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START

ENGINEERING CHANGE NOTICE

Page 1 of 6

1. ECN No 618188

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	3a. USQ Required?	4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	J.W. Lindberg, Groundwater Management OM623, H6-06, 376-5005	[] Yes [X] No	Sept. 20, 1995
	5. Project Title/No./Work Order No. RCRA Monitoring, R4044	6. Bldg./Sys./Fac. No. 216-S-10 Pond and Ditch	7. Approval Designator QE
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-EN-AP-018, Rev. 0A	9. Related ECN No(s). 618168	10. Related PO No. NA

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) [X] No (NA Blks. 11b, 11c, 11d)	NA	NA Cog. Engineer Signature & Date	NA Cog. Engineer Signature & Date

12. Description of Change

See Attachment A

OCT 1995
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EDMC

13a. Justification (mark one)

Criteria Change	[]	Design Improvement	[]	Environmental	[X]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

13b. Justification Details

The original groundwater monitoring plan (WHC-SD-EN-AP-018, Rev. 0) needed to be revised because Westinghouse Hanford Company resumed work that had previously been accomplished by Pacific Northwest Laboratory. The text needed to be changed to reflect different procedures and plans, current analyte lists, and sampling schedules.

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

See distribution sheet

RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE SEP 22 1995
Sta. 21

A-7900-013-2 (11/94) GEF095

A-7900-013-1

9513383.1844

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 618188

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[X] No	Savings	[X] $TBD	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	[]	Tickler File	[]
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

20. Approvals

Signature		Date	Signature	Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER	
Cog. Eng. J. W. Lindberg	J W Lindberg	9-20-95	PE	
Cog. Mgr. J. S. Schmid	J S Schmid	9-20-95	QA	
QA W. R. Thackaberry	W R Thackaberry	9-20-95	Safety	
Safety			Design	
Environ. W. E. Toebe	W E Toebe	9-21-95	Environ.	
Other			Other	
			DEPARTMENT OF ENERGY	
			Signature or a Control Number that tracks the Approval Signature	
			ADDITIONAL	

Attachment A

The following paragraph on the "Monitoring Network" will replace three sections in the original groundwater monitoring plan WHC-SD-EN-AP-018, Rev. 0. The three sections include:

Monitoring Network, p. 54
Background (Upgradient) Wells, p. 54, 55
Detection (Downgradient) Wells, p. 55, 56

Monitoring Network

The S-10 Facility groundwater monitoring well network during the indicator parameters evaluation program will consist of nine wells. Their locations are shown in Figure 3.4. Three, older non-RCRA-compliant wells will be used solely for measuring water levels quarterly (299-W26-3, 299-W26-6, and 699-32-77). Six regulatory-compliant wells will be used for groundwater sampling, two upgradient and four downgradient. The two upgradient wells are 299-W26-7 and 299-W26-8. The four downgradient wells are 299-W26-9, 299-W26-10, 299-W26-12, and 299-W27-2. Well 299-W27-2 monitors the base of the unconfined aquifer, and the other five sampling wells monitor the upper portion of the unconfined aquifer. Because well 299-W27-2 monitors the base of the unconfined aquifer, the results are not statistically comparable with upgradient wells which monitor a different portion of the aquifer. Well 299-W26-11, which monitors perched water, is now dry and is no longer a part of the monitoring network. Water level measurements will be collected from the wells used for sampling on a quarterly basis at the same time the three non-RCRA-compliant wells are measured.

The following phrase will be added to the end of the second sentence of the second paragraph in the section entitled "Monitoring Parameters" in ECN 618168.

...semi-annually (Table 3.2), in conformance with 40 CFR 265, Subpart F.

The complete sentence will now read as follows:

If these comparisons show that groundwater is not significantly affected by the facility, groundwater samples collected subsequently in the indicator parameters evaluation program will be analyzed for Groundwater Quality Parameters on an annual basis, Groundwater Contamination Indicator Parameters semi-annually, and some additional site specific and other useful parameters semi-annually (Table 3.2), in conformance with 40 CFR 265, Subpart F.

The last sentence of the same paragraph in ECN 618168 which reads:

Site specific and other useful parameters may change from time to time based on the results of sampling.

shall be deleted.

The following table will replace Table 3.2 in WHC-SD-EN-AP-018, Rev. 0.

Table 3.2 Groundwater Sampling Parameters

Groundwater Quality Parameters (Annual Sampling)
Chloride
Iron
Manganese
Phenols
Sodium
Sulfate
Groundwater Contamination Indicator Parameters (Semi-Annual Sampling)
pH
Specific Conductance
Total Organic Carbon
Total Organic Halogen
Site Specific and Other Useful Parameters (Semi-Annual Sampling)
Gross Alpha
Gross Beta
Alkalinity
Turbidity

The second paragraph of the section entitled "Sampling and Analysis" of WHC-SD-EN-AP-018, Rev. 0, p. 66, shall be deleted, and the following paragraphs added at the end of the section.

All field sampling activities will be recorded in the proper field logbook as specified in EII 1.5 and subsequent revisions (WHC 1988). Electric submersible or Hydrostar[1] pumps will continue to be used in existing monitoring wells for purging and sampling. Before sampling each well, the static water level will be measured and recorded as specified in EII 10.2 (WHC 1988). Based on the measured water level and well construction details, the volume of water of water in the well will be calculated and documented in the well sampling form or field notebook. As specified in EII 5.8, each well will be purged before sampling until the approved criteria are met (WHC 1988). Purged water will be managed according to EII 10.3 (WHC 1988). In the situations where the well pumps dry because of very slow recharge, the sample will be collected after recharged. Samples will be collected and field preserved as specified in EII 5.8. Sampling equipment decontamination will follow procedures specified in EII 5.4 (WHC 1988).

Sample chain-of-custody, sample packaging, and shipping required by 40 CFR 265, Subpart F, are discussed in EII 5.1 and 5.11 (WHC 1988). The purpose of the QC activities is to determine and document that samples were carefully collected and transferred to an analytical laboratory, the quality of the analytical results being produced by the laboratory are defensible, and that corrective actions will be taken as necessary.

The laboratory approved for the groundwater monitoring program will operate under the requirements of current laboratory statement of work and will use standard laboratory procedures as listed in SW-846 (EPA 1986) or an alternate equivalent. Alternate procedures, when used, will meet the guidelines of SW-846, Chapter 1.0. Analytical methods are quality control for the RCRA groundwater monitoring activities are described in WHC (1993).

The third sentence, second paragraph on page 67 of WHC-SD-EN-AP-018, Rev. 0, under "STATISTICAL ANALYSIS OF GROUNDWATER MONITORING DATA" shall be deleted. The sentence to be deleted reads: "The samples will be analyzed by United States Testing Company, Inc. (UST)."

Appendix E - "Sampling and Analysis Plan" of WHC-SD-EN-AP-018, Rev. 0, shall be deleted.

The following references will be added to the list of References in WHC-SD-EN-AP-018, Rev. 0:

WHC, 1988, *Environmental Investigations and Site Characterization Manual*, WHC-CM-7-7, Westinghouse Hanford Company, Richland, Washington.

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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[1] Hydrostar is a registered trademark of Instrumentation Northwest, Inc.

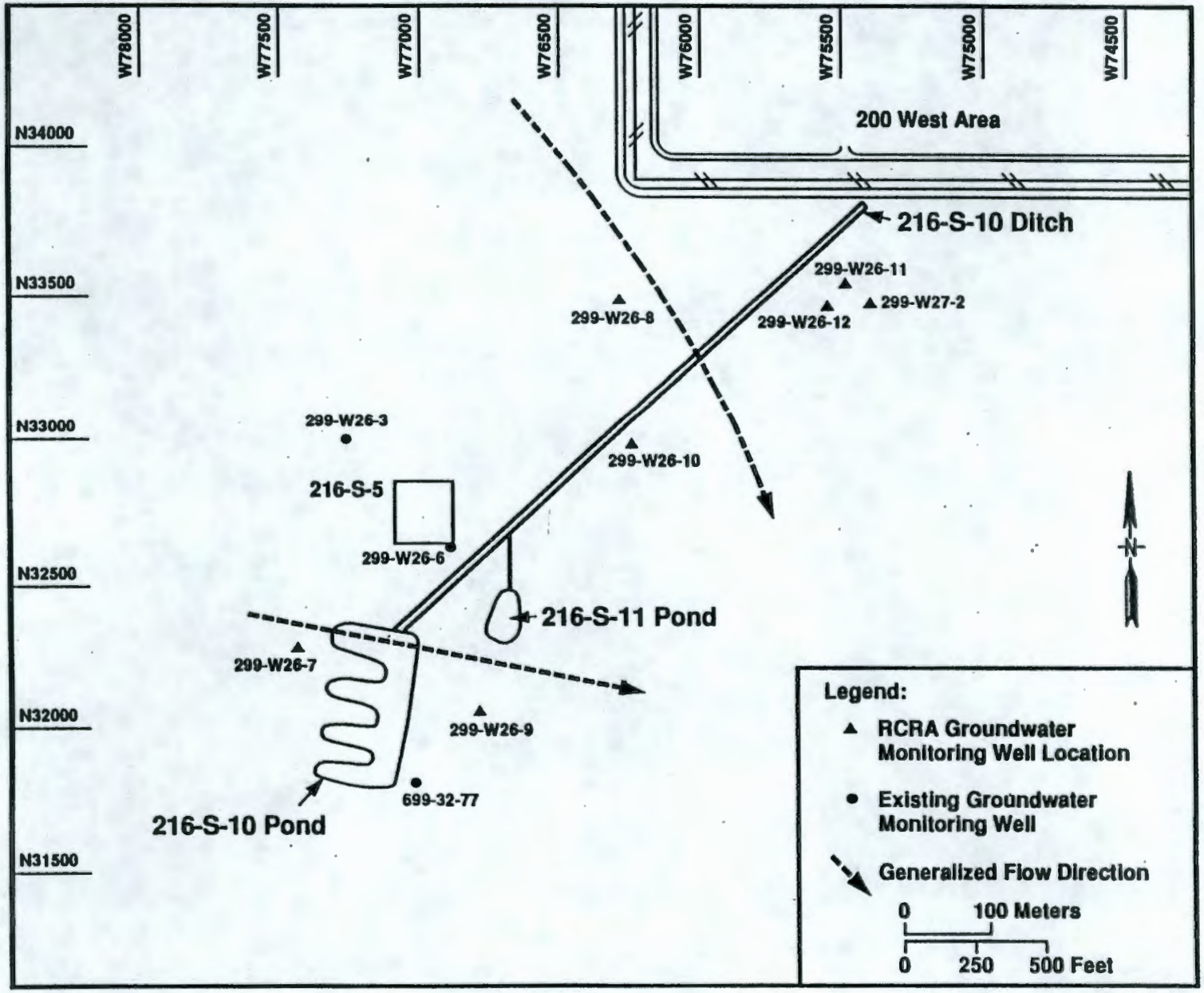

Figure 3.4 Monitoring Well Locations for the 216-S-10 Facility.

9513383.1853

ECN No. 618188

Page 6 of 6

9513383.1854

DISTRIBUTION SHEET

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Engineering Change Notice to Change RCRA Groundwater Monitoring Plan for the 216-S-10 Facility (WHC-SD-EN-AP-018, Rev. 0)		ECN No. 618188

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
OFFSITE					
C. D. Palomares Texas State Water Commission Industrial and Hazardous Waste Division Permit Section P. O. Box 13087 Austin, TX 78711		X			
Washington State Department of Ecology					
M. A. Selby 7601 W. Clearwater, Suite 102 Kennewick, WA 99336		X			
Stan Leja 7601 W. Clearwater, Suite 102 Kennewick, WA 99336		X			

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Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
ONSITE					
U.S. Department of Energy Richland Operations Office					
D. M. Wanek	H4-83	X			
Westinghouse Hanford Company					
B. P. Atencio	H6-25	X			
D. B. Barnett	H6-06	X			
D. M. Day	H6-06	X			
D. W. Fritz	H6-22	X			
D. G. Horton	H6-06	X			
J. W. Lindberg	H6-06	X			
A. K. McDowell	R1-51	X			
A. L. Prignano	H6-23	X			
S. M. Price	H6-23	X			
F. A. Ruck III	H6-23	X			
M. D. Sweeney	H6-06	X			
J. S. Schmid	H6-06	X			
W. R. Thackaberry	H6-32	X			
W. E. Toebe	H6-22	X			
B. A. Williams	H6-06	X			
Central Files	A3-88	X (1)			
EPIC	H6-08	X (2)			
Bechtel Hanford Incorporated					
K. R. Fecht	H4-85	X			
L. C. Swanson	H6-03	X			
J. Rugg	H4-86				
J. R. Laws	H6-03				
R. K. Tranbarger	H6-04				