how the test demonstration conditions vary or coincide with Hanford site conditions, and what affect any variance has on the applicability of test results to mitigation of leaks during retrieval of SST wastes.