

ENGINEERING CHANGE NOTICE

Page 1 of 24

1. ECN 119503

Proj.
ECN

2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Supersedure <input type="checkbox"/> Discovery <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. A.F. Crane/Effluent Process Engineering/R3-45/3-4079 5. Project Title/No./Work Order No. Project W-049H 200 Area Treated Effluent Disposal Facility 8. Document Number Affected (include rev. and sheet no.) WHC-SD-W049H-ER-003 Rev 0, p. 91,92,95, 96	4. Date 4-28-92 7. Impact Level 3QS 10. Related PO No.	
11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input checked="" type="checkbox"/> No (NA Blks. 11b, 11c, 11d)	11b. Work Package Doc. No. na	11c. Complete Installation Work na Cog. Engineer Signature & Date	11d. Complete Restoration (Temp. ECN only) na Cog. Engineer Signature & Date

12. Description of Change

This ECN provides page changes to the 200 Area Treated Effluent Disposal Facility (Project W-049H) Wastewater Engineering Report to delete replacement of portions of the PUREX Chemical Sewer line within the BAT/AKART evaluation.

1. Page K-92, Section K.7.6: Delete "Also, subject to finalizing a scope of work, the plant is committed to replacing some portion(s) of existing vitrified-clay sewer piping to eliminate potential leaks in the soil through hairline cracks."
2. Page K-95, Section K.8.0: Replace "The primary tasks remaining to be accomplished at PUREX to implement BAT/AKART for PUREX Plant Chemical Sewer are completion to the catch pan and roof structure at the unloading spot 1 and replacement or repair of certain sections of existing, vitrified-clay sewer pipe (primarily under roads and railroad tracks) which contain hairline cracks." with "The primary task remaining to be accomplished at PUREX to implement BAT/AKART for PUREX Chemical Sewer is completion of the catch pan and roof structure at the tank car unloading spot 1."

13a. Justification (mark one) Criteria Change <input type="checkbox"/> Design Improvement <input checked="" type="checkbox"/> Environmental <input type="checkbox"/> As-Found <input type="checkbox"/> Facilitate Const. <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/> Design Error/Omission <input type="checkbox"/>	13b. Justification Details The change is required to delete work scope from the BAT/AKART evaluation for the PUREX Chemical Sewer (Appendix K). See attached letter.
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14. Distribution (include name, MSIN, and no. of copies)

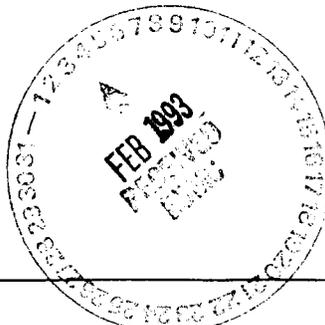
see attached

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BY WHC

DATE **JUL 08 1992**

Att. 4



ENGINEERING CHANGE NOTICE

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1. ECN (use no. from pg. 1)
119503

15. Design Verification Required

- Yes
 No

16. Cost Impact

ENGINEERING

Additional \$ _____
Savings \$ _____

CONSTRUCTION

Additional \$ _____
Savings \$ _____

17. Schedule Impact (days)

Improvement _____
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 <input type="checkbox"/> Functional Design Criteria <input type="checkbox"/> Operating Specification <input type="checkbox"/> Criticality Specification <input type="checkbox"/> Conceptual Design Report <input type="checkbox"/> Equipment Spec <input type="checkbox"/> Const. Spec <input type="checkbox"/> Procurement Spec <input type="checkbox"/> Vendor Information <input type="checkbox"/> OM Manual <input type="checkbox"/> FSAR/SAR <input type="checkbox"/> Safety Equipment List <input type="checkbox"/> Radiation Work Permit <input type="checkbox"/> Environmental Impact Statement <input type="checkbox"/> Environmental Report <input type="checkbox"/> Environmental Permit <input type="checkbox"/>	Seismic/Stress Analysis <input type="checkbox"/> Stress/Design Report <input type="checkbox"/> Interface Control Drawing <input type="checkbox"/> Calibration Procedure <input type="checkbox"/> Installation Procedure <input type="checkbox"/> Maintenance Procedure <input type="checkbox"/> Engineering Procedure <input type="checkbox"/> Operating Instruction <input type="checkbox"/> Operating Procedure <input type="checkbox"/> Operational Safety Requirement <input type="checkbox"/> IEPD Drawing <input type="checkbox"/> Cell Arrangement Drawing <input type="checkbox"/> Essential Material Specification <input type="checkbox"/> Fac. Proc. Samp. Schedule <input type="checkbox"/> Inspection Plan <input type="checkbox"/> Inventory Adjustment Request <input type="checkbox"/>	Tank Calibration Manual <input type="checkbox"/> Health Physics Procedure <input type="checkbox"/> Spares Multiple Unit Listing <input type="checkbox"/> Test Procedures/Specification <input type="checkbox"/> Component Index <input type="checkbox"/> ASME Coded Item <input type="checkbox"/> Human Factor Consideration <input type="checkbox"/> Computer Software <input type="checkbox"/> Electric Circuit Schedule <input type="checkbox"/> ICRS Procedure <input type="checkbox"/> Process Control Manual/Plan <input type="checkbox"/> Process Flow Chart <input type="checkbox"/> Purchase Requisition <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/>
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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
<u>OPERATIONS AND ENGINEERING</u>		<u>ARCHITECT-ENGINEER</u>	
Cog. Proj. Engr. AF Crane	4/23/92	PE _____	_____
Cog. Proj. Engr. Mgr DL Flyckt	4/23/92	QA _____	_____
QA MC Arntzen	4/23/92	Safety _____	_____
Safety OM Jaka	4/23/92	Design _____	_____
Security _____	_____	Other _____	_____
Proj. Prog./Dept. Mgr. DE Kelley	4/29/92	_____	_____
Def. React. Div. _____	_____	_____	_____
Chem. Proc. Div. _____	_____	_____	_____
Def. Wst. Mgmt. Div. _____	_____	_____	_____
Adv. React. Dev. Div. _____	_____	<u>DEPARTMENT OF ENERGY</u>	
Proj. Dept. _____	_____	JM Hennig	5/28/92
Environ. Div. _____	_____	_____	_____
IRM Dept. _____	_____	<u>ADDITIONAL</u>	
Facility Rep. (Ops) _____	_____	RF Guercia	5/14/92
Other JE Thrasher	4/30/92	LS Mamiya	5/14/92
RC Roal	5/7/92	JE Rasmussen	5/28/92
_____	_____	EE Clark	5/26/92
_____	_____	D.A. Brown	5/20/92



Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

APR 17 1992

Mr. David B. Jansen, P.E.
Hanford Project Manager
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Jansen:

NOTIFICATION OF CANCELLATION OF WHC-SD-C124-FDC-001, Rev.1, PUREX CHEMICAL SEWER LINE REPLACEMENT (PROJECT C-124)

Reference: DOE Letter, J.E. Mecca, DOE-RL to D.B. Jansen, Ecology, Meeting Minutes of Mr. Gary Anderson's Visit to Hanford on 3/16/92 and 3/17/92, dated March 31, 1992

The C-124 Project has been reevaluated and the U. S. Department of Energy, Richland Field Office (DOE-RL) has determined that the project is not necessary. This decision is based on: 1) the high quality of the liquid effluent (see Enclosure, Table 3-4, from the PUREX Plant Chemical Sewer Stream - Specific Report, WHC-EP-0342, Addendum 2) discharged to the Chemical Sewer Line (CSL), and 2) the excellent condition of the vitrified clay pipe (as evidenced by a video camera survey).

On Tuesday 3/17/92, Mr. Gary Anderson of your staff visited the PUREX Plant. During this visit, topics of discussion included the PUREX CSL, associated sampling systems, and the C-124 Project (see Reference 1). As a result of these discussions, it was determined that the existing 240 Engineering Report (WHC-SD-W049H-003, Rev. 0.), Appendix K (Section K.7.6 and 8.0) should be revised to remove any reference to a C-124 type project, to avoid confusion and provide consistency and clarity. This will be accomplished by submitting page changes to the State of Washington Department of Ecology, under separate correspondence.

If you have any questions, please contact me on 509-376-7471 or Dennis A. Brown, on 509-376-7660.

Sincerely,

J. E. Mecca
J.E. Mecca, Director
Operations Division

OPD:DAB

Enclosure

- cc: G. Anderson, Ecology, w/encl.
- P.T. Day, EPA, w/encl.
- R.E. Lerch, WHC
- J.C. Midgett, WHC



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70 D&B
ECN 119503
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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

April 30, 1992

Mr. James E. Mecca
United States Department of Energy
P.O. Box 550
Richland, WA 99352

Re: Notification of Cancellation of WHC-SD-C124-FDC-001, Rev. 1, Purex
Chemical Sewer Line Replacement (Project C-124)

Dear Mr. Mecca:

Mr. David B. Jansen has directed me to reply to your letter concerning Project C-124.

I did inspect this sewer line in the field and viewed the video tape of this line. In neither field inspection nor video tape did I see any damage or failure of this line sufficient to allow significant leakage.

It is further agreed that routine discharges through this line are probably non-hazardous and will be definitely so when the current Project W-049H is complete. This is an increase in the factor of safety associated with the discharge in this line, but not crucial to acceptance of this cancellation.

If you have any questions about this letter, please call me at (206) 438-7558.

Sincerely,

Gary Anderson, P.E.
Environmental Engineer 3
Nuclear and Mixed Waste Management

GA:jw

- cc: Dan Duncan, EPA
- J.M.Hennig, DOE
- R.M.Hiegel, DOE
- David Jansen, Ecology
- Toby Michelena, Ecology
- Dave Nylander, Ecology
- Rick Oldham, WHC
- R.D. Izatt, DOE
- Doug Sherwood, EPA
- T. Veneziano, WHC

SUPPORTING DOCUMENT

1. Total Pages 1564

2. Title 200 AREA TREATED EFFLUENT DISPOSAL FACILITY PROJECT W-049H WASTEWATER ENGINEERING REPORT

3. Number

WHC-SD-W049H-ER-003

4. Rev No.

0-A

5. Key Words

wastewater, BAT/AKART evaluation, treated effluent disposal facility

APPROVED FOR PUBLIC RELEASE *AMB*

6. Author

Name: A. F. Crane

A. F. Crane / MHC / DLF
Signature

Organization/Charge Code 87170/A2W16

7. Abstract

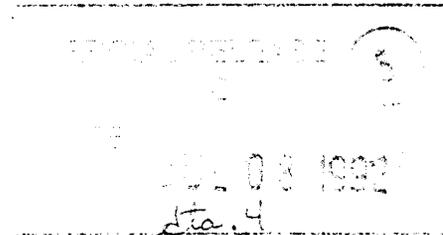
This report was developed to support the submittals required by Chapter 173-240, Washington Administrative Code to describe a plan by the U.S. Department of Energy (DOE) to provide new wastewater management facilities in the 200 Areas at the Hanford Site. Revision 0-A reflects the changes required to delete work scope from the BAT/AKART evaluation for the PUREX Chemical Sewer mentioned in Appendix K, per instructions from the State of Washington Department of Ecology and DOE.

8. ~~PURPOSE AND USE OF DOCUMENT - This document was prepared for use within the U.S. Department of Energy and its contractors. It is to be used only to perform, direct, or integrate work under U.S. Department of Energy contracts. This document is not approved for public release until reviewed.~~

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Legends removed per WHC legal 7/7/92
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10. RELEASE STAMP



9. Impact Level 3QS

K.7.3 PERSONNEL TRAINING REQUIREMENTS

The catch pan and roof structure at the car unloading spot are passive facilities. Operators already are familiar with existing sampling and analysis procedures required to verify waste in the existing sump before discharging it to the PUREX Plant Chemical Sewer. No specific, additional training is anticipated before implementing this source control.

Transferring any batches of contaminated waste from the 216-A-42 Retention Basin to one of the PUREX concentrators for reprocessing will require a limited amount of additional training. Standard procedures are already in place for operating the concentrators. However, the waste storage facilities and the concentrators have limited capacities for reprocessing diverted waste. Thus, the operators will be trained to exercise judgment. To minimize the volume of any diverted material to avoid consuming concentrator capacity in reprocessing uncontaminated waste.

K.7.4 RELATIONSHIP TO EXISTING TREATMENT FACILITIES

A number of existing treatment facilities or source controls within the PUREX Plant are related to the PUREX Plant Chemical Sewer effluent produced by Alternative 2. As described previously, administrative controls and equipment are in place to minimize the potential for accidental chemical spills and overflows, to recover liquids that might be leaked or spilled in any of several locations, to divert certain sources from the PUREX Plant Chemical Sewer into alternate disposal paths during periods when process upsets resulting from operations or loss of measuring and/or monitoring instruments could lead to contamination, and to retain certain, individual sources for sampling and verification analyses before discharge.

Chief among the existing treatment facilities are: catch tanks and tank level alarms installed at the aqueous makeup unit that minimize the potential for accidentally overflowing bulk chemical storage tanks, catch any liquid that does overflow, and facilitate recovery of overflow liquids (It should be

reemphasized that during standby mode these chemicals have been removed from the aqueous makeup unit as described in Section K.2.1.2.17.); and mixing tanks, pH monitors, and acid and base injection facilities used to neutralize solutions produced during periodic regeneration of demineralizer ion-exchange resin beds as described in Section K.2.1.2.30.

K.7.5 TREATMENT SYSTEM UNCERTAINTIES

The catch pan and roof structure are based on proven techniques for containing liquid spills and minimizing dilution or dispersion by rainwater. No uncertainties have been identified.

Similarly, reprocessing any contaminated wastes in the PUREX concentrators will use existing equipment and operating procedures familiar to PUREX Plant personnel. Therefore, no uncertainties have been identified for this activity.

K.7.6 COMMITTED FUTURE PLANS

The PUREX Plant is committed to completing the catch pan and roof structure at the tank car unloading spot 1 as designed. As discussed in Section K.2.1.2, future operating plans for the PUREX facility are uncertain and are subject to the environmental impact statement process and the resulting record of decision. Therefore, there are no other committed plans for the PUREX facility.

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K.8.0 PROJECT IMPLEMENTATION

Milestone M-17-00A of the Tri-Party Agreement between DOE, Ecology, and the U.S. Environmental Protection Agency requires complete liquid effluent treatment and/or facility upgrades for all Phase I streams by June 1995. It further requires that each of the Phase I effluent streams have BAT/AKART applied. Specific to the PUREX Plant Chemical Sewer, Milestone M-17-03 of the Tri-Party Agreement stipulated that PUREX demineralizer regeneration neutralization system upgrades be completed by September 1989. Although demineralizer regeneration is not anticipated during standby mode, demineralizer regeneration effluent is one source of the PUREX Plant Chemical Sewer. Consequently, both of these milestones directly affect the disposition of the PUREX Plant Chemical Sewer.

Many modifications already have been implemented in the PUREX Plant to satisfy the objectives of the Tri-Party Agreement and/or to implement the policy of waste minimization. Other modifications will be implemented in applying the BAT/AKART as selected and described in this appendix. As noted earlier, in certain cases, those modifications were made possible by the current standby status in the PUREX Plant.

Variances in pH were primarily responsible for designation of the PUREX Plant Chemical Sewer as a Phase I stream under the terms of the Tri-Party Agreement. As discussed in Section K.2.1.2.30, completion of Project B-669 has satisfied Milestone M-17-03 and eliminated a major contributor to poor stream quality. The primary task remaining to be accomplished at PUREX to implement BAT/AKART for the PUREX Plant Chemical Sewer is completion of the catch pan and roof structure at the tank car unloading spot 1. Other tasks, funded by Project W-049H and scheduled by managers of that project, include construction of the Project W-049H Treated Effluent Disposal Facility, and the construction of piping to transport the PUREX Plant Chemical Sewer to the Treated Effluent Disposal Facility. A bar chart schedule for these activities is shown in Figure K.8-1.

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2-28-92

PUREX Plant Chemical Sewer

K-96

Complete for all Types of Release

Purpose <input type="checkbox"/> Speech or Presentation <input type="checkbox"/> Full Paper (Check only one suffix) <input type="checkbox"/> Summary <input type="checkbox"/> Abstract <input type="checkbox"/> Visual Aid <input type="checkbox"/> Speakers Bureau <input type="checkbox"/> Poster Session <input type="checkbox"/> Videotape		<input type="checkbox"/> Reference <input checked="" type="checkbox"/> Technical Report <input type="checkbox"/> Thesis or Dissertation <input type="checkbox"/> Manual <input type="checkbox"/> Brochure/Flier <input type="checkbox"/> Software/Database <input type="checkbox"/> Controlled Document <input type="checkbox"/> Other	ID Number (include revision, volume, etc.) WHC-SD-W049H-ER-003 Rev 0-A List attachments. Date Release Required <p style="text-align: center;">06-19-92</p>
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Title 200 Area Treated Effluent Disposal Facility Wastewater (Project W-049H) Engineering Report	Unclassified Category UC-	Impact Level 3QS
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New or novel (patentable) subject matter? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If "Yes", has disclosure been submitted by WHC or other company? <input type="checkbox"/> No <input type="checkbox"/> Yes (Disclosure No(s).)	Information received from others in confidence, such as proprietary data, trade secrets, and/or inventions? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Identify)
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Copyrights? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If "Yes", has written permission been granted? <input type="checkbox"/> No <input type="checkbox"/> Yes (Attach Permission)	Trademarks? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Identify)
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Complete for Speech or Presentation

Title of Conference or Meeting na	Group or Society Sponsoring na
Date(s) of Conference or Meeting	City/State
Will proceedings be published? <input type="checkbox"/> Yes <input type="checkbox"/> No	Will material be handed out? <input type="checkbox"/> Yes <input type="checkbox"/> No

Title of Journal

CHECKLIST FOR SIGNATORIES

Review Required per WHC-CM-3-4	Yes	No	Reviewer - Signature	Indicates Approval	Date
			Name (printed)	Signature	
Classification/Unclassified Controlled Nuclear Information	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Patent - General Counsel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>SW BERGIN</u>	<u>[Signature]</u>	<u>6/23/92</u>
Legal - General Counsel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>B. D. Williamson</u>	<u>[Signature]</u>	<u>6/23/92</u>
Applied Technology/Export Controlled Information or International Program	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
WHC Program/Project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>J. E. Thrasher</u>	<u>[Signature]</u>	<u>6/14/92</u>
Communications	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
RL Program/Project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>K. Williams</u>	<u>[Signature]</u>	<u>7/2/92</u>
Publication Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>M. R. Turner</u>	<u>[Signature]</u>	<u>6/30/92</u>
Other Program/Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

Information conforms to all applicable requirements. The above information is certified to be correct.

References Available to Intended Audience <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Transmit to DOE-HQ/Office of Scientific and Technical Information <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Author/Requestor (Printed/Signature) <u>A. F. Crane</u> <u>[Signature]</u> Date <u>6-15-92</u>	INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP Stamp is required before release. Release is contingent upon resolution of mandatory comments. 
Intended Audience <input type="checkbox"/> Internal <input type="checkbox"/> Sponsor <input checked="" type="checkbox"/> External Responsible Manager (Printed/Signature) <u>D. L. Flyckt</u> <u>[Signature]</u> Date	Date Cancelled _____ Date Disapproved _____