9513335.0814

START

ENGINEERING CHANGE NOTICE

Page 1 of 5

1. ECN No 618169

Proj. ECN

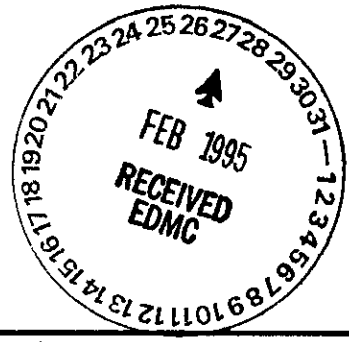
2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.		4. Date
Supplemental [XX] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	M. J. Hartman, Groundwater Management, H6-06, 376-9924		15 November 1994
	5. Project Title/No./Work Order No. 100-D Ponds RCRA Groundwater Monitoring	6. Bldg./Sys./Fac. No. 100-D Ponds	7. Impact Level EQ
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-EN-AP-048, rev. 0	9. Related ECN No(s). 144250, 150131	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[] Yes (fill out Blk. 11b) [XX] No (NA Blks. 11b, 11c, 11d)	N/A	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

(a) Revise constituent list:
Replace section 3.3.10 and Table 3-3 with the attached.

(b) Replace Section 3.5 with the attached; Delete Appendix C.



13a. Justification (mark one)							
Criteria Change	[]	Design Improvement	[X]	Environmental	[]		
As-Found	[]	Facilitate Const.	[]	Const. Error/Omission	[]	Design Error/Omission	[]

13b. Justification Details

(a) The revised constituent list meets regulatory requirements. Phenols, arsenic, and selenium have not been detected in groundwater during the first year of monitoring, and are not constituents of concern at the site. (b) The sampling and analysis plan for all Hanford RCRA groundwater monitoring is described by WHC (1993), which is updated annually. The new section 3.5 references those documents. Appendix C is no longer needed.

14. Distribution (include name, MSIN, and no. of copies)

B.A. Williams
M.J. Hartman
W.R. Thackaberry
R.R. Thompson

See dist. sheet

RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE FEB 15 1995
Sta. 21
20

A-7900-013-2 (06/92) GEF095

ENGINEERING CHANGE NOTICE

9513335.0815 Page 2 of 5

1. ECN (use no. from pg. 1) 618169

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[XX] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog Engineer M.J. Hartman Mary J Hartman	19 Dec 94	PE	
Cog. Mgr. J.S. Schmid J.S. Schmid	12/28/94	QA	
QA W.R. Thackaberry W.R. Thackaberry	12.19.94	Safety	
Safety		Design	
Security		Environ.	
Environ. D.J. Carrell D.J. Carrell for D.J. Carrell	12/16/94	Other	
Projects/Programs			
Tank Waste Remediation System			
Facilities Operations		DEPARTMENT OF ENERGY	
Restoration & Remediation		Signature or Letter No.	
Operations & Support Services			
IRM		ADDITIONAL	
Other RCA coor B.A. WILLIAMS	12/15/94		

3.3.10 Monitoring Parameters

Constituents and sampling frequencies required by 40 CFR 265.92 are listed in Table 3-3. A site-specific constituent list is shown in Table 3-4. In addition to those constituents required by 40 CFR 265.92, the site-specific list includes additional constituents that are determined by a given analytical method (e.g., the method to analyze for barium also determines 25 other metals). Tritium is included as a conservative tracer because it is present elsewhere in the 100-D groundwater. Samples from the 100-D Ponds monitoring wells will not be analyzed for pesticides and herbicides because these constituents were not discharged to the facility.

The wells will be sampled semiannually. Analytical methods are listed in WHC (1993).

Table 3.3. Groundwater Analyses for the 100-D Ponds.

INDICATOR PARAMETERS
- conductivity (field and lab)
- pH (field and lab)
- TOC
- TOX

RADIONUCLIDES
- gross alpha
- gross beta
- tritium

ANIONS BY ION CHROMATOGRAPHY
- bromide
- chloride
- fluoride
- nitrate
- nitrite
- phosphate
- sulfate

METALS BY INDUCTIVELY COUPLED PLASMA (filtered samples)
- aluminum
- antimony
- barium
- beryllium
- cadmium
- calcium
- chromium
- cobalt
- copper
- iron
- magnesium
- manganese
- nickel
- potassium
- silver
- sodium
- tin
- vanadium
- zinc

OTHER
- mercury (filtered) (annually)
- alkalinity
- phenols (annually)
- turbidity

3.5 SAMPLING AND ANALYSIS

New wells were sampled quarterly for 1 yr and semiannually thereafter. The depth to water is measured before samples are collected. The wells are purged and samples are collected after at least three casing volumes have been removed and when specific conductance, temperature, and pH have stabilized. In the case of wells that pump dry because of very low-permeability materials, the sample will be collected after recharge.

Sample analysis, preservation, and chain-of-custody procedures in accordance with 40 CFR 265.92 are discussed by WHC (1993), which is updated annually. The quality assurance/control protocol is also given by WHC (1993). The purpose of the quality control activities is to determine and document that samples were carefully collected and transferred to an analytical laboratory, that the quality of the analytical results being produced by the laboratory are defensible, and to see that corrective actions will be taken as necessary.

Under the indicator-evaluation monitoring program, groundwater surface elevation data must be evaluated at least annually to determine if the monitoring wells are appropriately located. If the evaluation indicates that existing wells are no longer adequately located, the groundwater monitoring system will be modified to bring it into compliance with 40 CFR 265.91(a).

Added Reference:

WHC, 1993, *Quality Assurance Project Plan for RCRA Groundwater Monitoring Activities*, WHC-SD-EN-QAPP-001, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

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