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Change Number M-15-94-04	Federal Facility Agreement and Consent Order Change Control Form Do not use blue ink. Type or print using black ink.	Date May 1, 1995												
Originator Ecology, EPA and DOE negotiation team members		Phone												
Class of Change <input checked="" type="checkbox"/> I - Signatories <input type="checkbox"/> II - Project Manager <input type="checkbox"/> III - Unit Manager														
Change Title 100-N Area Pilot Project														
Description/Justification of Change <u>Justification of Change:</u> <p>This change request has been developed pursuant to Amendment Four of the <u>Hanford Federal Facility Agreement and Consent Order</u> (Tri-Party Agreement), dated January 25, 1994. Included within Amendment Four was recognition by the parties that Hanford facility deactivation, decontamination and decommissioning will result in both regulated and nonregulated activities. In order to ensure consistent, effective, and nonduplicative cleanup, actions taken under Washington State Department of Ecology (Ecology), United States Department of Energy (USDOE) and United States Environmental Protection Agency (EPA) authorities will need to be implemented in a coordinated fashion.</p> <p>In light of this recognition USDOE, EPA, and Ecology have agreed to utilize USDOE's 100-N Area as a pilot project with the objective of ensuring coordinated cleanup efforts. The parties expect that "lessons learned" from the 100-N Area Pilot Project will aid them as other Hanford facilities proceed through cleanup.</p> <p>See attached Description/Justification of Change continued on Page 2.</p>														
Impact of Change <p>Signature of this change request will establish near term expectations for management and cleanup activities at Hanford's 100-N Area.</p> <p>See attached continuation sheet.</p>														
Affected Documents <p>Hanford Federal Facility Agreement and Consent Order, Appendix D. Additional reports and submittals required by this change.</p>														
Approvals <table border="0"> <tr> <td> <i>John D. Wagoner</i> Date </td> <td> 5/1/95 </td> <td> <input checked="" type="checkbox"/> Approved </td> <td> <input type="checkbox"/> Disapproved </td> </tr> <tr> <td> <i>Cheryl Clarke</i> EPA Date </td> <td> 5/8/95 </td> <td> <input checked="" type="checkbox"/> Approved </td> <td> <input type="checkbox"/> Disapproved </td> </tr> <tr> <td> <i>Mary Kauling</i> Ecology Date </td> <td> 5/9/95 </td> <td> <input checked="" type="checkbox"/> Approved </td> <td> <input type="checkbox"/> Disapproved </td> </tr> </table>		<i>John D. Wagoner</i> Date	5/1/95	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	<i>Cheryl Clarke</i> EPA Date	5/8/95	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	<i>Mary Kauling</i> Ecology Date	5/9/95	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	
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Description/Justification of Change (continued)

Justification of Change (continued):

This change request, and the 100-N Area Pilot Project, are intended to ensure that actions are taken which adequately reduce current and potential near term impacts to human health and the environment from 100-N Area facilities, discharges, etc. Actions taken under this change request will be consistent with Action Plan sections 6.3 and 7.5, and address all hazardous substances including radioactive constituents. Addressing all such substances during closure and/or remediation of Hazardous Waste Facility Treatment, Storage and/or Disposal (TSD) and RCRA Past Practice (RPP) units will avoid the need to perform additional work at these units later under CERCLA. Priority 100-N Area Pilot Project activities will include N Reactor Facilities deactivation; abatement of "skyshine" from 1301-N and 1325-N cribs; abatement of contaminant discharges from N-Springs; and closure of N-Springs source terms (i.e., 1301-N and 1325-N cribs). 1324-N/NA crib closures and lower priority RCRA past practice site remediation will be delayed until priority activities begin to be completed (maintaining overall level of effort).

This change request includes those actions presently deemed necessary to address near term environmental and human health related concerns, and is intended to carry 100-N Area through early cleanup and the deactivation process. More detailed 100-N Area cleanup and decontamination and decommissioning (D&D) requirements will be developed through change request (milestone) revision as D&D, closure, and past practice site remediation processes progress. The Parties agree to provide affected tribes, key stakeholders and the public notice, copies of this change request, and access to the N Reactor Deactivation Program Plan. Comments based on their review may result in change request amendment(s).

Approval of this change request constitutes deletion of Tri-Party Agreement milestones M-20-31 (1301-N and 1325-N closure plans) and M-20-35 (1324-N and 1324-NA closure plans).

Description of Change:

1. 100-N AREA DECONTAMINATION AND DECOMMISSIONING:

MILESTONE	DESCRIPTION	DATE
M-16-01	Complete 100-N Area Decontamination and Decommissioning.	To be determined
M-16-01A	Submit necessary 100-N Area Decontamination and Decommissioning (D&D) National Environmental Policy Act (NEPA) documentation for public review.	06/30/97
M-16-01B	Complete negotiation of 100-N Area D&D work schedules.	Six months after Environmental Impact Statement Record of Decision (or equivalent)

Description/Justification of Change (continued)

2. PILOT PROJECT PLAN:

MILESTONE	DESCRIPTION	DATE
M-15-12D	Submit 100-N Area Pilot Project Plan for EPA and Ecology concurrence.	03/16/95
	Priority 100-N Area Pilot Project activities will include N Reactor facilities deactivation; abatement of "skyshine" from 1301-N and 1325-N cribs; abatement of contaminant discharges from N-Springs; and closure of N-Springs source terms (i.e., 1301-N and 1325-N cribs).	

3. 100-N AREA DEACTIVATION:

MILESTONE	DESCRIPTION	DATE
M-16-01E	Complete N Reactor/100-N Area Deactivation pursuant to the work scope identified in the <u>N Reactor Deactivation Program Plan</u> , Revision 4, WHC-SP-0615, December 1993.	09/30/97
	Note: The three parties will review progress, issues and critical path activities semi-annually to assure progress towards 100-N Area Deactivation by September 1997. Critical path activities will be defined in the N-Reactor Deactivation Program Plan [Revision 5, November 1994]. Overall schedule and scope is defined in revision 4; critical path activities and new information will be defined in revision 5.	
M-16-01E-T1	Complete removal and disposal of 118-N-1/1303-N Silo fuel spacers.	09/30/95
M-16-01E-T2	Initiate pretreatment and removal of all N Reactor fuel storage basin waters pursuant to the N Reactor Deactivation Program Plan.	09/30/96
M-16-01E-T3	Complete characterization of N Reactor fuel storage basin sludge and debris.	04/30/97

Description/Justification of Change (continued)

IV. 100-N AREA PAST PRACTICE SITE/RCRA TSD ACTIVITIES:

MILESTONE	DESCRIPTION	DATE
M-16-12	Issue letter report and schedules to Ecology and EPA, documenting alternative proposed to abate 1301-N and 1325-N crib "skyshine". Any alternative interim abatement measure selected will be compatible with future final closure actions.	10/31/94
M-16-12A	Complete implementation of skyshine abatement action selected under M-16-12.	09/30/95
M-13-87	Submit 100-NR-01 and 100-NR-02 RFI/CMS Operable Unit Work Plans. Work Plans will be submitted to Ecology and/or EPA for approval in accordance with their respective authorities. Work Plans will incorporate regulatory comments of December 20, 1993 as resolved March 21, 1994. The Work plans will include project specific work duration schedules and a summary of N Reactor facilities deactivation activities (citing WHC-SP-0615, REV 4, December, 1993). General descriptions of 1301-N and 1325-N (high priority sites) and 1324-N/NA (lower priority) will be included (thorough descriptions will be provided in limited field investigation reports). Data previously collected at these operable units will be included in the work plans.	10/31/94
M-13-87-T01	Submit for Ecology and EPA review and concurrence, data quality objectives developed through the "Streamlined Approach for Environmental Restoration (SAFER)" process for contaminant investigations of the 1301-N/1325-N cribs. Existing characterization data for 1324-N/NA will be provided to Ecology and EPA to obtain concurrence on data sufficiency in this time period.	06/30/94
M-13-87-T02	Submit for Ecology and/or EPA review and approval in accordance with their respective authorities, the descriptions of work for contaminant investigations of the 1301-N/1325-N (and potentially 1324-N/NA) cribs.	08/31/94
M-15-12A	Submit Limited Field Investigation Report for new work completed under 100-NR-01 and 100-NR-02 RFI/CMS Work Plans.	07/31/96

Description/Justification of Change (continued)

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| M-15-12A-T1 | Submit to Ecology and EPA for review the 100-NR-1 and 100-NR-02 Limited Field Investigation Reports for previously approved field investigations. | 08/31/94 |
| M-15-12B | Submit Closure Plan/Corrective Measures Study (CMS) for 1301-N/1325-N to Ecology and/or EPA for approval in accordance with their respective authorities. The CMS will include focused feasibility study (FFS) information, closure and postclosure information, proposed Interim Response Measure (IRM) RCRA permit modifications and work schedules for the 1301-N/1325-N facilities. | 03/31/97 |
| | In an effort to achieve coordinated management of 100-N Area activities, closure and postclosure requirements of Washington State's Hazardous Waste Management Act (Chapter 70.105 RCW and its implementing regulations) applicable to the 1301-N and 1325-N cribs will be met and addressed within the 1301-N/1325-N CMS. Ecology CMS approval will constitute 1301-N/1325-N closure plan approval. | |
| M-15-12C | Submit 100-NR-1 and 100-NR-2 CMS to Ecology and/or EPA for approval in accordance with their respective authorities. The 100-NR-1 and 100-NR-2 CMS will address 1324-N/NA TSD existing groundwater contamination, and lower priority past practice sites. The CMS will include FFS information, closure and postclosure information, proposed IRM RCRA permit modifications and work schedules for all sites. | 11/30/96 |
| | In an effort to achieve coordinated management of 100-N Area activities, closure and postclosure requirements of Washington State's Hazardous Waste Management Act (Chapter 70.105 RCW and its implementing regulations) applicable to the 1324-N/NA crib will be met and addressed within the 100-NR-1 and 100-NR-2 CMS. Ecology CMS approval will constitute 1324-N/NA closure plan approval. | |

Description/Justification of Change (continued)

4. N-SPRINGS EXPEDITED RESPONSE ACTION:

Synopsis:

A pump-and-treat facility will be installed and operated initially to: (i) evaluate commercially available treatment options for Strontium-90, (ii) provide data necessary to set demonstrable Strontium-90 groundwater cleanup standards, and (iii) reduce Strontium-90 contamination flux from the groundwater to the river. If Ecology and/or EPA in accordance with their respective authorities (and after consultation with USDOE) determine that initial pump and treat operations are successful (see M-16-12-E), USDOE will upgrade and optimize the system.

A hydraulic barrier will be installed for the purpose of reducing the flux of Strontium-90 contamination at N-Springs to the Columbia River. This will be accomplished by the creation of a stagnant groundwater pool within the contaminant plume and through increased travel time for any contamination not captured in this zone. In response to public comments the barrier will be removable. In response to a post Engineering Evaluation/Cost Assessment (EE/CA) independent technical review committee report, the barrier selected will be a (approximately 3000') sealed-hinge metal sheet pile structure. The barrier is expected to enhance upgradient pump-and-treat operations.

a) Hydraulic Barrier

MILESTONE	DESCRIPTION	DATE
² * M-16-12B	Complete construction/installation of sheet pile wall, monitoring wells at the termini and matched (center of wall) sample capable piezometers, pursuant to Ecology (N Springs ERA) Action Memorandum dated September 23, 1994.	06/30/95 (To Be Re-Evaluated 02/28/96)
M-16-12B-T1	Release Request for Proposal.	09/30/94
M-16-12B-T2	Begin Site Preparation, e.g., preparation of shoreline road.	12/31/94
M-16-12B-T3	Initiate sheet pile wall construction.	02/28/95

* Refer to introduction of *Comments and Responses to the Tentative Agreement on Environmental Restoration Refocusing*, USDOE letter from S. H. Wisness to EPA and Ecology dated 2/8/95, "Request to change N-Springs Action Memorandum", and letter from Ecology/EPA to USDOE dated 3/23/95, "USDOE request to change N-Springs Action Memorandum".

^{1,2} During the public comment period, test sections of the N-Springs Barrier wall were installed. These Test sections could not be installed in accordance with the requirements of the N Area Pilot Project or the N-Springs Action Memorandum issued by Ecology and EPA (dated September 23, 1994). Further evaluation of the feasibility of installing a modified N-Springs Barrier wall will be conducted, including efforts under Milestone M-16-12E in the pilot project (evaluating the effectiveness of pump and treat for Strontium-90 at N-Springs).

Description/Justification of Change (continued)

b) Pump-and-Treat

MILESTONE	DESCRIPTION	DATE
M-16-12C	Submit letter report to Ecology and EPA on: (i) The results of pumping tests at three existing wells to evaluate Strontium-90 concentration response to pumping (effluents will be managed in accordance with the Hanford Purgewater Strategy); and (ii) necessary documentation justifying barrier placement and location of extraction wells and discharge point(s).	10/31/94
M-16-12D	Complete construction/installation and initiate operations of N-Springs pump and treat facility pursuant to Ecology (N-Springs Expedited Response Action (ERA)) Action Memorandum dated September 23, 1994.	09/30/95
M-16-12D-T1	Initiate preparation of pump and treat system extraction well network.	01/31/95
M-16-12E	Submit letter report to Ecology and EPA that evaluates pump-and-treat facility effectiveness and efficiency. Recommendations for continuation and system upgrades will be included.	02/28/96

The initial facility letter report and its accompanying recommendations, will be submitted to Ecology and/or EPA for approval in accordance with their respective authorities. This approval shall be consistent with provisions within Ecology's (N-Springs ERA) Action Memorandum dated September 23, 1994, as amended, reference letter from Ecology/EPA dated 3/23/95, "USDOE request to change N-Springs Action Memorandum".