

# START

0034407

## ENGINEERING CHANGE NOTICE

Page 1 of 4

1. ECN **198884**

Proj. ECN

2. ECN Category (mark one) Supplemental <input checked="" type="checkbox"/> Direct Revision <input type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. <b>C. M. Loll, 7C420, R1-51, 3-5039</b>		4. Date <b>June 28, 1993</b>
	5. Project Title/No./Work Order No. <b>241-A Tank Farm Cooling Water Sampling and Analysis Plan</b>	6. Bldg./Sys./Fac. No. <b>N/A</b>	7. Impact Level <b>3Q</b>
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) <b>WHC-SD-WM-EV-077, Rev. 2</b>	9. Related ECN No(s). <b>169264</b>	10. Related PO No. <b>N/A</b>

11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input checked="" type="checkbox"/> No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. <b>N/A</b>	11c. Modification Work Complete <b>N/A</b>	11d. Restored to Original Condition (Temp. or Standby ECN only) <b>N/A</b>
_____ Cog. Engineer Signature & Date		_____ Cog. Engineer Signature & Date	

12. Description of Change  
 Section G.1, The following analytical method changes were made:

EPA Method 6010 was added for the analysis of tin and lead.  
 EPA Method 365.4 was added for the analysis of phosphorus.  
 EPA Method 335.2 was added for the analysis of total cyanide.  
 EPA Method 350.3 was added for the analysis of ammonia.  
 The analytical methods for bromide, chloride, and fluoride were changed to EPA Method 300.0  
 Analysis for Tin (Sn113) was added to the list of required analyses.

13a. Justification (mark one)	Criteria Change <input checked="" type="checkbox"/>	Design Improvement <input 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 addition of analytical methods were made in order to allow more flexibility in choosing laboratories to perform the analyses. *cont 8/30/93*

The change from previously specified methods to method 300.0 for chloride, bromide, and fluoride was made because the original methods which were called out were not available on contract. *cont 8/30/93*

Sn-113 was added because it was supposed to be run in order to check routine sampling on the 241-A Tank Farm cooling water stream.

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



RELEASE STAMP

OFFICIAL RELEASE  
 BY WHC  
 DATE AUG 31 1993  
 55  
 Sta. 4

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# ENGINEERING CHANGE NOTICE

<b>15. Design Verification Required</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>16. Cost Impact</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;">ENGINEERING</td> <td style="width: 50%; text-align: center;">CONSTRUCTION</td> </tr> <tr> <td>Additional Savings <span style="float: right;">N/A</span></td> <td>Additional Savings <span style="float: right;">N/A</span></td> </tr> <tr> <td style="text-align: right;">[ ] \$</td> <td style="text-align: right;">[ ] \$</td> </tr> </table>	ENGINEERING	CONSTRUCTION	Additional Savings <span style="float: right;">N/A</span>	Additional Savings <span style="float: right;">N/A</span>	[ ] \$	[ ] \$	<b>17. Schedule Impact (days)</b> Improvement <span style="float: right;">N/A</span> Delay <span style="float: right;">[ ]</span>
ENGINEERING	CONSTRUCTION							
Additional Savings <span style="float: right;">N/A</span>	Additional Savings <span style="float: right;">N/A</span>							
[ ] \$	[ ] \$							

**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
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**20. Approvals**

Signature	Date	Signature	Date
<b>OPERATIONS AND ENGINEERING</b>			
Cog Engineer * <i>CM Holl/CAM Goll</i>	<u>6/30/93</u>	ARCHITECT-ENGINEER	_____
Cog. Mgr. * <i>R.D. Gustan</i>	<u>6/30/93</u>	PE	_____
QA * <i>MJW am</i>	<u>7/9/93</u>	QA	_____
Safety	_____	Safety	_____
Security	_____	Design	_____
Environ.	_____	Environ.	_____
Projects/Programs * <i>all spec</i>	<u>7-20-93</u>	Other	_____
Tank Waste Remediation System	_____		_____
Facilities Operations	_____	<b>DEPARTMENT OF ENERGY</b>	_____
Restoration & Remediation	_____	Signature or Letter No.	_____
Operations & Support Services	_____		_____
IRM	_____	<b>ADDITIONAL</b>	_____
Other	_____		_____

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## G. SAMPLE HANDLING AND ANALYSIS

### G.1 Liquid Effluent Characterization Samples

Liquid effluent characterization samples will be analyzed for the following:

<u>Analyte List</u>	<u>Method of Analysis</u>
Sulfides	EPA method 9030
Semi-volatile organics (semi-VOA)	EPA method 8270
Volatile organics (VOA)	EPA method 8240
Total organic halides (TOX)	EPA method 9020
Herbicides	EPA method 8150
Organophosphorus Pesticides	EPA method 8140
Polychlorinated biphenyls (PCB) /organochlorine pesticides	EPA method 8080
Inductive coupled plasma metals (ICP)	EPA method 6010
<u>Graphite furnace atomic absorption (AA) metals</u>	
Arsenic	EPA method 7060
Lead	EPA method 7421/6010
Mercury	EPA method 7470 (cold vapor)
Selenium	EPA method 7740
Tin	EPA method 7870/6010
Total cyanide	EPA method 9010/9012/335.2
Hexavalent Chromium	EPA method 7196
Bromide	EPA method 300.0
Chloride	EPA method 300.0
Fluoride	EPA method 300.0
Total oil and grease	EPA method 9070
Total phenols	EPA method 9065/9066/9067
Biological oxygen demand (BOD)	EPA method 405.1
Chemical oxygen demand (COD)	EPA method 410.1, .2, .3, .4
Total organic carbon (TOC)	EPA method 9060
Phosphorus	EPA method 365.2, .3, .4
Nitrogen, nitrate, nitrite	EPA method 353.1, .2, .3
Ammonia	EPA method 350.1, .2, .3
Total dissolved solids (TDS)	EPA method 160.1
Total suspended solids (TSS)	EPA method 160.2
Alkalinity	EPA method 310.1/310.2
pH	EPA method 9040
Conductivity	EPA method 9050
Total alpha/beta	WHC approved laboratory method

Analyte List

Method of Analysis

Radionuclides

WHC approved laboratory method

Plutonium-238, 239, 241  
Americium-241  
Strontium-89, 90  
Cesium-137  
Ruthenium-103  
Ruthenium-Rhodium-106  
Tin-113

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The handling and preparation of samples will comply with the procedures found in the, Environmental Investigations and Site Characterization Manual, WHC-CM-7-7. When an analysis requires that a preservative be added to the sample bottle, the preservative is added in a clean laboratory environment prior to traveling to the sampling site. At the time of sample bottle preparation a chain of custody (COC) form will be initiated and will accompany the sample bottle into the field. A COC form will accompany each liquid effluent characterization sample, which may consist of several containers. The COC will account for each container. The sample bottles are stored in a cooler sealed with tamper evident tape and all custody transfers are noted on the bottle COC form.

Once a liquid effluent characterization sample has been drawn it must be in the physical control or view of the custodian, locked in an area where it can not be tampered with, or prepared for shipping with tamper-proof tape applied. Physical control includes being in the sight of the custodian, being in a room which will signal an alarm when entered, or locked in a cabinet. When more than one person is involved in sampling, one person shall be designated and only that person signs as sampler. This person is the custodian until the samples are transferred to another location or group and shall sign when releasing the samples to the designated receiver.

The preparation of either a single or a group of samples for shipment to a laboratory shall comply with the procedure EII 5.11 "Sample Packaging and Shipping." Samples going off-site for analysis will conform to all federal regulations governing shipment.

The approved laboratory shall designate a sample custodian and a designated alternate responsible for receiving all samples. The sample custodian or his alternate shall sign and date all appropriate receiving documents at the time of receipt and at the same time initiate an internal Chain of Custody form using documented procedures. A continuous chain of custody will be maintained from the time of sampling until final disposition of all samples.

Liquid effluent characterization samples will be collected in commercially available, individually certified, precleaned containers. The certification of the precleaned condition shall accompany the bottle. The necessary containers, sample volumes, and preservatives for the analyses are identified per the QAPP (WHC, 1992).

AUG 31 1993

Date Received  
6/29/93

7/26/93 KMS

# INFORMATION RELEASE REQUEST

Reference:  
WHC-CM-3-4

Complete for all Types of Release

<b>Purpose</b> <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.) JENG198884 ECN - List attachments. SD-WM-EV-077 Rev 1 Date Release Required
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Title 241-A Tank Farm Cooling Water Sampling and Analysis Plan	Unclassified Category UC-	Impact Level 3Q
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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	Group or Society Sponsoring
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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
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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"/>	OGC Memo		2/4/93
Legal - General Counsel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OGC Memo		2/4/93
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"/>	D. R. Speer	<i>[Signature]</i>	2-20-93
Communications	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
RL Program/Project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RL HIGGINS	<i>[Signature]</i>	7/27/93
Publication Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M.K. Oldfield	<i>[Signature]</i>	7-23-93
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	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Transmit to DOE-HQ/Office of Scientific and Technical Information	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Author/Requestor (Printed/Signature)	C. M. Loll <i>[Signature]</i>	Date 6/30/93

Intended Audience	<input type="checkbox"/> Internal <input type="checkbox"/> Sponsor <input checked="" type="checkbox"/> External
Responsible Manager (Printed/Signature)	R. D. Gustavson <i>[Signature]</i>
Date	6/30/93

<b>INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP</b> Stamp is required before release. Release is contingent upon resolution of mandatory comments.	
	
Date Cancelled	Date Disapproved

