



U.S. Department of Energy  
**Office of River Protection**

P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

SEP 23 2011

11-ESQ-241

Mr. John Martell, Manager  
Radioactive Air Emissions Section  
Washington State Department of Health  
309 Bradley Blvd., Suite 201  
Richland, Washington 99352  
(Hanford Mailstop: B1-42)

Dear Mr. Martell:

U.S. DEPARTMENT OF ENERGY (DOE), OFFICE OF RIVER PROTECTION (ORP)  
SUBMITTAL OF CLOSURE REPORTS FOR SIX EMISSION UNITS IN THE HANFORD  
SITE AIR OPERATING PERMIT (AOP), PERMIT NUMBER 00-05-006/LICENSE NUMBER  
FF-01

DOE ORP hereby submits to the Washington State Department of Health, Closure Reports, also known as Reports of Closure, for six Emission Units (listed below) currently in the Hanford Site AOP. These Reports of Closure (Attached) are required pursuant to Washington Administrative Code 246-247-080(6), and document the cessation of radionuclide emitting activities. This information is necessary to facilitate removal of the units from the AOP.

Emission Units reported in Closure Reports:

- P-296-P028-001 (EU ID 54);
- P-296AW-001 (EU ID 150);
- C-106 Sluicing (EU ID 236);
- P-Vadose-002 (EU ID 539);
- P-Vadose-003 (EU ID 541); and
- P-244CR-003 (EU ID 714).

Mr. John Martell  
11-ESQ-241

-2-

SEP 23 2011

If you have any questions, please contact me, or your staff may contact Dennis W. Bowser, Environmental Compliance Division, (509) 373-2566.

Sincerely,



Scott L. Samuelson, Manager  
Office of River Protection

ESQ:DWB

Attachment

cc w/attach:

O. S. Wang, Ecology  
R. H. Anderson, MSA  
J. W. Donnelly, WRPS  
Administrative Record  
Environmental Portal, LMSI  
WRPS Correspondence

cc w/o attach:

J. A. Bates, CHPRC  
J. Cox, CTUIR  
S. Harris, CTUIR  
S. L. Dahl, Ecology  
D. Hendrickson, Ecology  
T. G. Beam, MSA  
G. Bohnee, NPT  
K. Niles, Oregon Energy  
D. E. Jackson, RL  
F. R. Miera, WRPS  
M. G. Peloquin, WRPS  
L. L. Penn, WRPS  
J. A. Voogd, WRPS  
R. Jim, YN

Attachment  
11-ESQ-241  
(79 Pages)

Report of Closure for Emission Units

## REPORT OF CLOSURE FOR EMISSION UNITS:

1. P-296-P028-001 (EU ID 54)
2. P-296AW-001 (EU ID 150)
3. C-106 Sluicing (EU ID 236)
4. P-Vadose-002 (EU ID 539)
5. P-Vadose-003 (EU ID 541)
6. P-244CR-003 (EU ID 714)

## Report of Closure/Permit Revision

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 08/31/2011

**NOC Application Revision**

New NOC Rev Number: \_\_\_\_\_

**Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: See below

**ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Report of closure for P-296P028-001, 296-P-28

Current NOC Application Number: AOP Permit 00-05-006/ License Number FF-01

AEI ID Number (AOP Emission Unit Number(s): P-296P028-001

Current WDOH Approval Letter Number(s): N/A

WDOH NOC ID Number: 54

### DESCRIPTION OF CHANGE

Number of Attachments 1

## Report of Closure for P-296P028-001

### Summary/Introduction

In accordance with Washington Administrative Code 246-247-080(6), this report of closure is being submitted to the State of Washington Department of Health (WDOH) to document cessation of radionuclide emitting activities from P-296P028-001.

The following information is provided in this document:

- Date of closure
- Remaining material
- Assessment of potential continued emissions
- Future plans
- Emissions control and monitoring

#### 1. Date of closure:

The P-296P028-001 exhauster has been inactive and the status is non-operational in the Hanford Site Air Operating Permit (AOP), 00-05-006. In a review of the historical file of the *Radioactive Air Emissions Report for the Hanford Site* (1998 Annual Report), there have been no reported emissions for this exhauster for the last 11 years. This exhauster has been stored in 241-SY Tank Farm in a non-operational status and has been removed from the 241-SY Tank Farm and disposed as waste. The closure date is the submittal date of this closure report.

2. Remaining material:

The P-296P028-001 exhauster, associated ventilation components, and condensate drain lines were placed in a container/burial box, removed from the 241-SY Tank Farm and disposed of as waste as an American Recovery and Reinvestment Act of 2009 activity. There is no remaining material.

3. Assessment of potential continued emissions:

There is no potential for continued emissions as the P-296P028-001 has been removed and disposed of as waste. The flex duct connection attached to the exhaust system was removed and a blind flange installed. The condensate drain line was capped. The seal pot was drained. All removed equipment was placed in a container/burial box. Isolation field work and loading of the P-296P028-001 was performed under Tank Farm Work Instruction 2W-03-00852/M, "241-SY Remove the P-28 Exhauster". There is no potential for future emissions.

4. Future plans:

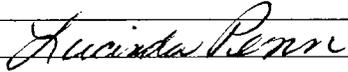
Dispose of exhauster as waste.

5. Emissions control and monitoring:

Emissions control and monitoring is not required for the P-296P028-001 exhauster. The emissions control and monitoring system have been removed.

Based on this report of closure it is requested that emission unit/notice of construction approval P-296P028-001 be removed from the Hanford Site Air Operating Permit (AOP Permit 00-05-006/ License Number FF-01).

**SIGNATURES**

Reviewed by Contractor	Reviewed by RL/ORP	Approved by WDOH
		
Date: 8/31/11	Date:	Date:

**Solid Waste Information and Tracking System  
Container Listing Report**

SWIR310  
06/29/2011 13:12  
Page 1 of 4

for Package ID: **BOE-09-246-01**  
Source Facility:  
Location Facility:  
Shipment #:

Package ID: <b>BOE-09-246-01</b>	Secondary Pkg ID: <b>BOE-09-246-01</b>	Accumulation Date: <b>09/20/2009</b>
Waste Type: <b>D LLW</b>	Phys State Cd: <b>S</b>	Deadline Date: <b>12/18/2009</b>
Sec Waste Type: <b>LLW</b>	UHC Determination: <b>G</b>	Ship Date: <b>10/21/2009</b>
Encasement/HIC#:	UHC's Applicable: <b>D</b>	TSD Receive Date: <b>10/23/2009</b>
Profile / Rev#: <b>2007-WRPS-0003 - 01</b>	NFPA < 93.3C:	TSD Accept Date: <b>10/23/2009</b>
WSRd / Rev #: <b>647 - 04</b>	Storage Category: <b>M</b>	Disposal Date:

Routine Status: **100 Non-Routine / Other**

Container Type / Descr: <b>CM / 17.7*9.7*13.6</b>	Container Empty Tare Wt. (kg): <b>3307.0000</b>
Container Volume (cu. meters): <b>52.9500</b>	Waste Weight (kg): <b>4176.8000</b>
Labpack Flag: <b>N</b>	Container Gross Wt. (kg): <b>7581.8000</b>
Container Contents: <b>241 SY P-28 EXHAUSTER CONSISTING OF LEAD, STEEL, ASBESTOS, ALUMINUM, COPPER, WOOD, RUBBER, CLOTH, PLASTIC, &amp; PAPER</b>	
SWO Comments:	

Generator Information

Generating Company: <b>WRPS WASHINGTON RIVER PROTECTION SOLUTIONS</b>	Generator ID: <b>0002035</b>	Generator Group: <b>TANKFARM</b>
Source Facility: <b>241SY</b>	Generator: <b>TM TURNER</b>	
Generator Comments: <b>SHIPMENT # TF591. ACTUAL SIZE OF BOX: 10' X 11' X 17'. LEAD WILL BE SEGREGATED/REMOVED &amp; THEN TREATED AS MIXED WASTE AT PFNW. REMAINING PORTION WILL BE PROCESSED/MANAGED AS LLW.</b>		

Billing Detail

<u>Charge Code</u>	<u>COA</u>	<u>Company</u>	<u>Group ID</u>	<u>Percent</u>
301550	EF00	WASHINGTON RIVER PROTECTION SOLUTIONS	TANKFARM	100.00
				100.00



Solid Waste Information and Tracking System  
Container Listing Report

for Package ID: BOE-09-246-01

Source Facility:

Location Facility:

Shipment #:

SWIR310

06/29/2011 13:12

Page 3 of 4

Radioactive Package Detail

Waste Category: WC1	Shielding: None	Thermal Power (w/cu.m.): 1.75945E-05
Combustible Flag:	Handling: C	Neutron Dose Rate: .00000E+00
Exceeds ISB Limit: N	RSWIMS Container Cnt: 1	Contact Dose Rate: 3.00000E+00
NRC Class: A	Excluded from DE-Ci:	Tot Pe-Ci: 7.67000E-06
		ICRP 71 DE-Ci: 2.54788E-05

VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date: VOC Hold?: VOC Resample Date:

Current Location Information

Facility ID: OFFSITE	Tier Level:	Loc Beg Coordinates - N:
Trench / Unit:	Tier Position:	W:
Module:	GPS Data Flag:	Loc End Coordinates - N:
		W:

Isotope Information

<u>Isotope Number</u>	<u>Isotope Name</u>	<u>Isotope Activity (Ci)</u>
8	Cs-137	1.93000E-01
26	Am-241	7.67000E-06
80	Sm-151	1.60000E-02

**Solid Waste Information and Tracking System**  
**Container Listing Report**  
 for Package ID: **BOE-09-246-01**  
 Source Facility:  
 Location Facility:  
 Shipment #:

SWIR310  
 06/29/2011 13:12  
 Page 4 of 4

Waste Component Records

<u>Component ID</u>	<u>Component Text</u>	<u>PPM</u>	<u>Weight (kg)</u>	<u>Weight %</u>
7429-90-5	ALUMINUM		52.6277	1.26
7439-92-1	LEAD		55.1338	1.32
7440-50-8	COPPER		91.8896	2.2
GCNASBESTOS	ASBESTOS		229.3063	5.49
GCNCLOTH	CLOTH		13.7834	0.33
GCNMETAL	METAL (NONHAZARDOUS)		3440.8478	82.38
GCNPAPER	PAPER/CARDBOARD		18.3779	0.44
GCNPLASTIC	PLASTIC		80.1946	1.92
GCNRUBBER	RUBBER		45.5271	1.1
GCNWOOD	WOOD		149.1118	3.57
			<u>4176.8000</u>	

Packaging Components

<u>Component Description</u>	<u>Weight (kg)</u>
10 MIL LINER	88.0000
ABSORBENT PAD, POLYPROPYLENE	10.0000
	<u>98.0000</u>

Manifest / Shipping Information

<u>Shipment</u>				<u>RSR</u>	<u>DOT</u>	<u>DOT</u>	<u>REQ</u>	<u>Shipment</u>	<u>Date</u>	<u>Shipment</u>	<u>Manifest</u>	<u>Tran</u>	<u>Tran</u>	<u>Dest</u>	<u>Dest</u>	<u>Receiving</u>	<u>Rtn</u>
<u>Type</u>	<u>Document#</u>	<u>Item</u>	<u>RSR #</u>	<u>Type</u>	<u>Spec</u>	<u>Cat</u>	<u>Num</u>	<u>Scheduled</u>	<u>Shipped</u>	<u>Arrived</u>	<u>Returned</u>	<u>Cmpny</u>	<u>Type</u>	<u>Cmpny</u>	<u>Type</u>	<u>Facility</u>	
MFT	TF591	1		OFF	7AA	UN2915		10/21/09	10/21/09	10/23/09	10/23/09	SAV	TRA	PFNW	TSD		

PermaFix

Northwest, Inc.

2025 Battelle Blvd.  
Richland, WA 99354  
Telephone: (509) 375-5160  
FAX: (509) 375-0613

October 21, 2009

Mandrake Pascual  
Department of Energy  
WA River Protection Solutions  
P.O. Box 0000 MSIN:R1-51  
Richland, WA 99352

33592 - Rel 20  
TF591

Mr. Pascual:

In compliance with the requirements of 10 CFR 20, Appendix G, Section III, C.1, the attached-signed shipping manifest copy is your notice of receipt and acceptance of the mixed hazardous/radioactive waste materials specified on the manifest. Manifest number 000731332GBF (MWA09-170) received on October 21, 2009 has been assigned receipt number of MWR09-174.

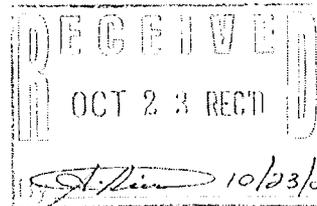
This is an acknowledgement of receipt only. Any discrepancies found during unloading will be processed at a later date.

Thank you for your business.

Sincerely,

  
Dakin Utley  
Technical Projects Lead  
Perma-Fix Northwest

Enclosure(s): UHWM, 540, 541,



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number WK789000887	2. Page 1 of 1	3. Emergency Response Phone 1-800-760-0171		4. Manifest Tracking Number 000791332 GBF				
		5. Generator's Name and Mailing Address US DOE IN CARE OF WASHINGTON RIVER PROTECTION SOLUTIONS PO BOX 850, RICHLAND, WA. 99354 609 372-0713 ALBAF PASCUAL R1-61			Generator's Site Address (if different than mailing address) US DOE IN CARE OF WASHINGTON RIVER PROTECTION SOLUTIONS PO BOX 850, RICHLAND, WA. 99354					
6. Transporter 1 Company Name SAVAGE LOGISTICS LLC		U.S. EPA ID Number WA4000000373								
7. Transporter 2 Company Name NONE		U.S. EPA ID Number N/A								
8. Designated Facility Name and Site Address PLUMMER NORTHWEST 2025 BATTELLE BLVD, RICHLAND, WA 99352		U.S. EPA ID Number WA0000000356				Facility's Phone: (509)375-5150				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		1. WASTE RADIOACTIVE MATERIAL, TYPE A PACKAGING, 7102915; SOLID, MIXTURE; CS-137, AM-241; 7.82 E+03 MBQ; DOE-09-246-01 STEEL BOX; Radioactive YELLOW II; FI 0.7; Flammable Excepted;		1		1	1	1	0005	
		2.								
		3.								
		4.								
14. Special Handling Instructions and Additional Information SEE FOOT -- Additional information on accompanying paperwork -- Exclusive Use Shipment -- Return to Generator if not Delivered -- ERG #: 163										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. OR BEHALF OF DOE-RL										
Generator's/Offeror's Printed/Typed Name RL CLAWSON					Signature <i>[Signature]</i>			Month Day Year 10 21 09		
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____ Transporter signature (for exports only): _____										
17. Transporter Acknowledgment of Receipt of Materials										
Transporter 1 Printed/Typed Name ALICIA HERNANDEZ					Signature <i>[Signature]</i>			Month Day Year 10 21 09		
Transporter 2 Printed/Typed Name					Signature			Month Day Year		
18. Discrepancy										
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection										
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____										
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____										
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1. 1124		2.		3.		4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a										
Printed/Typed Name DORIS R. HILBY					Signature <i>[Signature]</i>			Month Day Year 10 21 09		

## Report of Closure/Permit Revision

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 08/31/2011

**NOC Application Revision**

New NOC Rev Number: \_\_\_\_\_

**Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: See below

**ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Report of closure for P-296AW-001, 296-A-27

Current NOC Application Number: AOP Permit 00-05-006/ License Number FF-01

AEI ID Number (AOP Emission Unit Number(s): P-296AW-001

Current WDOH Approval Letter Number(s): N/A

WDOH NOC ID Number: 150

### DESCRIPTION OF CHANGE

Number of Attachments 1

## Report of Closure for P-296AW-001

### Summary/Introduction

In accordance with Washington Administrative Code 246-247-080(6), this report of closure is being submitted to the State of Washington Department of Health (WDOH) to document cessation of radionuclide emitting activities from P-296AW-001.

The following information is provided in this document:

- Date of closure
- Remaining material
- Assessment of potential continued emissions
- Future plans
- Emissions control and monitoring

1. Date of closure:

The P-296AW-001 exhauster has been removed from service. This exhauster has been dismantled and will be disposed as waste. The closure date is the submittal date of this closure report.

2. Remaining material:

The P-296AW-001 exhauster, associated ventilation components, and condensate drain lines have been placed in a container/burial box and are being disposed of as waste as an American Recovery and Reinvestment Act of 2009 activity. There is no remaining material.

3. Assessment of potential continued emissions:

There is no potential for continued emissions as the P-296AW-001 has been dismantled and is being disposed of as waste. There is no potential for future emissions.

4. Future plans:

Dispose of exhauster as waste.

5. Emissions control and monitoring:

Emissions control and monitoring is not required for the P-296AW-001 exhauster. The emissions control and monitoring system have been removed.

Based on this report of closure it is requested that emission unit/notice of construction approval P-296PAW-001 be removed from the Hanford Site Air Operating Permit (AOP Permit 00-05-006/ License Number FF-01).

**SIGNATURES**

Reviewed by Contractor	Reviewed by RL/ORP	Approved by WDOH
<i>Alicinda Penn</i>		
Date: <i>8/31/11</i>	Date:	Date:

# ENGINEERING CHANGE NOTICE

1a. ECN No.: 10-001692

Page 1 of 12

DM     FM     TM

1b. Project No.: N/A

<b>2. Simple Modification</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>3. Design Inputs</b> - For full ECNs, record information on the ECN-1 Form (not required for Simple Modifications)			<b>4. Date</b> 01/05/2011																																
<b>5. Originator's Name, Organization, MSIN, &amp; Phone No.</b> VJ Bender, ARES Corporation 1100 Jadwin Ave, Suite 400 509-946-3300		<b>6. PrHA Number</b> No. 0105R-0 <i>N/A 01/14/11                  For MUSHultz                  per te/locom</i>	<b>7. USQ Number</b> No. <i>N/A J.M. Giesey</i> <i>1/9/11</i> USQ Evaluator Sign/Date	<b>8. Related ECNs</b> ECN-726786-R0 <del>ECN-836684-R0</del> <del>ECN-726664-R0</del> <i>PBD 01/13/11</i>																																	
<b>9. Title</b> Isolate and remove 241-AW Primary Ventilation		<b>10. Bldg. / Facility No.</b> 241-AW	<b>11. Equipment / Component ID</b> AW Primary Ventilation System	<b>12. Approval Designator</b> N/A																																	
<b>13. Engineering Documents/Drawings to be Changed</b> (Incl. Sheet & Rev. Nos.) <i>726786 PBD 01/14/11</i> Supersedes ECN-726786-R0 with this ECN, changes continue on page 3.			<b>14. Safety Designation</b> <input type="checkbox"/> SC <input type="checkbox"/> SS <input checked="" type="checkbox"/> GS <input type="checkbox"/> N/A	<b>15. Expedited/Off-Shift ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																																	
<b>16a. Work Package Number</b> <i>TFC-wo-10-4004                  TFC-wo-10-4243                  TFC-wo-10-4055 PBD                  01-4055 06/23/11                  PBD 01/17/11</i>		<b>16b. Modification Work Completed</b>	<b>16c. Restored to Original Status (TM)</b> N/A	<b>17. Fabrication Support ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																																	
Responsible Engineer / Date		Responsible Engineer / Date	Responsible Engineer / Date	<b>29. CAD File?</b> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>MJ 1/17/11</i>																																	
<b>18. Description of the Change</b> (Use ECN Continuation pages as needed) Problem: Under project W-314, the original primary exhaust trains were replaced. The original K1 system was abandoned in place. The original K1 system requires removal to optimize operations, remove potential sources of radiation and contamination, and improve worker safety. Solution: This ECN is to identify and establish isolation boundaries and facilitate removal of the abandoned system components. This ECN supersedes ECN-726786-R0 in its entirety. Due to the nature of the original K1 system design media and to simplify the work control documentation, this ECN identifies the system removal boundaries for configuration control during the removal of the K1 system. This ECN includes Essential Drawings which define the actual field changes and Support/Reference drawings which define removal boundaries. The actual removal of components will be as directed through the work control documentation using this ECN to define the removal boundaries and the methods of isolation.																																					
<b>19. Justification of the Change</b> (Use ECN Continuation pages as needed)			Engineering Rework <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Training Impact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>20. ECN Category</b> <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Supplemental <input type="checkbox"/> Void/Cancel ECN Type <input checked="" type="checkbox"/> Supersadure <input type="checkbox"/> Revision																																	
<b>19b. Existing Test Program Worksheet (TWP):</b> <input type="checkbox"/> Work is TP-3 <input checked="" type="checkbox"/> Test Program providing new TPW <input type="checkbox"/>																																					
<b>21. Distribution</b>				Release Stamp																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>MSIN</th> <th>Name</th> <th>MSIN</th> </tr> </thead> <tbody> <tr> <td>P DeBuigne</td> <td>R2-54</td> <td>C Slack</td> <td>R1-51</td> </tr> <tr> <td>D Scott</td> <td>R3-26</td> <td>A Holbrook</td> <td>R3-26</td> </tr> <tr> <td>T Bennington</td> <td>R3-25</td> <td>R Brooks</td> <td>S5-03</td> </tr> <tr> <td>M Harty</td> <td>S5-27</td> <td>M Cranston</td> <td>S7-07</td> </tr> <tr> <td>G Tardiff</td> <td>S5-25</td> <td></td> <td></td> </tr> <tr> <td>R Nicholson</td> <td>S5-25</td> <td></td> <td></td> </tr> <tr> <td>M Sheridan</td> <td>S5-25</td> <td></td> <td></td> </tr> </tbody> </table>				Name	MSIN	Name	MSIN	P DeBuigne	R2-54	C Slack	R1-51	D Scott	R3-26	A Holbrook	R3-26	T Bennington	R3-25	R Brooks	S5-03	M Harty	S5-27	M Cranston	S7-07	G Tardiff	S5-25			R Nicholson	S5-25			M Sheridan	S5-25			<div style="border: 2px solid black; padding: 10px; width: fit-content; margin: auto;"> <p style="font-size: 24px; font-weight: bold; margin: 0;">JAN 17 2011</p> <p style="margin: 5px 0;">DATE:    STA: 4</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center;"> <p style="margin: 0;">HANFORD RELEASE</p> </div> <p style="margin: 5px 0;">ID:    58</p> </div>	
Name	MSIN	Name	MSIN																																		
P DeBuigne	R2-54	C Slack	R1-51																																		
D Scott	R3-26	A Holbrook	R3-26																																		
T Bennington	R3-25	R Brooks	S5-03																																		
M Harty	S5-27	M Cranston	S7-07																																		
G Tardiff	S5-25																																				
R Nicholson	S5-25																																				
M Sheridan	S5-25																																				

ECN 10-001692

A-6003-563.1 (REV 11)

# ENGINEERING CHANGE NOTICE

1a. ECN No.: 10-001692

Page 1 of 12

DM     FM     TM

1b. Project No.: N/A

<b>2. Simple Modification</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>3. Design Inputs</b> – For full ECNs, record information on the ECN-1 Form (not required for Simple Modifications)			<b>4. Date</b> 01/05/2011	
<b>5. Originator's Name, Organization, MSIN, &amp; Phone No.</b> VJ Bender, ARES Corporation 1100 Jadwin Ave, Suite 400 509-946-3300		<b>6. PrHA Number</b> No. 01915R-0 <input checked="" type="checkbox"/> N/A PBD 01/17/11 For MV Shultz per telecon	<b>7. USQ Number</b> No. - - - R - <input checked="" type="checkbox"/> N/A J.M. Gresser 1/9/11 USQ Evaluator    Sign/Date		<b>8. Related ECNs</b> ECN-726786-R0 <del>ECN-836604-R0</del> ECN-726664-R0 PBD 01/13/11	
<b>9. Title</b> Isolate and remove 241-AW Primary Ventilation		<b>10. Bldg. / Facility No.</b> 241-AW	<b>11. Equipment / Component ID</b> AW Primary Ventilation System		<b>12. Approval Designator</b> N/A	
<b>13. Engineering Documents/Drawings to be Changed</b> (Incl. Sheet & Rev. Nos.) 726786 R0 01/14/11 Supersede ECN-726786-R0 with this ECN, changes continue on page 3.			<b>14. Safety Designation</b> <input type="checkbox"/> SC <input type="checkbox"/> SS <input checked="" type="checkbox"/> GS <input type="checkbox"/> N/A		<b>15. Expedited/Off-Shift ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>16a. Work Package Number</b> TFC-WO-10-4004 TFC-WO-10-4243 TFC-WO-10-4055 RPB 01/17/11 Responsible Engineer / Date	<b>16b. Modification Work Completed</b>  Responsible Engineer / Date	<b>16c. Restored to Original Status (TM)</b> N/A Responsible Engineer / Date		<b>17. Fabrication Support ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					<b>29. CAD File?</b> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No MJ 1/17/11	

**18. Description of the Change** (Use ECN Continuation pages as needed)

**Problem:**  
 Under project W-314, the original primary exhaust trains were replaced. The original K1 system was abandoned in place. The original K1 system requires removal to optimize operations, remove potential sources of radiation and contamination, and improve worker safety.

**Solution:**  
 This ECN is to identify and establish isolation boundaries and facilitate removal of the abandoned system components. This ECN supersedes ECN-726786-R0 in its entirety.

Due to the nature of the original K1 system design media and to simplify the work control documentation, this ECN identifies the system removal boundaries for configuration control during the removal of the K1 system. This ECN includes Essential Drawings which define the actual field changes and Support/Reference drawings which define removal boundaries.

The actual removal of components will be as directed through the work control documentation using this ECN to define the removal boundaries and the methods of isolation.

<b>19. Justification of the Change</b> (Use ECN Continuation pages as needed)		Engineering Rework <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Training Impact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>20. ECN Category</b> <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Supplemental <input type="checkbox"/> Void/Cancel ECN Type <input checked="" type="checkbox"/> Supersedure <input type="checkbox"/> Revision
The K1 Exhaust System is not in use and has been abandoned. The primary ventilation function is accomplished by an updated ventilation system, thus AW241-VTP-EF-001 & AW241-VTP-EF-002 are no longer required. Disconnecting power will support future demolition activities for this equipment. PrHA is N/A per TFC-ENG-DESIGN-C-35, Section 1.0.				
<b>19b. Existing Test Program Worksheet (TWP):</b> <input type="checkbox"/> , Work is TP-3 <input checked="" type="checkbox"/> , Test Program providing new TPW <input type="checkbox"/>				

21. Distribution			
Name	MSIN	Name	MSIN
P DeBuigne	R2-54	C Slack	R1-51
D Scott	R3-26	A Holbrook	R3-26
T Bennginton	R3-25	R Brooks	S5-03
M Harty	S5-27	M Cranston	S7-07
G Tardiff	S5-25		
R Nicholson	S5-25		
M Sheridan	S5-25		

Release Stamp

JAN 17 2011

DATE: \_\_\_\_\_

STA: 4

HANFORD  
RELEASE

ID: \_\_\_\_\_

58

# ENGINEERING CHANGE NOTICE

1a. ECN No.: 10-001692

Page 2 of 12

DM     FM     TM

1b. Proj. No.: N/A

**22. Revisions Planned** (Include a brief description of the contents of each revision)

None

Note: All revisions shall have the approvals of the affected organizations as identified in block 12 "Approval Designator," on page 1 of this ECN.

**23. Commercial Grade Item Dedication Numbers** (associated with this design change)  
N/A

**24. Engineering Data Transmittal Numbers** (associated with this design change, e.g., new drawings, new documents)  
N/A

**25. Other Non Engineering (not in HDCS) documents that need to be modified due to this change**

Type of Document	Document Number	Update Completed On	Responsible Engineer (print/sign and date)
Alarm Response Procedure	N/A		
Operations Procedure	N/A		
Maintenance Procedure	N/A		
CHAMPS Equipment Database Change	N/A		
Software Change	N/A		
PM/S Activity Change	N/A		
Spare Parts Requirement	N/A		
Other			
Other			
Other			

**26. Field Change Notice(s) Used?**

Yes     No

If Yes, Record information on the ECN-2 Form, attach form(s), include a description of the interim resolution on ECN Page 1, block 18, and identify permanent changes.

NOTE: ECNs are required to record and approve all FCNs issued. If the FCNs have not changed the original design media then they are just incorporated into the design media via an ECN. If the FCN did change the original design media then the ECN will include the necessary engineering changes to the original design media.

**27. Design Verification Required?**

Yes     No

If Yes, as a minimum attach the one page checklist from TFC-ENG-DESIGN-P-17.

**28. Approvals**

Facility/Project Signatures	Date	A/E Signatures	Date
Resp. Engineer    P DeBuigne <i>[Signature]</i>	01/17/11	Originator/Design Agent    VJ Bender <i>[Signature]</i>	01/11
Resp. Manager <del>M Sheridan</del> DM Cato <i>[Signature]</i>	1/17/11	Professional Engineer <i>[Signature]</i>	
Quality Assurance <del>T Bennington</del> <i>[Signature]</i>	1-12-11	Project Engineer    M Jennings <i>[Signature]</i>	Jan 10 11
IS&H Engineer    _____		Quality Assurance    _____	
NS&L Engineer    _____		Safety    _____	
Environ. Engineer    _____		Designer    _____	
Engineering Checker    M Harty <i>[Signature]</i>	1/17/11	Environ. Engineer    _____	
Other <del>MA Fish</del> N/A    PBD 01/14/11		Other    A/E Checker: K White <i>[Signature]</i>	Jan 10, 11
Other    _____		Other    _____	
Other    _____		<b>DEPARTMENT OF ENERGY / OFFICE OF RIVER PROTECTION</b>	
Other    _____		Signature or a Control Number that tracks the Approval Signature	
Other    _____		ADDITIONAL SIGNATURES	
Other    _____			
Other    _____			

# ENGINEERING CHANGE NOTICE CONTINUATION SHEET

1a. ECN No.: 10-001692

Page 3 of 12

1b. Proj. No.: N/A

Document/Drawing No.

Sheet

Revision

Drawings to be Changed:

Continued from Block 13

H-2-90906, Sheet 1, Rev. *89*  
 H-2-90922, Sheet 1, Rev. 1  
 H-14-020102, Sheet 2, Rev. *14*  
 H-14-020102, Sheet 3, Rev. *7a*

Continued from Block 18:

Once components are physically removed separate ECNs will be issued to revise the following drawings to reflect actual field configuration.

H-2-70302-1	241-AW Tank Farm Civil Plot Plan
H-2-70323-1	Electrical Plans and Details
H-2-70324-5	Electrical Plans and Details
H-2-70325-4	Electrical Power and Control Elementary Diagrams
H-2-70331	Instrument Elementary Diagram
H-2-70333-6	Electrical Wire Run List
H-2-70333-7	Electrical Wire Run List
H-2-70333-9	Electrical Wire Run List
H-2-70339-1	HVAC Equipment Plans (K2 Seal Pot)
H-2-70341-1	HVAC/Piping Standard Tank Farm details
H-2-70358-1	Instrumentation Exhaust Stack Radiation Monitoring
H-2-70362-1	Instrumentation Annunciator Elementary Diagram
H-2-70362-3	Instrumentation Annunciator Elementary Diagram
H-2-74896-1	296-A-27 Tank Stack Monitor Installation
H-2-74896-2	296-A-27 Tank Stack Monitor Installation
H-2-74896-3	296-A-27 Tank Stack Monitor Installation
H-2-74896-4	296-A-27 Tank Stack Monitor Installation
H-2-74896-5	296-A-27 Tank Stack Monitor Installation
H-2-90905-1	Drawing List/HVAC Flow Control Diagram
H-2-90906-1	HVAC Equipment Plan and Elevations
H-2-90907-1	HVAC Demolition Plan
H-2-90908-1	HVAC Miscellaneous Details
H-2-90909-1	HVAC Equipment Schedules and Notes
H-2-90911-1	HVAC Support Structure
H-2-90912-1	HVAC Plenum Assy
H-2-90912-2	HVAC Plenum Detail
H-2-90914-1	HVAC End Panel
H-2-90915-1	HVAC Plenum Equipment Assembly Detail
H-2-90916-1	HVAC Fan to Plenum Assembly
H-2-90917-1	HVAC Electric Heat Trace
H-2-90920-1	Structural Concrete Foundation Plan
H-2-90922-1	Piping Primary Exhaust Modification
H-2-90923-1	Piping Primary System Seal Pot
H-2-90925-1	Piping Portable Exhauster Plan, Section and Details
H-2-90926-1	Piping Portable Exhauster Plan, Section and Details
H-2-90927-1	Electrical One Line and Details
H-2-90928-1	Electrical Elementary Diagram
H-2-90928-2	Electrical Elementary Diagram
H-2-90929-1	Electrical Connection Diagram
H-2-90930-1	Electrical Plans and Details
H-2-90930-2	Electrical Plans and Details
H-2-90931-1	Electrical Wire Run List
H-2-91784	Central Exhaust Station Heat Trace Installation
H-2-99085	Electrical Elementary Diagram
H-2-99075	Electrical Control RM Details

Note: An AutoCAD page may be used in place of this form (the header section items must be included on the AutoCAD page).

**ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET**

1a. ECN No.: 10-001692

Page 4 of 12

1b. Proj. No.: N/A

Document/Drawing No.	Sheet	Revision
H-2-92520	Generic Stack Beta RCD Cabinet	
H-2-92495	Generic Stack Sampler	
H-2-92493	Generic Stack Sampler	

Electrical ECN Planned:

ECN 726664-R0 electrical disconnect at the power source. This ECN and/or later revisions will identify load isolation and wire removal.

Description of the Change:

Continued from Block 18

Revise the following drawings as described on this ECN to identify and establish the isolation removal boundaries for the 241-AW K1 system:

H-2-90906, Sheet 1, Rev. 8 HVAC Equipment Plans Elevation and Details

Revise drawing to show isolation and removal of the K1 system above grade. Seal pot, concrete pad and associated dimensioning are to remain. See pages 5 & 6 of this ECN.

H-2-90922, Sheet 1, Rev. 1 Piping Primary Exhaust Modification

Revise drawing to show isolation and removal of the K1 system above grade and delete associated details. See pages 7 & 8 of this ECN.

H-14-020102, Sheet 2, Rev. 14 AW VTP P&ID

Revise drawing to show isolation and removal of the K1 system. Associated piping to be cut and capped at grade. See pages 9 & 10 of this ECN.

H-14-020102, Sheet 3, Rev. 7 AW VTP Stack Monitor P&ID

Revise drawing to show isolation and removal of the K1 system. See pages 11 & 12 of this ECN.

1. Does the change introduce any new failure modes to the equipment?  Yes  No  
Basis (required for Yes):
2. Does the change increase the probability of existing failure modes?  Yes  No  
Basis (required for Yes):
3. For Safety Significant equipment, does the change require a modification to Chapter 4 of the DSA and/or FRED?  
 Yes  No  N/A  
Basis (required for Yes):

Note: An AutoCAD page may be used in place of this form (the header section items must be included on the AutoCAD page).



IS: ECN NOTE: (DO NOT INCORPORATE)  
SEAL POT, CONCRETE PAD AND ASSOCIATED  
DIMENSIONING TO REMAIN.

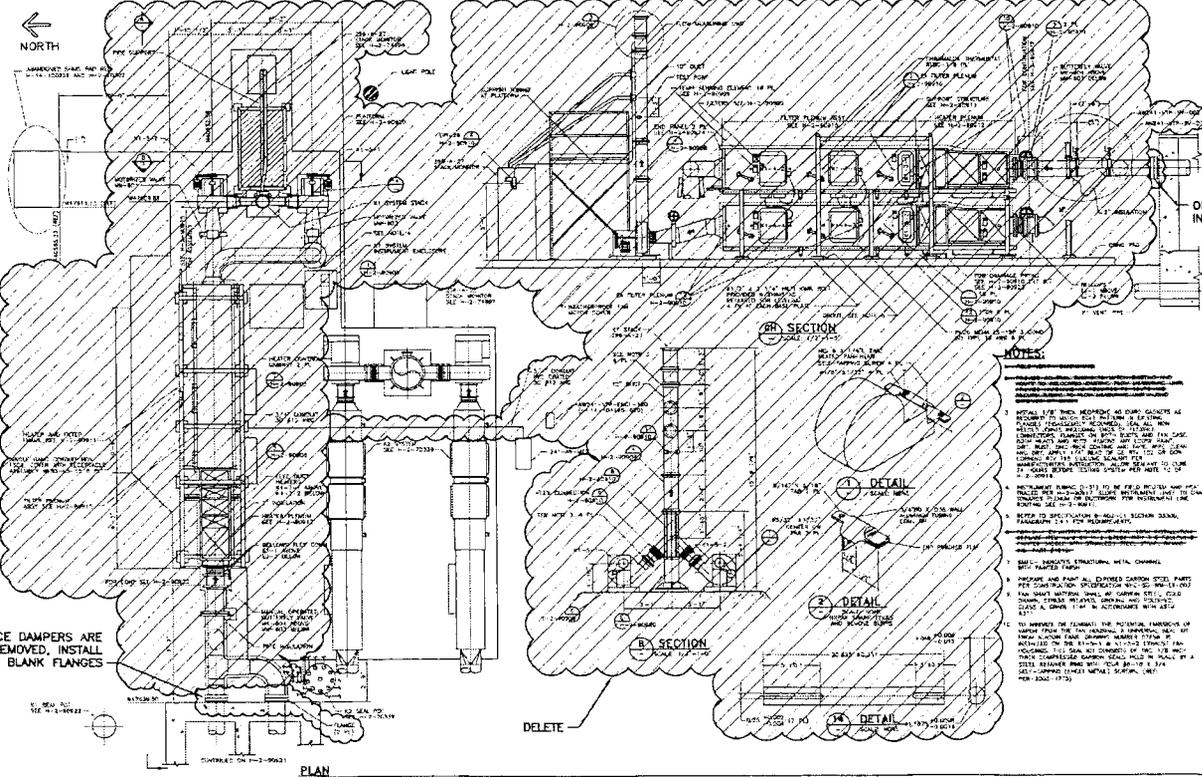
ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET

1c. ECN NO.: 10-001692

1b. Proj. NO.: N/A

Page 6 of 12

Document/Drawing No. H-2-40906 Sheet 1 Revision 9



ONCE DAMPER IS REMOVED,  
INSTALL BLANK FLANGE

ONCE DAMPERS ARE  
REMOVED, INSTALL  
BLANK FLANGES

DELETE

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
  2. MATERIALS TO BE USED SHALL BE AS SPECIFIED IN THE MATERIAL SPECIFICATIONS.
  3. ALL WELDS SHALL BE MADE IN ACCORDANCE WITH THE WELDING SPECIFICATIONS.
  4. ALL SURFACES SHALL BE PROTECTED AGAINST CORROSION.
  5. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  6. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  7. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  8. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  9. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  10. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  11. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
  12. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.

PLOT DATE: 1/6/2011

PLAN

WAS:

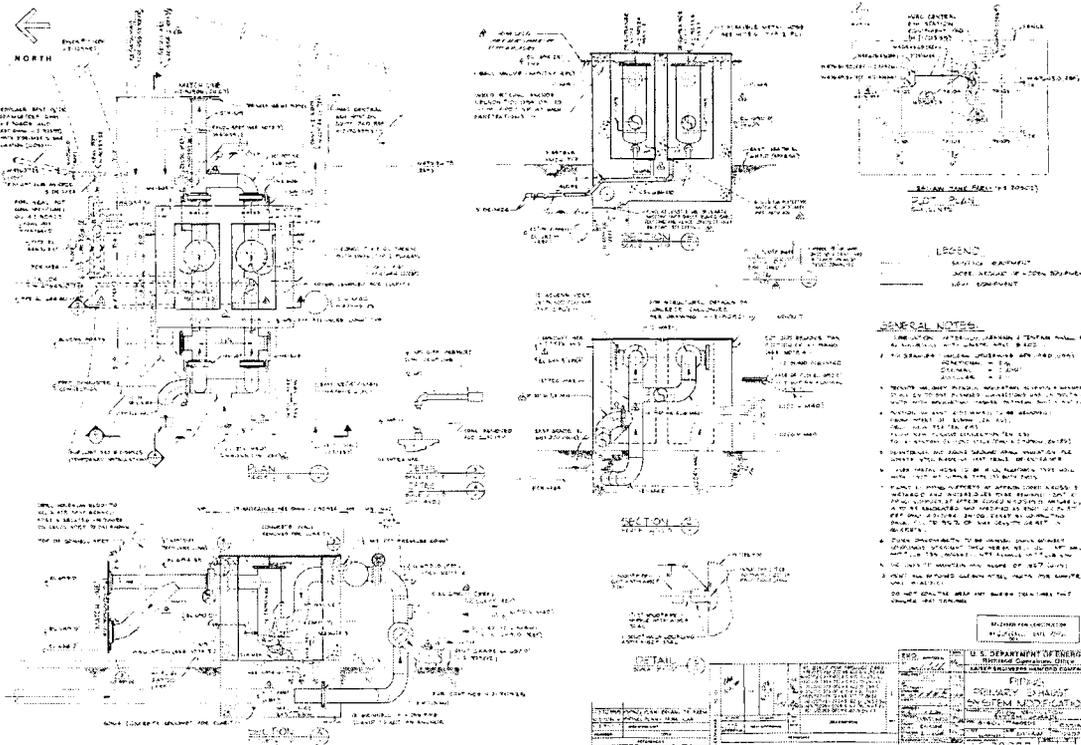
### ENGINEERING CHANGE NOTICE CONTINUATION SHEET

1a. EGN NO.: 10-001692

Page 7 of 12

1b. Proj. NO.: N/A

Document/Drawing No. 2-9092 Sheet 1 Revision 1



PLOT DATE: 1/6/2011

U.S. DEPARTMENT OF ENERGY	
NATIONAL LABORATORY	
GENERAL INVESTIGATIVE DIVISION	
PROJECT NO.	10-001692
PROJECT TITLE	...
DATE	...
BY	...
CHECKED BY	...
APPROVED BY	...
DATE	...



WAS:

ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET

1a. ECN NO.: 10-001692

1b. Proj. NO.: N/A

Page 9 of 12

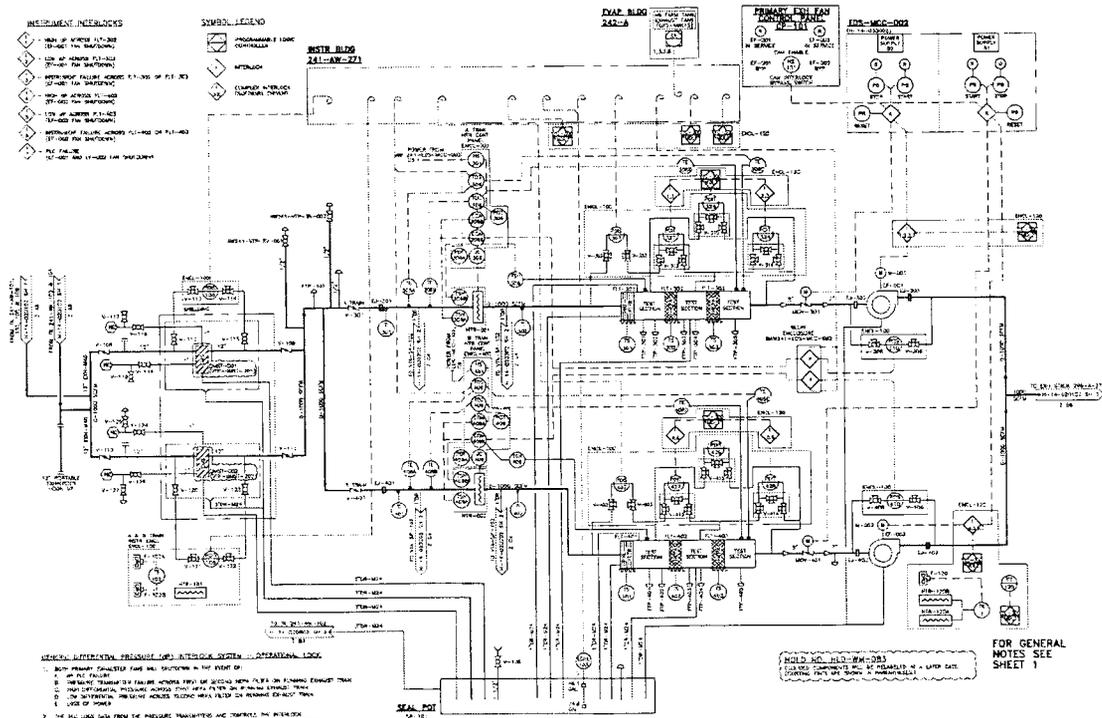
Document/Drawing No. H-14-020162 Sheet 2 Revision 1110

- INSTRUMENT INTERLOCKS**
- 1. 100% OF WATER FLOW (2) - 100% FLOW
  - 2. 100% OF WATER FLOW (2) - 100% FLOW
  - 3. 100% OF WATER FLOW (2) - 100% FLOW
  - 4. 100% OF WATER FLOW (2) - 100% FLOW
  - 5. 100% OF WATER FLOW (2) - 100% FLOW
  - 6. 100% OF WATER FLOW (2) - 100% FLOW
  - 7. 100% OF WATER FLOW (2) - 100% FLOW
  - 8. 100% OF WATER FLOW (2) - 100% FLOW
  - 9. 100% OF WATER FLOW (2) - 100% FLOW
  - 10. 100% OF WATER FLOW (2) - 100% FLOW

**SYMBOL LEGEND**

- 1. APPROACH
- 2. APPROACH
- 3. APPROACH
- 4. APPROACH
- 5. APPROACH
- 6. APPROACH
- 7. APPROACH
- 8. APPROACH
- 9. APPROACH
- 10. APPROACH

NOTE: BLDG 241-14-020162



**GENERAL INTERVIEW PRESENTATION - OPERATIONAL LOG**

1. BEING PRESENTED TO THE OPERATOR IN THE EVENT OF:
  - A. ON THE FLOOR
  - B. OPERATOR PRESENTATION OF FAILURE MODES FROM THE FLOOR TO THE OPERATOR
  - C. OPERATOR PRESENTATION OF FAILURE MODES FROM THE FLOOR TO THE OPERATOR
  - D. OPERATOR PRESENTATION OF FAILURE MODES FROM THE FLOOR TO THE OPERATOR
  - E. OPERATOR PRESENTATION OF FAILURE MODES FROM THE FLOOR TO THE OPERATOR
2. THE FLOOR USER SHALL BE PRESENTED WITH THE OPERATOR PRESENTATION OF FAILURE MODES FROM THE FLOOR TO THE OPERATOR
3. THE FLOOR USER SHALL BE PRESENTED WITH THE OPERATOR PRESENTATION OF FAILURE MODES FROM THE FLOOR TO THE OPERATOR

NOTE: BLDG 241-14-020162

FOR GENERAL NOTES SEE SHEET 1

PLOT DATE: 1/27/01

IS:

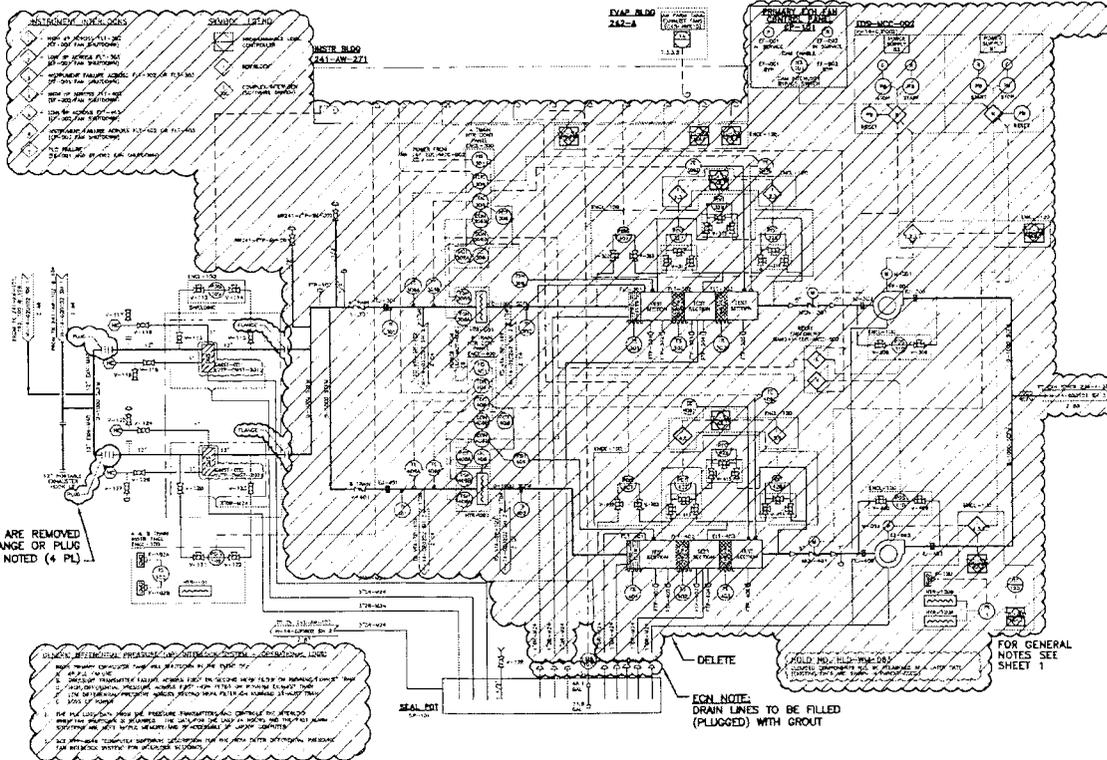
ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET

1a. ECN NO.: 10-001692

Page 10 of 12

1b. Proj. NO.: N/A

Document/Drawing No. H-14-020102 Sheet 2 Revision 1



ONCE DAMPERS ARE REMOVED  
INSTALL BLANK FLANGE OR PLUG  
AS NOTED (4 PL)

REMOVE REFERENCED PIPING AND SYSTEM COMPONENTS, LOGS

1. REMOVE REFERENCED PIPING AND SYSTEM COMPONENTS, LOGS
2. REMOVE REFERENCED PIPING AND SYSTEM COMPONENTS, LOGS
3. REMOVE REFERENCED PIPING AND SYSTEM COMPONENTS, LOGS
4. REMOVE REFERENCED PIPING AND SYSTEM COMPONENTS, LOGS
5. REMOVE REFERENCED PIPING AND SYSTEM COMPONENTS, LOGS

ECN NOTE:  
DRAIN LINES TO BE FILLED  
(PLUGGED) WITH GROUT

FOR GENERAL  
NOTES SEE  
SHEET 1

PLT DATE: 1/10/2011

WAS:

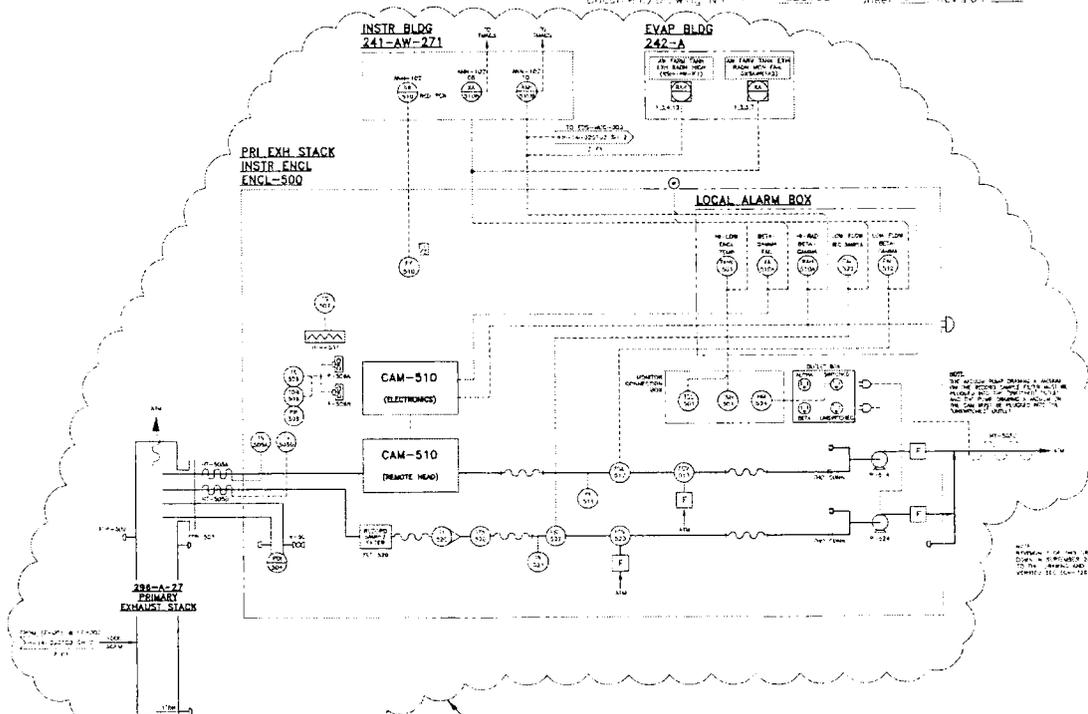
ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET

1c. ECR NO.: 10-001692

Page 11 of 17

1b. Proj. NO.: N/A

Document/Drawing No. 10-4-022102 Sheet 3 Revision 9



NOTE - EQUIPMENT OUT-OF-SERVICE, TO BE ISOLATED/REMOVED

PLC: INIE: 1/6/2011

IS:

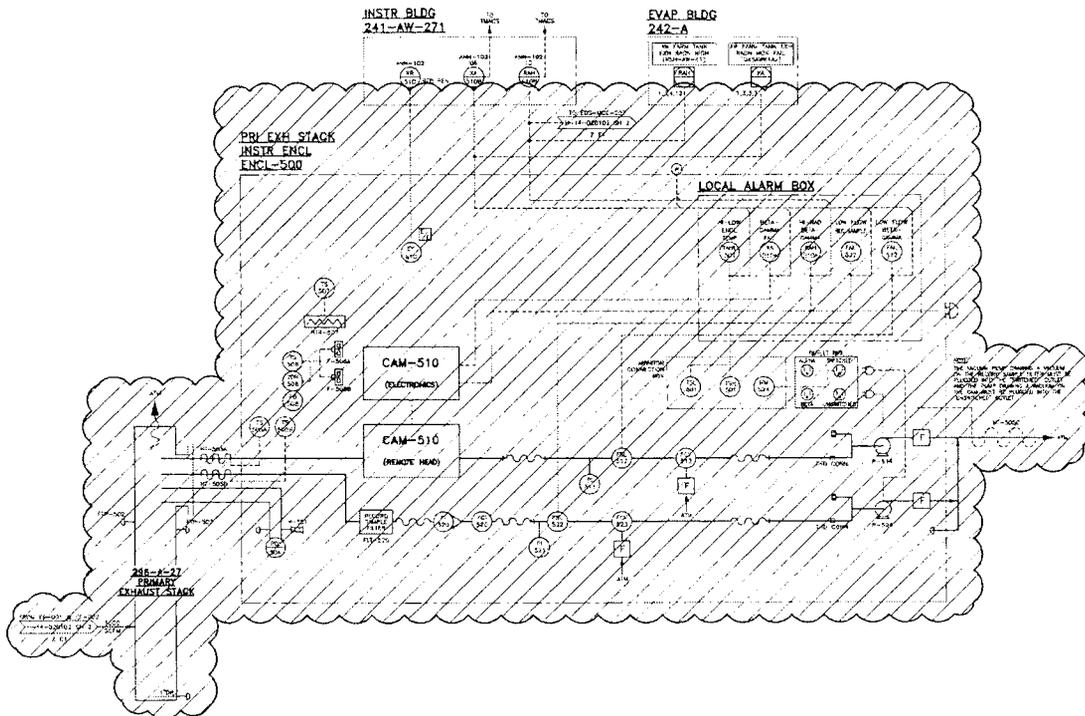
ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET

1a. ECN NO.: 10-001692

1b. Proj. NO.: N/A

Page 12 of 12

Document/Drawing No. H-14-020192 Sheet 3 Revision 7



PLOT DATE: 1/6/2011

296-A-27 HEPA  
Filters in Burial Box

RA-11-033-01

CAUTION  
RADIOACTIVE  
MATERIAL

CONTENTS: HEPA FILTERS  
LOCATION: ROOM 200  
HEPA FILTERS  
REMOVED FROM OLD  
KI EXHAUSTER

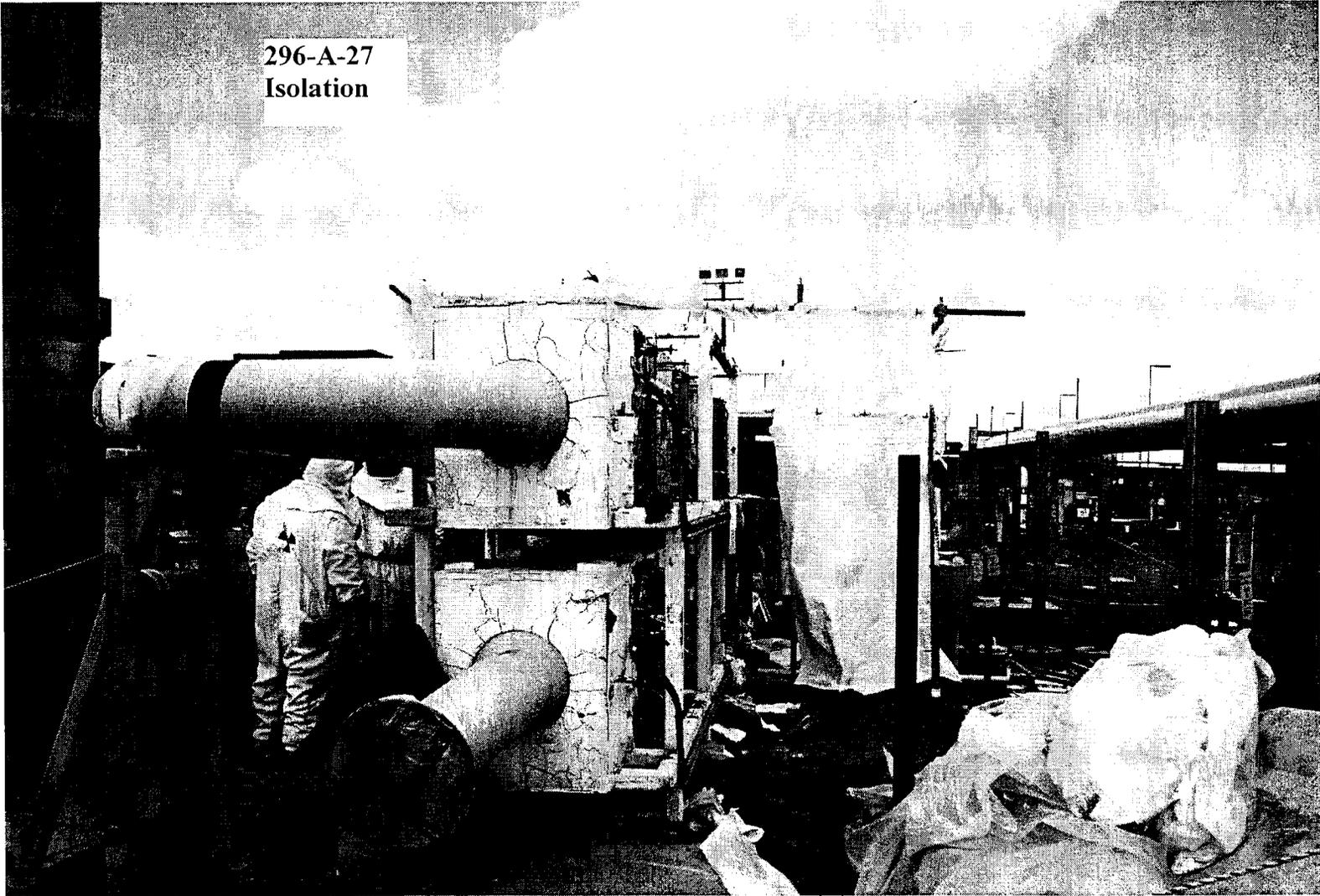
CONTAINER TYPE: DRUM  
DATE: 10/11/01  
EXPIRES: 10/11/03

CONTENTS: 1 UNIT  
DATE: 10/11/01  
EXPIRES: 10/11/03

ALL LEVELS ARE FOR  
THE CLOSED BOX

DATE: 10/11/01 BY: 2111

296-A-27  
Isolation



296-A-27 Filter  
Housing bagged  
for disposal



## Report of Closure/Permit Revision

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 08/31/2011

**NOC Application Revision**

New NOC Rev Number: \_\_\_\_\_

**Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: See below

**ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Report of closure for 296-C-6, C-106 Sluicing

Current NOC Application Number: AOP Permit 00-05-006/ License Number FF-01

AEI ID Number (AOP Emission Unit Number(s): C-106 Sluicing

Current WDOH Approval Letter Number(s): NRA 486

WDOH NOC ID Number: 236

### DESCRIPTION OF CHANGE

Number of Attachments 0

## Report of Closure for C-106 Sluicing

### Summary/Introduction

In accordance with Washington Administrative Code 246-247-080(6), this report of closure is being submitted to the State of Washington Department of Health (WDOH) to document cessation of radionuclide emitting activities from 296-C-106, C-106 Sluicing.

The following information is provided in this document:

- Date of closure
- Remaining material
- Assessment of potential continued emissions
- Future plans
- Emissions control and monitoring

#### 1. Date of closure:

The 296-C-6, C-106 Sluicing exhauster is no longer operationally needed and will not be used. It has been isolated and de-energized. The NOC was obsolete on 10/22/2002 and the unit has not operated since this time. The closure date is 06/08/2011.

2. Remaining material: The 296-C-6, C-106 Sluicing has not been used since October 22, 2002. The remaining components consist of an exhauster frame, de-entrainer, HEPA filters, and stack.

3. Assessment of potential continued emissions:

- a. The electrical power to the stack exhaust fan is disconnected.
- b. The stack exhaust fan is isolated—the inlet and outlet are capped.
- c. The pre-filters, HEPA filters and housing dampers are closed.
- d. The stack is isolated—the inlet and outlet are capped.
- e. The 296-C-6, C-106 Sluicing does not have a potential for continued emissions based on its isolation.

4. Future plans:

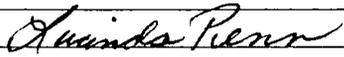
Dispose of exhauster as waste.

5. Emissions control and monitoring:

Emissions control and monitoring is not required for the inactive and isolated 296-C-6, C-106 Sluicing exhauster. The emissions control and monitoring system are inactive and have been isolated or removed.

Based on this report of closure it is requested that emission unit/notice of construction approval 200 P-296-C-6, C-106 Sluicing be removed from the Hanford Site Air Operating Permit (AOP Permit 00-05-006/ License Number FF-01).

**SIGNATURES**

Reviewed by Contractor	Reviewed by RL/ORP	Approved by WDOH
		
Date: 8/31/11	Date:	Date:



# Bank Farm Work Instruction

## CLO-WO-06-001405

241-C-EDS OPTIMIZATION

### 1.0 SCOPE

The equipment being worked on is identified GS.

- Apply Proper Lockout/Tagout.
- Disconnect Components.
- Install Labeling.
- Remove Lockout/Tagout.
- 

### 2.0 LIMITATIONS / PRECAUTIONS

- [ ] 2.1. This activity has been determined to be a **Low Risk** radiological work activity and will utilize radiological limits and controls as specified on **RWP CO-001**.

---

#### NOTE

**Documented Surveys are required for opening potentially contaminated systems or items, accessing previously unexposed surfaces, excavating or when required by Procedure.**

---

- [ ] 2.2. If the work directions and/or documents are confusing, conflicting, or not understood, contact FWS for clarification. If the work instructions/procedures are incorrect, request a change prior to proceeding. (Lessons Learned Bulletin # SN-98-09)

### 3.0 PREREQUISITES

- [ ] 3.1. ENSURE the correct waste containers are available to perform the work activities, as stated in the "Waste Planning Checklist".
- [ ] 3.2. FWS ENSURE a walkdown is conducted using the Work Instructions and **Worksite Hazard Analysis** with as many of the work crew as possible who will be performing the job.

CLO-WO-06-001405

2

# Bank Farm Work Instruction

---

## NOTE

Steps- 4.2.1, thru,  4.4.2 may be worked concurrently or out of order, provided Lockout/Tagout boundaries are not by-passed.

---

## 4.0 SPECIFIC WORK INSTRUCTIONS

4.1. ENSURE that the Main Disconnect/Breaker for "C241-EDS-MCC-001" and "CR271-EDS-MCC-002" is isolated, tagged, and locked in accordance with the Lockout/Tag out Program.

4.2. HPT perform pre-job radiation and contamination survey of work area and record RSR number.

RSR Number: COF-002835 Date 8/29/06

4.2.1. Subsequent survey report numbers to be documented on the Work Record.

4.3. Disconnect at "C241-EDS-MCC-001" and "CR271-EDS-MCC-002" the Line/Load leads (respectively) of the identified compartments or breakers as identified on pages 4 and 5 of ECN-724070 R0, (reference pages 3 of ECN-724070 R0 for additional info). *and pages 4 thru 7 of ECN-724070 R1*

4.3.1. Tape-up/Safe-off the leads that were disconnected in step  4.3 as needed.

P41-01  
RES 9/1/06

CLO-WO-06-001405

Stoddard

RECORD COPY

2 of 4

3

# Tank Farm Work Instruction

- 4.3.2. Fabricate and install on the compartments or breakers that were disconnected in step  4.3 labels to read:

P41-01  
RES 9/1/06

**"SPARE"**

**Line (Load if applicable) Leads Disconnected**  
**Per ECN-724070 R0 + 724070 R1**

- 4.4. Disconnect in the Pull Box for "C104-EDS-ENCL-004" the Line leads for the identified Disconnects identified on page 6 of ECN-724070 R0, (reference pages 3 of ECN-724070 R0 for additional info). *AND PAGES 4 thru 7 of ECN-724070 R1.*

P41-01  
RES 9/1/06

- 4.4.1. Tape-up/Safe-off the leads that were disconnected in step  4.4 as needed.

- 4.4.2. Fabricate and install on the Disconnects that were disconnected in step  4.4 labels to read:

P41-01  
RES 9/1/06

**"SPARE"**

**Line (Load if applicable) Leads have been**  
**Disconnected in Pull Box**  
**Per ECN-724070 R0 + 724070 R1**

- 4.5. FWS ensure that all Lockout/Tagout(s) have been removed and system returned to normal configuration.

- 4.6. HPT perform post-job radiation and contamination survey of work area.

RSR Number: COF-002835 Date 8/29/06

CLO-WO-06-001405

# Tank Farm Work Instruction

## 5.0 POST WORK ACTIVITY TESTING

5.1. N/A.

## 6.0 RESTORATION ACTIONS

---

### NOTE

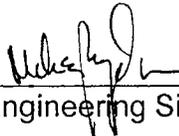
STEPS WITHIN SECTION 6.0 MAY BE PERFORMED CONCURRENTLY OR IN ANY ORDER.

---

6.1. Document on the "WORK RECORD" work performed and any problems that may have been encountered.

6.2. **FWS** to Record on the Work Record that "The Job Site has been walked down and the area is orderly and all waste has been placed in the proper containers".

6.3. **Engineering Closeout** review complete, Ensure all associated ECN's have been closed and a copy of the "MODIFICATION COMPLETE" cover page has been inserted into the Work Package.

  
\_\_\_\_\_  
Engineering Signature

1 / 4 / 07  
Date

CLO-WO-06-001405

**Work Order: CLO-WO-06-001405**  
**Title: 241-C-EDS Optimization**

<b>Date Created:</b> 8/23/06 13:35:59	<b>Equipment:</b> C241-EDS-MCC-001	<b>SC/I:</b> <input type="checkbox"/>
<b>WorkFlow:</b> WO Standard	<b>Planner:</b> Stoddard, Rocky	<b>Job Plan:</b>
<b>WO Type:</b> 4 - MODIFICATION	<b>Assigned:</b> Bryant, William (Bill) H	<b>Farm/Facility:</b> 241C
<b>State:</b> In Approval	<b>Phase Desig:</b>	<b>PM Id:</b>
<b>WO Risk:</b> Low	<b>Flow Status:</b> OK	<b>Frequency:</b>
<b>CACN:</b> 501956	<b>Project Id:</b>	<b>Date Reqd:</b> 8/28/06 07:00:00
<b>Priority:</b> 3.1 Most Critical Path (Float <10 Days)		<b>Route Id:</b>

**Description:**

Compartments located in "C-241-EDS-MCC-001" are no longer in service and need to be disconnect and labeled "DISCONNECTED/SPARE".

DT  
1-8-11

6

# Work Order: CLO-WO-06-001405

## Title: 241-C-EDS Optimization

Step 1 Of 1 Step Id: 001 State: In Approval Safety Class:  
 Sched Start: Sched Comp: Related Step/Link:

**Step Instructions:**

Compartments located in "C-241-EDS-MCC-001" are no longer in service and need to be disconnect and labeled "DISCONNECTED/SPARE".

Assets Seq	Asset Class	Asset Id	Asset Name	SC/I	Expiration Date
1	Equipment	C241-EDS-MCC-001	MOTOR CONTROL CENTER	<input type="checkbox"/>	

Trades	Crew	Trade Id:	Trade Description:	Workers	Act Hrs.	Delay Code
	Maintenance	<del>M013</del> C020 <del>T050</del>	Electricians	<del>1</del> 2 1	<del>4</del> 24 12	

**Attachments:** There are 4 document(s) attached to this work order

Description	Path/Name
<b>Header Attachment</b>	
Scanned USQ TF-06-1043-S.doc	Scanned USQ TF-06-1043-S__878996.doc
Scanned Waste Planning Cklist.doc	Scanned Waste Planning Cklist__878997.doc
RWP-CO-001.003.pdf	RWP-CO-001.003__878995.pdf
<b>Step Attachment</b>	
CLO-WO-06-001405 RECORD Work Instructions.doc	CLO-WO-06-001405 RECORD Work Instructions__879028.doc

**Electronic Approvals:**

Date	State	Response	Profile	Name	Role
8/23/06 13:36:00	Ready For Planning	Approved	clo_&_wfo_ops_shift_mgr	Ficklin, Jim	
8/23/06 13:55:38	In Planning	Approved	clo_&_wfo_planner	Stoddard, Rocky	
8/24/06 13:05:08	In Approval	Approved	clo_&_wfo_planner	Stoddard, Rocky	clo_planner
8/24/06 13:21:32	In Approval	Approved	clo_rad_con	Gray, Keith W	clo_rad_con
8/24/06 14:17:43	In Approval	Approved	CLO & WFO Resp. Eng.	Bewick, Joe	clo & wfo resp. eng.
8/24/06 14:42:02	In Approval	Approved	clo_safety	Bean, Tonya	clo_safety
8/24/06 15:15:31	In Approval	Approved	clo&wfo_radcon_&_env	Doss, Shelly D	clo_environmental
8/28/06 15:14:07	In Approval	Approved	clo_&_wfo_fws	Hay, Mike	clo_field_work_suprv

**FWC**

FWS Completed By: WAB FWC Date: 8-29-06 Update Job Plan (Y/N): \_\_\_\_\_

Completed Satisfactorily (yes,no): X 9-1-06 Asset Condition: \_\_\_\_\_

Comments: \_\_\_\_\_

RPP WORK RECORD

1. Document Number:

CLO-WO-06-001405

2. Work Item Title: 241-C-EDS Optimization

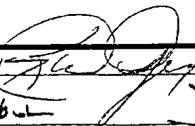
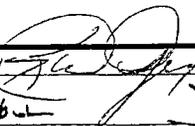
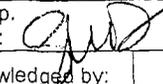
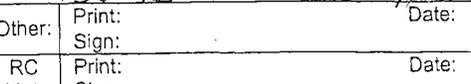
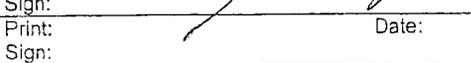
Date	Turnover, Problem Description, Action Taken	Feed Back (X)	Name	Craft/Resource Type	Hours
8-29-06	HELD GENERAL PRE JOB				
	STARTED DISCONNECT		WJB	M010	2
9/1/06	PEN + INK-01: Modified STEPS			CO20	16
	4.3. ON PAGE 2 AND 4.3.2. + 4.4. + 4.4.2.			T050	8
	ON PAGE 3 of WORK INSTRUCTIONS to				
	INCORPORATE FCN-724070 R1 AND THE				
	CHANGES REFLECTED WITHIN IT.		RE. Stoddard	PLANNER	
	FWS		WJB	M010	
	ENGINEER		J.A. Bewick	ENG	
			J.A. BEWICK		
9-1-06	WORK COMPLETE NO. WASTE				
	WORK SITE CLEAN		WJB	M010	2
				CO20	8
				T050	4
01/05/07	Performed Post Review ON WORK				
	Package.		RE. Stoddard	Planner	
1/8/7	Eagred completed up into (Mcpo-30 pps.				
	(Record will be in FDMS System)		DT	Blank	

Summary by Craft/Resource Type

Craft/Resource Type	Total Hours	Craft/Resource Type	Total Hours

8

# COPY

<b>RADIOLOGICAL WORK PERMIT</b>			Contractor: <b>CH2M HILL Hanford Group, Inc.</b>		RWP Number CO-001, Rev.004
General: <input checked="" type="checkbox"/>	Start Date 8/29/2006	End Date 8/28/2007	Technical Document Number(s): Various		AMW Number N/A
Job Location: All Closure Operations and Support work areas.	Brief Job Description and Type of Area: All Low Risk construction and plant forces activities. • Health Physics Routines • Housekeeping including laundry activities and removal of contaminated specks, weed fragments and animal droppings • Excavation < 12" excluding excavation in known radioactive spill areas, cribs, ponds, or ditches • Minor Decontamination (wiping and solvents only) • Preventive and Corrective Maintenance • RWR and WRCSOF jobs screened by RadCon • Waste transfer operations and Operation of support equipment and Waste Retrieval Pumping Tours. <u>This RWP does not permit; breaching of waste transfer lines or primary tank risers; removal of waste transfer system pit cover blocks or shield plugs that expose penetrations &gt; 6"; area; work in open waste transfer system pits unless specifically approved by Radiological Control SME.</u> RBA/RA/JCA/SCA/URMA/RMA				
<b>Radiation Emitted</b>	<b>Estimated Dose Rates</b>		<b>Estimated Contamination Levels</b>		<b>Job Dose Estimate</b>
<input checked="" type="checkbox"/> Alpha	General Area: <5 mrem/hr		Beta/Gamma: <100,000 dpm/100 cm <sup>2</sup>		<200 person-mrem per task
<input checked="" type="checkbox"/> Beta	Maximum Contact: <100 mrem/hr		Alpha: <20 dpm/100 cm <sup>2</sup>		Low
<input checked="" type="checkbox"/> Gamma	<b>Radiological Worker Training Req.</b> <input type="checkbox"/> I		<b>Internal Dosimetry Requirements</b>		
<input checked="" type="checkbox"/> Neutrons	<input checked="" type="checkbox"/> II		<input type="checkbox"/> 3 minute WBC	<input checked="" type="checkbox"/> 10 minute WBC	<input type="checkbox"/> Urinalysis/Isotopes <input type="checkbox"/> Chest Count
<b>DOSIMETRY</b>		<b>PERSONAL PROTECTIVE EQUIPMENT</b>			<b>SURVEY REQUIREMENTS</b>
<input checked="" type="checkbox"/> HSD-TLD	SI6	Coveralls		Shoe Covers	Grab Air Sampling Required
<input type="checkbox"/> HOND-TLD	SI6	Waterproof Suit	SI6	Canvas Boots	Lapel Air Sampling Required
<input type="checkbox"/> Pocket Dosimeter		Goretex Suit	SI6	Rubber Overshoes	SI7 Auto. Survey Device
<input type="checkbox"/> Electronic Dosimeter		Cap		Rubber Boots	SI7 Self Survey (if qualified)
<input type="checkbox"/> Finger Rings	SI6	Hood		Face Shield	SI7 HPT Exit Survey Required
<input type="checkbox"/> Time Keeping	SI6	Surgeon's Gloves		Full Face Respirator	
<input checked="" type="checkbox"/> Entry Control System	SI6	Leather Gloves		PAPR	<b>HPT COVERAGE</b>
<input checked="" type="checkbox"/> Brick	SI6	Canvas & Surgeon's Gloves		Supplied Air Respirator	SI4 Continuous
<input checked="" type="checkbox"/> 30Day ACES Auth.	SI6	Waterproof Gloves		SCBA	Intermittent
	SI6	Arm Sleeves		Undressing Assistance	
<b>SPECIAL INSTRUCTIONS</b>					
<p>1. VOID LIMITS CA: ≥ 100,000 dpm/100cm<sup>2</sup> beta-gamma and/or ≥210 dpm/100 cm<sup>2</sup> alpha. RA: Whole body dose rate ≥ 100 mrem/hr at 30 cm. SCA: &gt; 1,000 dpm/100cm<sup>2</sup> Beta/Gamma transferable contamination.</p> <p>2. SAFE CONDITION LEVELS • None identified</p> <p>3. ACTION LEVELS • None identified</p> <p>4. HPT COVERAGE • Continuous coverage is required for opening potentially contaminated systems or items; accessing previously unexposed surfaces; excavating or when required by procedure, ALARACT or NOC and for the removal of radiological controls.</p> <p>5. DOSIMETRY/ACES • N/A</p> <p>6. PERSONNEL PROTECTIVE EQUIPMENT • A minimum of 1 pair of surgeon's gloves will be worn when breaching potentially contaminated systems or enclosures outside of a CA. Handling of any materials removed from such areas requires this minimum level of PPE until items have been surveyed by a HPT. • Gloves required when reaching into a CA to perform contamination release surveys or removing items from the CA that have been surveyed and found to be free of contamination by the HPTs. • Single set of PPE required for whole body entry into a CA. Leather gloves, additional pair(s) of surgeon's gloves, leather gloves, silver shield gloves or electrician's gloves may be substituted for canvas gloves. • A hood will be worn when the workers head has a potential to contact contaminated surfaces such as when working inside potentially contaminated equipment or working overhead on potentially contaminated surfaces.</p>			<p>• Rain jacket and/or rain pants are required to protect cloth personal protective equipment if there is a potential for it to become wet due to environmental conditions. Only those portions of cloth personal protective equipment that are at risk of becoming wet need to be covered.</p> <p>7. SURVEY: • Use auto survey device when exiting areas where PPE has been worn. If auto survey device is inoperable or unavailable, perform whole body survey. Perform a follow-up survey in an automated survey device. HPT survey required if not self survey qualified. • Hand &amp; foot survey (minimum) required for exit from RBA established for contamination control. • HPT to perform both beta-gamma and alpha surveys on the outer packaging of all equipment removed from pits. • Alpha survey of personnel required if alpha contamination is detected during the performance of work. • HPT to perform alpha survey whenever beta-gamma contamination is detected. • The following areas require both beta-gamma and alpha surveys: o 244-TX/242-T, 242-S Evaporator, 241-EW-151, 241-TX-155, 244-AR, 241-ER-151. o Outside of fenced Tank Farm Boundaries (e.g., diversion boxes, swab risers, and similar equipment) o Isolated CAs</p> <p>8. AIR SAMPLING • None required</p> <p>9. SPECIAL PREJOB BRIEFING • None identified</p> <p>10. OTHER • NA</p>		
RWP Prepared By: KW Gray		Phone: 373-4286	HPT Phone: 373-3353		
Line Mgt. Print: 	Sign: 	Phone: 438-062	Date: 8/29/06		
RC Sup. Initial: 	RC Dir. Print: 	Sign: KW Gray	Phone: 438-9306	Date: 8/29/06	
Acknowledged by:	AJRG Chair (High Risk)	Print: 	Date:	Other: Print: 	Date:
RWP Field Change Approvals:	Line Mgt. Print: 	Sign:	Date:	RC Mgt. Print: 	Date:

9

# CH2M HILL LOCKOUT/TAGOUT AUTHORIZATION

1. Lockout/Tagout Number  
CO-2006-033

2. Page 1 of 3

3. System 241-C Electrical Distribution System

4. Controlled Drawings, ECNs, Documents  
H-2-2126 sh 3, H-14-030013 sh 1,2,3;

5. Lockbox Location(s) and Lock Number(s)  
Middle C Farm Change Trailer/  
A161  
Lock box # 2

6. Work Authorization/Documentation	7. Applicable Tag Numbers	8. Reason for Lockout/Tagout	9. Personnel Hazard	10. Technical Review Sign/Date	11. Lockout/Tagout Authorized Sign/Date	12. Lockout/Tagout Work Complete Sign/Date
CLO-WO-06-1066	1	Clean and Inspect Electrical Equip	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	
CLO-WO-06-1044	1	Clean and Inspect Electrical Equip	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	
CLO-WO-06-1011	1	Clean and Inspect Electrical Equip	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	
CLO-WO-06-1012	1	Clean and Inspect Electrical Equip	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	
CLO-WO-06-1007	2	Clean and Inspect Electrical Equip	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	8-29-06 WHB
CLO-WO-06-1008	3	Clean and Inspect Electrical Equip	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	8-28-06 WHB
CLO-WO-06-1405	1	Disconnected Unused Electrical Equipment	Electrical Shock	<i>[Signature]</i> 8/24/06	<i>[Signature]</i> 8/24/06	

13. Tag No. 14. Special Instructions

1,2,3 The controlling organization lock on the lockbox indicates that the equivalent protection is still in place.

15. Comments

16. Surveillance Record

MONTHLY

Initials	Date								

CH2M HILL LOCKOUT/TAGOUT AUTHORIZATION RECORD SECTION

19. Tag No.	20. Component Tagged	21. Location	22. Lock Number	23. Required Position or Condition	24. Authorized By Sign/Date	25. Installed By Sign/Date	26. Independently Verified By Sign/Date	27. Safe Condition Check By Sign/Date	28. Removal Approval Sign/Date	29. Restoration Position/Condition	30. Removed By Sign/Date
1	CRX544	CR Elec. TRSFMR	N/A	Fuses Pulled	[Signature] 8/29/06	[Signature] 8/29/06	[Signature] 8-29-06	[Signature] 8-29-06	[Signature] 8-29-06	Fuses pulled	[Signature] 8-29-06
2	CRX642	Middle C Change Trl	N/A	Fuses Pulled	[Signature] 8/29/06	[Signature] 8-29-06	[Signature] 8-29-06	[Signature] 8-29-06	[Signature] 8-29-06	Fuses pulled	[Signature] 8-29-06
3	CRX814	Upper C Change Trl	N/A	Fuses Pulled	[Signature] 8/29/06	[Signature] 8-29-06	[Signature] 8-29-06	[Signature] 8-29-06	[Signature] 8-29-06	Fuses pulled	[Signature] 8-29-06
4	AN271-EDS-BKR-125	AN271-EDS-MCC-001	A159	OFF	[Signature] 8/29/06	[Signature] 8/29/06	[Signature] 8-29-06	[Signature] 8/29/06	[Signature] 8-29-06		

31. Tag No	32. Safe Condition Credit
1	Zero electrical energy at CR271-EDS-MCC-002.
2	Zero electrical energy at MO-512 Change Trailer.
3	Zero electrical energy at MO-822 Change Trailer.
4	Zero electrical energy at AN241-EDS-DS-120.

3. System 241-C Electrical Distribution/241-AN Electrical Distribution

4. Controlled Drawings, ECNs, Documents  
H-14-030001 Sh 2, H-14-030025 Sh 5

6. Work Authorization/ Documentation	7. Applicable Tag Numbers	8. Reason for Lockout/Tagout	9. Personnel Hazard	10. Technical Review Sign/Date	11. Lockout/Tagout Authorized Sign/Date	12. Lockout/Tagout Work Complete Sign/Date
C10-WO-06-1408	1, 4	Electrical Circuit Breaker Inspection	Electrical Shock	<i>[Signature]</i> 8/29/06	<i>[Signature]</i> 8/29/06	

13. Tag No. 14. Special Instructions

15. Comments

16. Surveillance Record

Initials	Date	Initials	Date	Initials	Date	Initials	Date



## WORK RELEASE CHECKLIST FOR OE'S

(For Operations Pre-Release Review)

Work Package No.: CLO-WO-06-01405 Reviewed By: *Roulette* Date: 8/29/06

Title: 241-C-EDS Optimization

RWR: \_\_\_\_\_

**Document Check:**

- Work Instructions
- Data Sheets
- JCS Partial Release Sheet (J-9 or A-6001-819)
- BOM
- CACN listed and correct
- Hold Points
- Waste Planning Checklist
- SJHA / JHA / JSA
- Pre-Job Safety Meeting form
- Attendance Roster
- RWP
- ALARACT
- OTP (Operational Test Procedure)
- ATP (Acceptance Test Procedure)
- USQ Screening (No. TF-06-1043-S)
- ECNs (# 72407020) (# \_\_\_\_\_ )  
(# \_\_\_\_\_ )
- Reference Drawings
- Lockout / Tagout Authorization or AWT form prepared
- Asbestos Work Permit / Negative Exposure Assessment
- Core-Drill / Tie-in Permit
- Hot Work Permit (fire watch required)
- Confined Space Entry Permit
- Non-Permit Confined Space monitoring form
- Excavation Permit (ground scan or explanation why none)
- EEWP
- Procedures
- Vehicle Route Map
- Critical Lift Procedure
- Hoisting and Rigging Information
- MSDS Sheets
- Glove Bag / Containment Form
- Ignition Source Control Requirements Screening
- Standing Orders
- ALARA Management Worksheet

**Limiting Conditions for Operation (LCOs):**

- 3.1.1 Transfer Leak Detection Systems
- 3.1.2 Backflow Prevention Systems
- 3.2.1 DST Primary Ventilation Systems
- 3.2.2 SST Passive Ventilation Systems

**Administrative Controls (ACs):**

- 5.10 Flammable Gas Controls
- 5.11 Transfer Controls
- 5.12 Administrative Lock Controls
- 5.13 Bulk Chemical Addition Controls
- 5.14 Dome Loading Controls
- 5.15 Tank Farm Installed Instrumentation
- 5.16 Corrosion Mitigation Program
- 5.17 Vacuum Retrieval Controls

Comments:

14

## WORK RELEASE CHECKLIST FOR OE'S (continued)

(For Operations Pre-Release Review)

Work Package No.: CLO-WO-06-01405

Reviewed By: *Keith Muth*

Date: 8/29/06

RWR

Title: 241-C-EDS Optimization

Please Explain all "NO" responses in the Comment section below.

		YES	NO	N/A
1.	Is the USQ and revision listed in the WP, or in Block 22 of the JCS Work Document? RWRs (Block 17)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	Do all changes to the WP/RWR include an USQ assignment (screening, determination or Cat-X) by Engineering or Nuclear Safety & Licensing (NS&L)?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.	Does the referenced USQ (specific, not Cat-X) actually cover the WP/RWR, not just the ECN?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	Is configuration of equipment and systems properly identified for safe operation while the work is being performed?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	Is operability of the equipment and systems properly restored as part of the retesting?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
6.	Are the Lock and Tag steps required to install and remove included in the work document and are the forms complete and in the WP?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	Are TSR, LCO, OSD, and AB requirements properly included? (Note for LCO entry/exit.)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
8.	Was Safety Classification of the SSC's (Structures, Systems and Components) identified in the WP/RWR correctly?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	Have appropriate final inspections or retest instructions been included? (SS/SC must address retest.)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
10.	Are Partial Release Sheets Prepared?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
11.	Are work scope boundaries clear and the forms complete and in the WP?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

## OPERATIONS WORK PACKAGE (WP) ACCEPTANCE CHECKLIST

WP Number: CLO-WO-06-1405

Date: 1/4/07

Name of Reviewer: Reichmuth

**WP Review for Operations Acceptance**

(Do not Ops Accept if any "NO" checked - Return to Work Control to resolve)

		YES	NO	N/A
1.	Has the Field Work Supervisor signed the work package field work complete? <ul style="list-style-type: none"> <li>• Did the workers/FWS adequately document the work performed?</li> <li>• Has the FWS written work requests for all failed or deficient SSC?</li> <li>• Are the documented data, checklists and permits completed as required for the activity to allow it to be returned to Operations (Hold Points, supporting procedures, data sheets, signoffs, etc.)?                             <ul style="list-style-type: none"> <li>◦ (Note Post Review signoffs are not required for Operations acceptance)</li> </ul> </li> </ul>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	If the work package involves an ECN, has engineering closed out the ECN (Modification Complete Block signed)? <ul style="list-style-type: none"> <li>• If the work package involves a Temporary Modification ("TM" block is checked on the front page of the ECN), has engineering signed the "Restored To Original Status" block of the ECN?                             <ul style="list-style-type: none"> <li>◦ Has the Temporary Modification been removed from the Temporary Modification Logbook?</li> <li>◦ Has the Caution Tag been removed from the Temporary Modification?</li> </ul> </li> </ul>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	Has the Controlling Organization Lockout "work complete" block on the Tag Out Authorization Form been signed for the work package? <ul style="list-style-type: none"> <li>• If a single point lockout/tag out or Authorized Worker Lockout was used, is the form filled out completely (i.e., work complete and lock removed)?</li> </ul>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	If a routing board update was required, was the routing board updated? <ul style="list-style-type: none"> <li>• Were jumper leack check requirements implemented?</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5.	Is the current status of the SSC known and acceptable for turnover to Operations (i.e., operable, returned to service, out of service)?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

16

S S

<b>CH2M HILL ENGINEERING CHANGE NOTICE</b>	1a. ECN 724070 R 1
Page 1 of 7 <span style="margin-left: 100px;"><input type="checkbox"/> DM</span> <span style="margin-left: 20px;"><input checked="" type="checkbox"/> FM</span> <span style="margin-left: 20px;"><input type="checkbox"/> TM</span>	1b. Proj. ECN N/A - - R

<b>2. Simple Modification</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>3. Design Inputs</b> - For full ECNs, record information on the ECN-1 Form (not required for Simple Modifications)	<b>4. Date</b> 08/30/06
<b>5. Originator's Name, Organization, MSIN, &amp; Phone No.</b> Jessica R Hahn, COSE, S7-90, 373-1332	<b>6. USQ Number</b> No. TF - 06 - 1071 - S R - 0  <input type="checkbox"/> N/A	<b>7. Related ECNs</b> ECN-724070-R0 ECN-723552-R0
<b>8. Title</b> 241-C EDS Optimization	<b>9. Bldg. / Facility No.</b> 241-C	<b>10. Equipment / Component ID</b> None
<b>12. Engineering Documents/Drawings to be Changed</b> (Incl. Sheet & Rev. Nos.) H-14-030013 Sh. 2, Rev. 9; Sh. 3, Rev. 6; Sh. 9, Rev. 6		<b>13. Safety Designation</b> <input type="checkbox"/> SC <input type="checkbox"/> SS <input checked="" type="checkbox"/> GS <input type="checkbox"/> N/A
<b>15a. Work Package Number</b> CLO-WO-06-1405	<b>15b. Modification Work Completed</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <i>MJ Bryden</i>  <b>SEP 12</b>  <i>MJ BRYDEN</i> 9.12.06  <small>Responsible Engineer / Date</small> </div>	<b>15c. Restored to Original Status (TM)</b> LUUO STA 3 N/A 18 <small>Responsible Engineer / Date</small>
<b>16. Fabrication Support ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

**17. Description of the Change** (Use ECN Continuation pages as needed)

**Problem:** There are numerous pieces of equipment in the C Farm that are no longer being used nor have a future use planned for them that require large amounts of craft resources to do regular preventative maintenance. The equipment is seen as a potential safety hazard in the future because of its age and condition in the field. The equipment, if left energized, could represent a potential electrical hazard to the craft personnel if asked to operate such equipment (i.e. disconnects, breakers, and pump contactors).

**Solution:** The electrical equipment should be determined from the source and electrically isolated to minimize the potential electrical hazards in the farm. This change will also allow the craft personnel to discontinue the electrical PMs on the equipment and save valuable resource time and money.

**Analysis:** The equipment is no longer in use and has no future scope related to operations or projects.

**Testing:** N/A

**NOTE:** Page 4 of this ECN replaces page 5 of ECN 724070-R0, and pages 4 and 5 of this ECN replace the corresponding portions of page 7 of ECN-723552-R0

<b>18. Justification of the Change</b> (Use ECN Continuation pages as needed) The electrical equipment in C Farm has become old and presents potential safety hazards to our craftsmen if asked to work on these pieces of equipment. In an effort to optimize the electrical systems in the tank farms, the equipment will be disconnected from the source and removed from the PM data sheets to save craft resources and company money from doing unnecessary maintenance on obsolete equipment.	<b>19. ECN Category</b> <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Supplemental <input type="checkbox"/> Void/Cancel  <b>ECN Type</b> <input type="checkbox"/> Supersedure <input checked="" type="checkbox"/> Revision
--	--

20. Distribution			
Name	MSIN	Name	MSIN
MJ BRYDEN	S7-67	DG BAIDE	S7-24
JA BEWICK	S7-24		
WT THOMPSON	S7-67		
LS KROGSRUD	S7-24		
DB PARKMAN	S7-67		
TH NGUYEN	S7-24		
RE STODDARD	S7-92		

**Release Stamp**

**AUG 31 2006**

DATE: HANFORD

STA: 3 RELEASE ID: 18

ECN 724070 R 1 17

SEP 12 2006 18

CH2M HILL ENGINEERING CHANGE NOTICE

1a. ECN 724070 R 1

1b. Proj. ECN N/A - - R

DM  FM  TM

Page 2 of 7

21. Revisions Planned (include a brief description of the contents of each revision)  
NONE

Note: All revisions shall have the approvals of the affected organizations as identified in block 11 "Approval Designator," on page 1 of this ECN.

22. Commercial Grade Item Dedication Numbers (associated with this design change)  
NONE

23. Engineering Data Transmittal Numbers (associated with this design change, e.g., new drawings, new documents)  
NONE

24. Other Non Engineering (not in HDCS) documents that need to be modified due to this change

Type of Document	Document Number	Update Completed On	Responsible Engineer (print/sign and date)
Alarm Response Procedure	N/A		
Operations Procedure	N/A		
Maintenance Procedure	N/A		
Type of Document	Document Number	Type of Document	Document Number
Data Sheets	WT-07716, WT-07283		

25. Field Change Notice(s) Used?  
 Yes  No  
If Yes, Record information on the ECN-2 Form, attach form(s), include a description of the interim resolution on ECN Page 1, block 17, and identify permanent changes.

NOTE: ECNs are required to record and approve all FCNs issued. If the FCNs have not changed the original design media then they are just incorporated into the design media via an ECN. If the FCN did change the original design media then the ECN will include the necessary engineering changes to the original design media.

26. Design Verification Required?  
 Yes  No  
If Yes, as a minimum attach the one page checklist from TFC-ENG-DESIGN-P-17.

27. Approvals

Facility/Project Signatures	Date	A/E Signatures	Date
Resp. Engineer MJ BRYDEN <i>[Signature]</i>	8-31-06	Originator/Design Agent JR HAHN <i>[Signature]</i>	8-31-06
Resp. Manager WT THOMPSON <i>[Signature]</i>	8-31-06	Professional Engineer _____	
Quality Assurance _____		Project Engineer _____	
IS&H Engineer _____		Quality Assurance _____	
NS&L Engineer _____		Safety _____	
Environ. Engineer _____		Designer _____	
Engineering Checker JA BEWICK <i>[Signature]</i>	8-31-06	Environ. Engineer _____	
Other _____		Other _____	
Other _____		Other _____	
Other _____		DEPARTMENT OF ENERGY / OFFICE OF RIVER PROTECTION	
Other _____		Signature or a Control Number that tracks the Approval Signature	
Other _____		ADDITIONAL SIGNATURES	
Other _____			

18

**CH2M HILL ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET**

1a. ECN 724070 R 1

Page 3 of 7

1b. Proj. ECN N/A

Document/Drawing No. N/A

Sheet N/A

Revision N/A

Description of Change continued:

**H-14-030013 Sh. 2, R. 9**

The Motor Control Center (MCC) CR271-EDS-MCC-002 is a cubicle system that allows the breakers to be removed from the cubicle by disconnecting the breakers' line side wires from the MCC bus. Complete the disconnection on the designated cubicles as shown on page 4 of this ECN.

Update MCC Legend to reflect A1, A3, B1, E1, E2, and G3 as spaces on page 5 of this ECN.

**H-14-030031 Sh. 3, R. 6**

The Motor Control Center (MCC) CR271-EDS-MCC-002 is a cubicle system that allows the breakers to be removed from the cubicle by disconnecting the breakers' line side wires from the MCC bus. Complete the disconnection on the designated cubicles as shown on page 6 of this ECN.

**H-14-030013 Sh. 9, R. 6**

Revise panelboard schedule to show circuits 25, 29, and 31 as spare and update load values as shown on page 7.

Note: An AutoCAD page may be used in place of this form (the header section items must be included on the AutoCAD page).

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

PAGE 4 OF 7

To ECN 724070 R1

R1

To Proj N/A

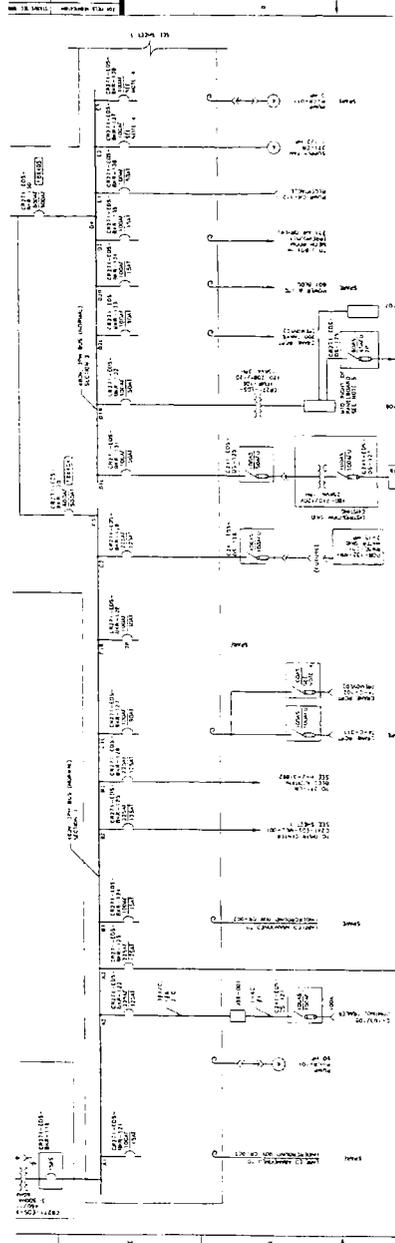
ECN

Document/Drawing No. H-14-030013 Sheet 2 Revision 9

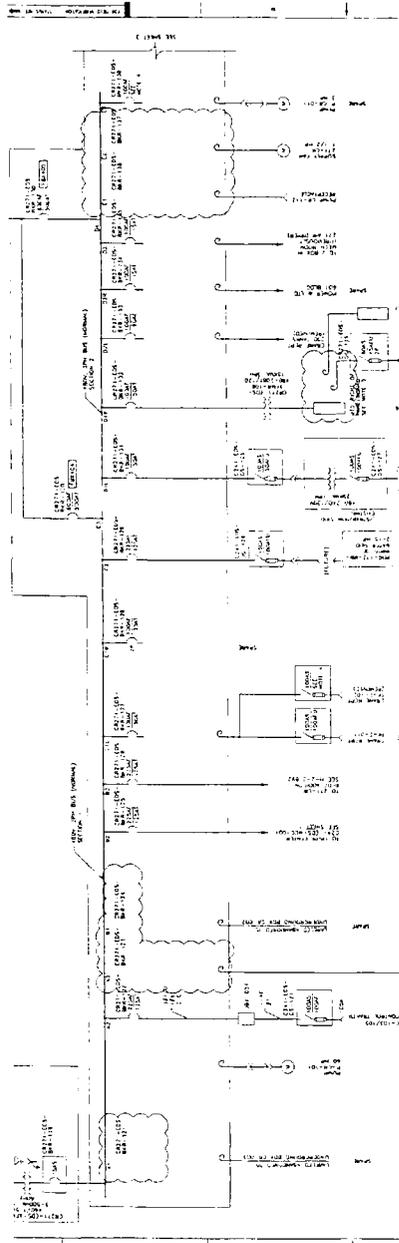
ECN NOTE: DELETE OR RE-USE CLOTTED AREAS ONLY

THIS PAGE REPLACES PAGE 5 OF ECN-724070-R0  
AND CORRESPONDING PORTION OF PAGE 7 OF  
ECN-723552-R0

WAS:



IS: REMOVE BREAKERS AND DISCONNECT EQUIPMENT SHOWN



22

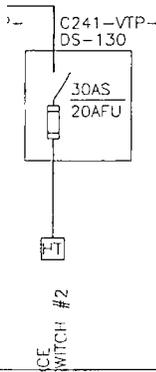
Document/Drawing No. H-14-030013 Sheet 2 Revision 9

ECN NOTE: DELETE OR REVISE CLOUDED AREAS ONLY

THIS PAGE REPLACES CORRESPONDING PORTION OF PAGE 7 OF ECN-723552-R0

WAS:

/106  
IAUSTER  
D



A1	SPARE	E4	COMPRESSOR BUILDING 241-C-701 SEE NOTE
A2	C-103/105 CONTROL TRAILER	F1	SPARE
A3	C-105/106 EXHAUST SKID (BREAKER HANDLE LOCATED INSIDE)	F2	SPARE
B1	SPARE	F3	SPARE
B2	DISTR CENTER MCC-001	F4	SPACE
B3	CR-271 BUILDING ADDITION	G1	SPACE
C1L	SPARE	G2	SPACE
C1R	SPARE	G3	LOADOUT BLDG 801-C
C2	C241-EDS-DS-126 & RECEPTACLE	G4	PANELBOARD EDS-DP-110
C3	MCC-002 SECTION 1	G5	SPARE
D1L	C241-EDS-DS-125 & RECEPTACLE	H1	PANELBOARD EDS-DP-111 & 112
D1R	PANELBOARD EDS-DP-106	H2	PANELBOARD C241-EDS-DP-114
D2L	SPARE	H3L	EMERGENCY BUS
D2R	SPARE	H3R	EMERGENCY BUS GENERATOR
D3	SPARE	I1	SPARE
D4	INCOMING FEEDER SECTION NO. 2	I2	SPARE
E1	CF-112 PUMP RECEPTACLE SEE NOTE	I3	MINI-POWER ZONE CR244-EDS-DP-101
E2	CR-271 SUPPLY FAN SEE NOTE	I4	SPARE
E3	SPARE SEE NOTE	I5	SPARE

TEMPORARY

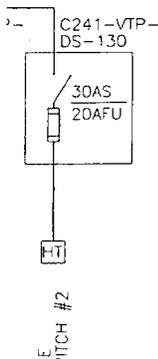
SECTION

A1	B1
A2	B2
A3	B3

MCC LEGEND

IS: MODIFY LEGEND TO REFLECT SPARES

/106  
IAUSTER  
D



A1	SPACE	E4	COMPRESSOR BUILDING 241-C-701 SEE NOTE
A2	<del>C-103/105 CONTROL TRAILER</del>	F1	SPARE
A3	SPACE (BREAKER HANDLE LOCATED INSIDE)	F2	SPARE
B1	SPACE	F3	SPARE
B2	<del>DISTR CENTER MCC-001</del>	F4	SPACE
B3	CR-271 BUILDING ADDITION	G1	SPACE
C1L	SPACE	G2	SPACE
C1R	SPACE	G3	SPACE
C2	C241-EDS-DS-126 & RECEPTACLE	G4	<del>PANELBOARD EDS-DP-110</del>
C3	MCC-002 SECTION 1	G5	SPARE
D1L	C241-EDS-DS-125 & RECEPTACLE	H1	PANELBOARD EDS-DP-111 & 112
D1R	PANELBOARD EDS-DP-106	H2	PANELBOARD C241-EDS-DP-114
D2L	SPARE	H3L	EMERGENCY BUS
D2R	SPARE	H3R	EMERGENCY BUS GENERATOR
D3	SPARE	I1	SPARE
D4	INCOMING FEEDER SECTION NO. 2	I2	SPARE
E1	SPACE	I3	MINI-POWER ZONE CR244-EDS-DP-101
E2	SPACE	I4	SPARE
E3	SPACE SEE NOTE	I5	SPARE

TEMPORARY

SECTION

A1	B1
A2	B2
A3	B3

MCC LEGEND

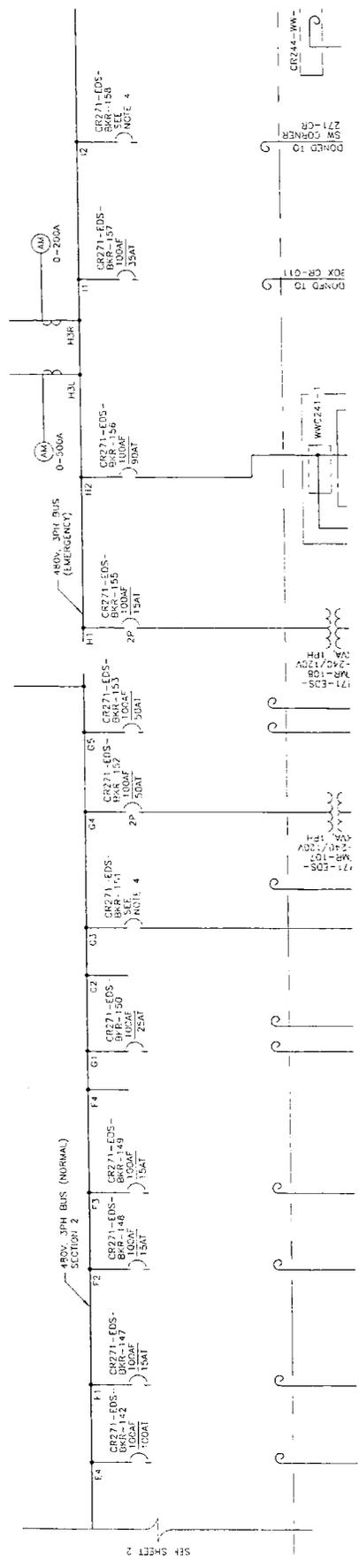
21

ENGINEERING CHANGE NOTICE CONTINUATION SHEET		1a. ECN 724070	R1
PAGE 6 OF 7		1b. Proj. ECN	N/A

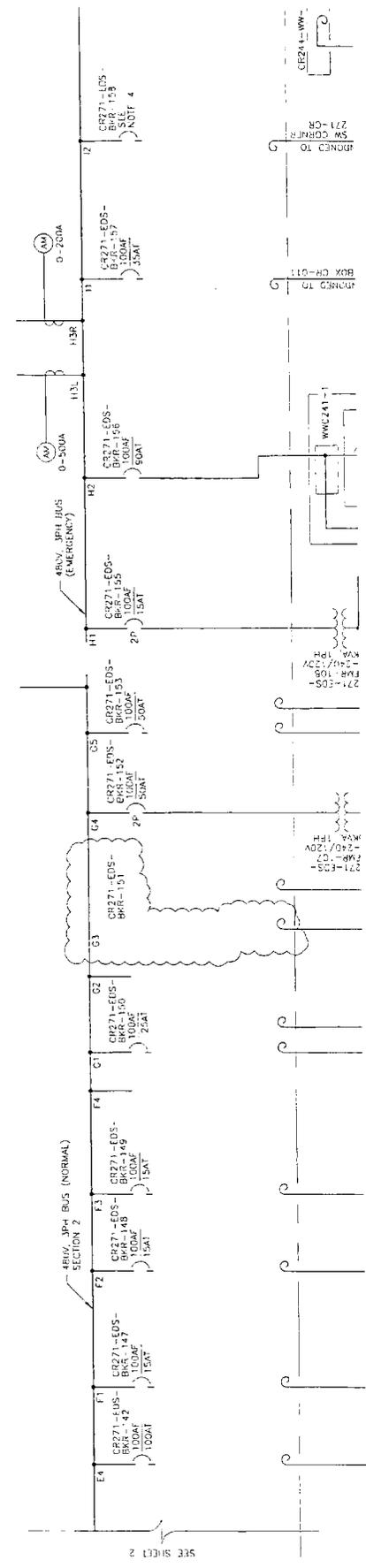
Document/Drawing No. H-14-03001.3 Sheet 3 Revision 5

FCN NOTE: DELETE OR REVISE CLOUDED AREAS ONLY

WAS:



IS: DISCONNECT EQUIPMENT AND REMOVE BREAKER AS INDICATED



27

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

1a. ECN 724070 R1

PAGE 7 OF 7

1b. Proj. N/A  
ECN

Document/Drawing No. H-14-030013 Sheet 9 Revision 6

ECN NOTE: DELETE OR REVISE CLOUDED AREAS ONLY

WAS:

	900		HALL, LUNCHRM, CNTRL RM RCPT	19		20	OUTSIDE LIGHT A
	-		SPARE	21		22	INSIDE & OUTSIDE
		540	HALL & COMPRESSOR ROOM RCPT	23		24	INSIDE LIGHTS
	360		MEN'S ROOM EXHAUST FAN RCPT LUNCH ROOM 240V RECEPTACLE	25		26	INSIDE LIGHTS
	180		LUNCH ROOM 240V RECEPTACLE	27		28	SPARE
		180	240V RCPT BEHIND INSTR PANEL, LUNCH ROOM RECEPTACLE	29			
	180		240V RCPT BEHIND INSTR PANEL	31		32	200 VA TRANSFC THERMOSTATS AN
		50	TO UTILITY FIELD DATA ACQUISITION SYSTEM #86	33		34	SPARE
		360	SWP ROOM RECEPTACLES	35A		36A	OLD CHANGE SH DISCONNECT SWI
		-	SUPPLIES TERMINATED WIRE IN TBX ABOVE INSTRUMENT PANEL CB5	35B		36B	AT SUBSTATION

SUBTOTAL 1440 230 1320

TOTAL WATTS PHASE A: 2660  
TOTAL WATTS PHASE B: 3790  
TOTAL WATTS PHASE C: 4880  
TOTAL: 11,330

PARTIALLY SUPERSEDED  
H-2-41251 SH

IS AN UNDETERMINED LOAD  
IS TO SAME SO CORD AS  
"IA" CIRCUIT 5.

IS:

	900		HALL, LUNCHRM, CNTRL RM RCPT	19		20	OUTSIDE LIGHT A
	-		SPARE	21		22	INSIDE & OUTSIDE
		540	HALL & COMPRESSOR ROOM RCPT	23		24	INSIDE LIGHTS
	-		SPARE	25		26	INSIDE LIGHTS
	180		LUNCH ROOM 240V RECEPTACLE	27		28	SPARE
		-	SPARE	29			
	-		SPARE	31		32	200 VA TRANSFC THERMOSTATS AN
		50	TO UTILITY FIELD DATA ACQUISITION SYSTEM #86	33		34	SPARE
		360	SWP ROOM RECEPTACLES	35A		36A	OLD CHANGE SH DISCONNECT SWI
		-	SUPPLIES TERMINATED WIRE IN TBX ABOVE INSTRUMENT PANEL CB5	35B		36B	AT SUBSTATION

SUBTOTAL 900 230 1140

TOTAL WATTS PHASE A: 2120  
TOTAL WATTS PHASE B: 3790  
TOTAL WATTS PHASE C: 4700  
TOTAL: 10610

PARTIALLY SUPERSEDED  
H-2-41251 SH

IS AN UNDETERMINED LOAD  
IS TO SAME SO CORD AS  
"IA" CIRCUIT 5.

23



SEP 12 2006 18  
3  
Page 2 of 6

### CH2M HILL ENGINEERING CHANGE NOTICE

1a. ECN 724070 R 0

DM  FM  TM

1b. Proj. ECN N/A - - R

21. Revisions Planned (Include a brief description of the contents of each revision)  
None

Note: All revisions shall have the approvals of the affected organizations as identified in block 11 "Approval Designator," on page 1 of this ECN.

22. Commercial Grade Item Dedication Numbers (associated with this design change)  
None

23. Engineering Data Transmittal Numbers (associated with this design change, e.g., new drawings, new documents)  
None

#### 24. Other Non Engineering (not in HDCS) documents that need to be modified due to this change

Type of Document	Document Number	Update Completed On	Responsible Engineer (print/sign and date)
Alarm Response Procedure	N/A		
Operations Procedure	N/A		
Maintenance Procedure	N/A		
Type of Document	Document Number	Type of Document	Document Number
DATA SHEETS	WT-07150, WT-07114		

#### 25. Field Change Notice(s) Used?

Yes  No

If Yes, Record information on the ECN-2 Form, attach form(s), include a description of the interim resolution on ECN Page 1, block 17, and identify permanent changes.

NOTE: ECNs are required to record and approve all FCNs issued. If the FCNs have not changed the original design media then they are just incorporated into the design media via an ECN. If the FCN did change the original design media then the ECN will include the necessary engineering changes to the original design media.

#### 26. Design Verification Required?

Yes  No

If Yes, as a minimum attach the one page checklist from TFC-ENG-DESIGN-P-17.

#### 27. Approvals

Facility/Project Signatures	Date	A/E Signatures	Date
Resp. Engineer MJ Bryden <i>[Signature]</i>	8-24-06	Originator/Design Agent	
Resp. Manager DG Baide <i>[Signature]</i>	8-24-06	Professional Engineer	
Quality Assurance		Project Engineer	
IS&H Engineer		Quality Assurance	
NS&L Engineer		Safety	
Environ. Engineer		Designer	
Engineering Checker GJ Coleman <i>[Signature]</i>	8/24/06	Environ. Engineer	
Other JA Bewick <i>[Signature]</i>	8/24/06	Other	
Other		Other	
Other		DEPARTMENT OF ENERGY / OFFICE OF RIVER PROTECTION	
Other		Signature or a Control Number that tracks the Approval Signature	
Other		ADDITIONAL SIGNATURES	
Other			
Other			

25

**CH2M HILL ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET**

1a. ECN 724070 R 0

Page 3 of 6

1b. Proj. ECN N/A - - R

Document/Drawing No. N/A

Sheet N/A

Revision N/A

Description of Change Continued:

**H-14-030013 Sh.1 R.11**

Distribution Center C241-EDS-MCC-001 is a 480V distribution panel and the loads will be removed from the load side of the breakers as shown on page 4 of this ECN.

**H-14-030013 Sh.2 R.9**

The Motor Control Center (MCC) CR271-EDS-MCC-002 is a cubicle system that allows the breakers to be de-energized by disconnecting the breakers' line side wires from the MCC bus and leaving the entire cubicle de-energized. Complete the disconnection on the designated cubicles as shown on page 5 of this ECN.

**H-14-030013 Sh.3 R.6**

The disconnection of the disconnect switches from the pull box (PB) as shown on sheet 6 of this ECN are to ensure the power is isolated to the disconnects to allow removal from the EDS preventative maintenance data sheet. Due to the lack of space the wires shown coiled outside the box is solely for the clarity of the disconnection. A flag note "X" to be added as the next available note on the drawing will state the following:

NOTE "X." WIRES ARE DISCONNECTED AND SAFED OFF INSIDE THE PULL BOX.

Note: An AutoCAD page may be used in place of this form (the header section items must be included on the AutoCAD page).

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

PAGE 6 OF 6

1a ECN: 724070 RO

1b Proj: N/A  
ECN

Document/Drawing No. H-14-030013 Sheet 3 Revision B

ECN NOTE: DELETE OR REVISE CLOUDED AREAS ONLY

WAS:

UTILITY  
480V  
RECEP

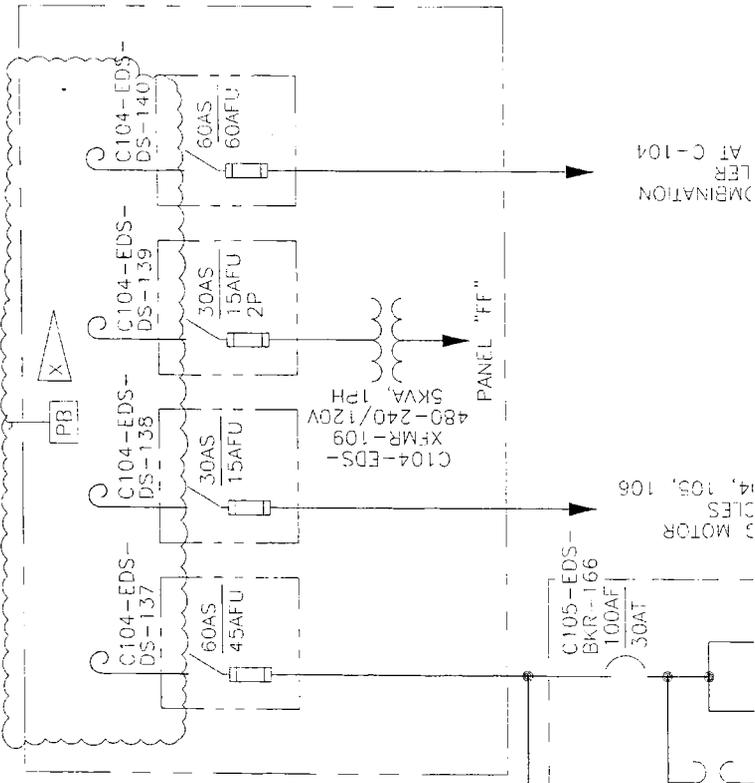
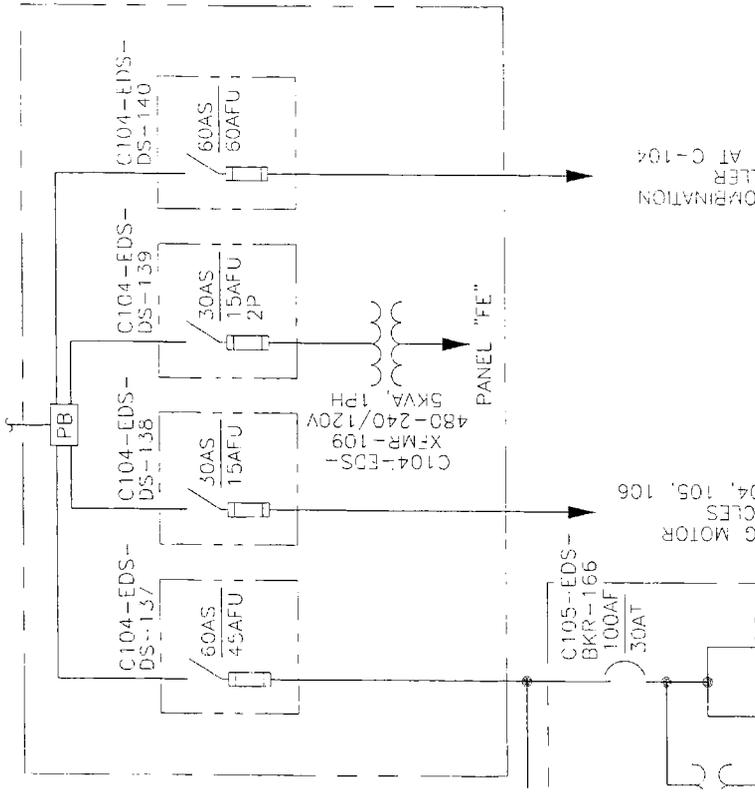
PANEL  
C241  
SEE SI

IS:

PANEL  
C241  
SEE SI

NO POWER PRESENT DURING CIRCUIT VERIFICATION  
POWER CABLES COULD NOT BE VERIFIED AT 241-CR-271 MCC  
SEE H-2-41336

NO POWER PRESENT DURING CIRCUIT VERIFICATION  
POWER CABLES COULD NOT BE VERIFIED AT 241-CR-271 MCC  
SEE H-2-41336



OPERATION  
LEAF  
AT C-104

G MOTOR  
CLES  
24, 105, 106

G MOTOR  
CLES  
24, 105, 106

OPERATION  
LEAF  
AT C-104



**UNREVIEWED SAFETY QUESTION (USQ) SCREENING**

USQ No.:  
**TF-06-1043-S**

Rev.  
**0**

**Title:** Revise Electrical Distribution in C-Farm via ECN-724070-R0 and Work Package CLO-WO-06-1405  
**Change Description:** A substantial proportion of the electrical distribution equipment in C-farm is no longer serving operable equipment. However as long as the distribution equipment is energized it must be maintained, thus consuming scarce resources. As a result management has decided to reduce much of the unnecessary distribution equipment by disconnecting it via ECN-724070-R0. This will not affect any operational or safety-related equipment in service in C-farm. No other changes are included.

**Categorical Exclusion (If applicable, check box and sign below)**

- GCX-1 (USQ Evaluator)
- GCX-2 (USQ Evaluator or designated staff)
- GCX-3 (USQ Evaluator or designated staff)

**Document Type(s) and Identification Number(s):** ECN-724070-R0 and Work Package CLO-WO-06-1405

**Project Identification**

No: None

Area:  East  West  General

Facility:  SST  DST  AWF  Other (specify):

**Based on this evaluation, this change does not require a USQ determination, i.e., this has been screened out of the USQ process.**

Safety basis change is required.

Initiate change in accordance with TFC-ENG-SB-C-01. Enter SBCN No.:

**SIGNATURES**

Trainee Preparer  N/A

Print name:

Date:

Sign:

**Preparer**

Print name: **G.J. Coleman**

Org./MSIN: S7-24

Date: 8/24/06

Sign: *(My signature below indicates that my USQ qualification is current on this date.)*

Phone: 372-3849



**Reviewer**

Print name: **J.F. Renholds**

Org./MSIN: S7-24

Date: 8/24/06

Sign: *(My signature below indicates that my USQ qualification is current on this date.)*

Phone: 373-4248



**Categorical Exclusion Preparer**

Print name:

Org./MSIN:

Date:

Sign: *(My signature below indicates that my USQ qualification is current on this date, or I am designated to sign for Categorical Exclusions [GCX-2 and GCX-3 only].)*

Phone:



## UNREVIEWED SAFETY QUESTION (USQ) SCREENING

USQ No.:  
TF-06-1043-SRev.  
0

## USQ SCREENING

1. Does the proposed change represent a temporary or permanent change in the facility as described in the existing DSA?  Yes  No

**Basis for No:** The proposed activity revises the electrical distribution service in C-farm. The DSA does not describe the electrical distribution system in each farm thus the proposed activity does not represent a temporary or permanent change in the facility as described in the existing DSA.

2. Does the proposed change represent a temporary or permanent change in the procedures as described in the existing DSA?  Yes  No

**Basis for No:** The proposed activity revises the electrical distribution service in C-farm. There are no procedure changes involved in, or required by, this design change, therefore the proposed activity does not represent a temporary or permanent change in the procedures as described in the existing DSA.

3. Does the proposed change represent a test or experiment not described in the existing DSA?  Yes  No

**Basis for No:** The proposed activity is a design change and does not represent a test or experiment not described in the existing DSA.

**CONCLUSION:** The proposed activity is not a change to the facility or procedures as described, nor is it a test or experiment not described in the DSA therefore no USQ determination is required.

**IMPACTS:** None

**REFERENCES:**

CH2M HILL 2006a, *Tank Farms Documented Safety Analysis*, RPP-13033, Rev. 1-P, CH2M HILL Hanford Group, Inc., Richland, Washington.

CH2M HILL 2006b, *Tank Farms Technical Safety Requirements*, HNF-SD-WM-TSR-006, Rev. 4-Q, CH2M HILL Hanford Group, Inc., Richland, Washington.

CH2M HILL 2006c, *Unreviewed Safety Questions*, TFC-ENG-SB-C-03, Rev. D-1 (including Safety Basis Bulletins through #249), CH2M HILL Hanford Group, Inc., Richland, Washington.

<b>CH2M HILL ENGINEERING CHANGE NOTICE</b>	1a. ECN 724070 R 0
Page 1 of 6	1b. Proj. ECN N/A - - R

<b>2. Simple Modification</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>3. Design Inputs</b> – For full ECNs, record information on the ECN-1 Form (not required for Simple Modifications)	<b>4. Date</b> 08/23/2006
<b>5. Originator's Name, Organization, MSIN, &amp; Phone No.</b> Joe A. Bewick, COSE, S7-24, 372-1116		<b>6. USQ Number</b> No. TF - 06 - 1043 - S R - 0  <input type="checkbox"/> N/A
<b>7. Related ECNs</b> None	<b>8. Title</b> 241-C EDS Optimization	<b>9. Bldg. / Facility No.</b> 241-C
<b>10. Equipment / Component ID</b> None	<b>11. Approval Designator</b> N/A	<b>12. Engineering Documents/Drawings to be Changed</b> (Incl. Sheet & Rev. Nos.) H-14-030013 Sh. 1 R.11, H-14-030013 Sh. 2 R. 9, H-14-030013 Sh. 3 R.6
<b>13. Safety Designation</b> <input type="checkbox"/> SC <input type="checkbox"/> SS <input checked="" type="checkbox"/> GS <input type="checkbox"/> N/A		<b>14. Expedited/Off-Shift ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>15a. Work Package Number</b> CLO-WO-06-1405	<b>15b. Modification Work Completed</b>  <small>Responsible Engineer / Date</small>	<b>15c. Restored to Original Status (TM)</b> N/A  <small>Responsible Engineer / Date</small>
<b>16. Fabrication Support ECN?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

**17. Description of the Change** (Use ECN Continuation pages as needed)

**Problem:** There are numerous pieces of equipment in the C Farm that are no longer being used nor have a future use planned for them that require large amount of craft resources to do regular preventative maintenance. The equipment is seen as a potential safety hazard in the future because of its age and condition in the field. The equipment if left energized could represent a potential electrical hazard to the craft personnel if asked to operate such equipment (i.e. disconnects, breakers and pump contactors).

**Solution:** The electrical equipment should be determined from the source and electrically isolated to minimize the potential electrical hazards in the farms. This change will also allow the craft personnel to discontinue the electrical PMs on the equipment and save valuable resource time and money.

**Analysis:** The equipment is no longer in use and has no future scope related to operations or projects.

**Testing:** N/A

<b>18. Justification of the Change</b> (Use ECN Continuation pages as needed) The electrical equipment in C Farm has become old and useless and presents potential safety hazards to our craftsman if asked to work on these pieces of equipment. In an effort to optimize the electrical systems in the tank farms the equipment will be disconnected from the source and removed from the PM data sheets to save craft resources and company money from doing unnecessary maintenance on obsolete equipment.	<b>19. ECN Category</b>  <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Supplemental <input type="checkbox"/> Void/Cancel  <u>ECN Type</u>  <input type="checkbox"/> Supersedure <input type="checkbox"/> Revision
---	---

20. Distribution			
Name	MSIN	Name	MSIN
JA Bewick			
MJ Bryden			
LS Krogsrud			
DB Parkman			
TH Nguyen			
DG Baide			
RE Stoddard			

Release Stamp

AUG 24 2006

DATE: \_\_\_\_\_

STA: 3

HANFORD  
RELEASE

ID: 18

# CH2M HILL ENGINEERING CHANGE NOTICE

1a. ECN 724070 R 0

Page 2 of 6

DM  FM  TM

1b. Proj. ECN N/A - - R

**21. Revisions Planned** (Include a brief description of the contents of each revision)

None

Note: All revisions shall have the approvals of the affected organizations as identified in block 11 "Approval Designator," on page 1 of this ECN.

**22. Commercial Grade Item Dedication Numbers** (associated with this design change)

None

**23. Engineering Data Transmittal Numbers** (associated with this design change, e.g., new drawings, new documents)

None

**24. Other Non Engineering (not in HDCS) documents that need to be modified due to this change**

Type of Document	Document Number	Update Completed On	Responsible Engineer (print/sign and date)
Alarm Response Procedure	N/A		
Operations Procedure	N/A		
Maintenance Procedure	N/A		
Type of Document	Document Number	Type of Document	Document Number
WT <sup>JAB</sup> 08-24-06			
DATA SHEETS	WT-07150, WT-07714		

**25. Field Change Notice(s) Used?**

Yes  No

If Yes, Record Information on the ECN-2 Form, attach form(s), include a description of the interim resolution on ECN Page 1, block 17, and identify permanent changes.

NOTE: ECNs are required to record and approve all FCNs issued. If the FCNs have not changed the original design media then they are just incorporated into the design media via an ECN. If the FCN did change the original design media then the ECN will include the necessary engineering changes to the original design media.

**26. Design Verification Required?**

Yes  No

If Yes, as a minimum attach the one page checklist from TFC-ENG-DESIGN-P-17.

**27. Approvals**

Facility/Project Signatures		Date	A/E Signatures		Date
Resp. Engineer	MJ Bryden <i>[Signature]</i>	8-24-06	Originator/Design Agent		
Resp. Manager	DG Baide <i>[Signature]</i>	8-24-06	Professional Engineer		
Quality Assurance			Project Engineer		
IS&H Engineer			Quality Assurance		
NS&L Engineer			Safety		
Environ. Engineer			Designer		
Engineering Checker	GJ Coleman <i>[Signature]</i>	8/24/06	Environ. Engineer		
Other	JA Bewick <i>[Signature]</i>	8/24/06	Other		
Other			Other		
Other			DEPARTMENT OF ENERGY / OFFICE OF RIVER PROTECTION		
Other			Signature or a Control Number that tracks the Approval Signature		
Other			ADDITIONAL SIGNATURES		
Other					
Other					

**CH2M HILL ENGINEERING CHANGE NOTICE  
CONTINUATION SHEET**

1a. ECN 724070 R 0

Page 3 of 6

1b. Proj. ECN N/A - - R

Document/Drawing No. N/A

Sheet N/A

Revision N/A

Description of Change Continued:

**H-14-030013 Sh.1 R.11**

Distribution Center C241-EDS-MCC-001 is a 480V distribution panel and the loads will be removed from the load side of the breakers as shown on page 4 of this ECN.

**H-14-030013 Sh.2 R.9**

The Motor Control Center (MCC) CR271-EDS-MCC-002 is a cubicle system that allows the breakers to be de-energized by disconnecting the breakers' line side wires from the MCC bus and leaving the entire cubicle de-energized. Complete the disconnection on the designated cubicles as shown on page 5 of this ECN.

**H-14-030013 Sh.3 R.6**

The disconnection of the disconnect switches from the pull box (PB) as shown on sheet 6 of this ECN are to ensure the power is isolated to the disconnects to allow removal from the EDS preventative maintenance data sheet. Due to the lack of space the wires shown coiled outside the box is solely for the clarity of the disconnection. A flag note "X" to be added as the next available note on the drawing will state the following:

NOTE "X." WIRES ARE DISCONNECTED AND SAFED OFF INSIDE THE PULL BOX.

Note: An AutoCAD page may be used in place of this form (the header section items must be included on the AutoCAD page).





ENGINEERING CHANGE NOTICE CONTINUATION SHEET

PAGE 6 OF 6

1a. ECN 724070	RO
1b. Proj. N/A	
ECN	

Document/Drawing No. H-14-030013 Sheet 3 Revision 5

ECN NOTE: DELETE OR REVISE CLOUDED AREAS ONLY

WAS:

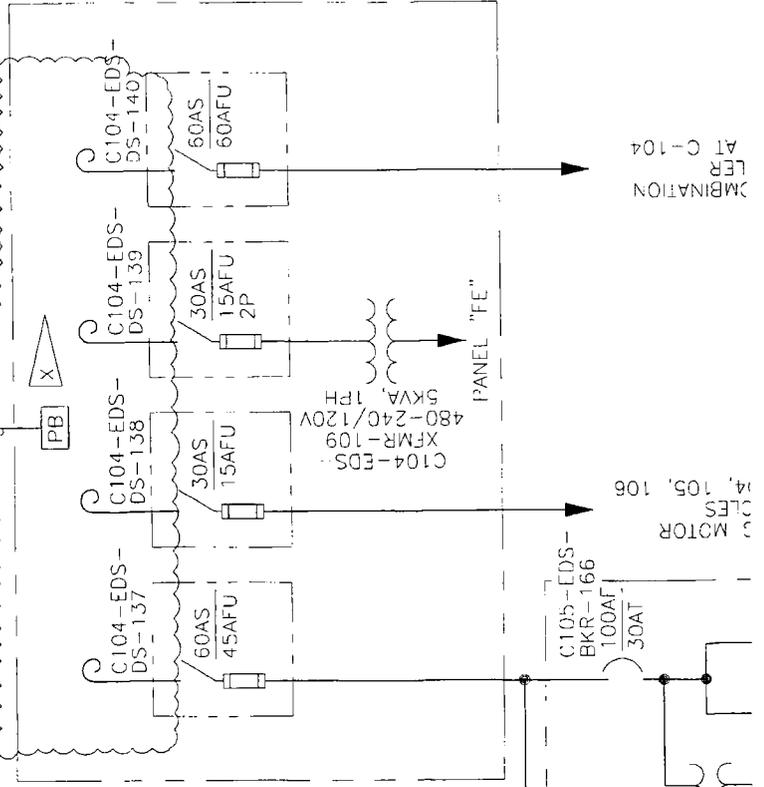
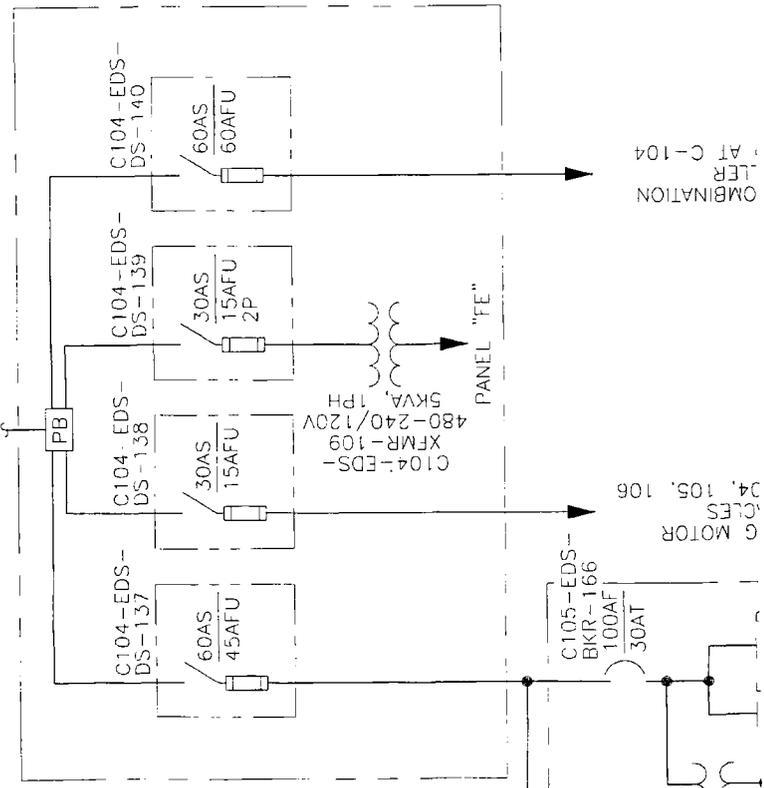
UTILITY  
480V  
RECEP.  
PANEL  
C241-  
SEE S1

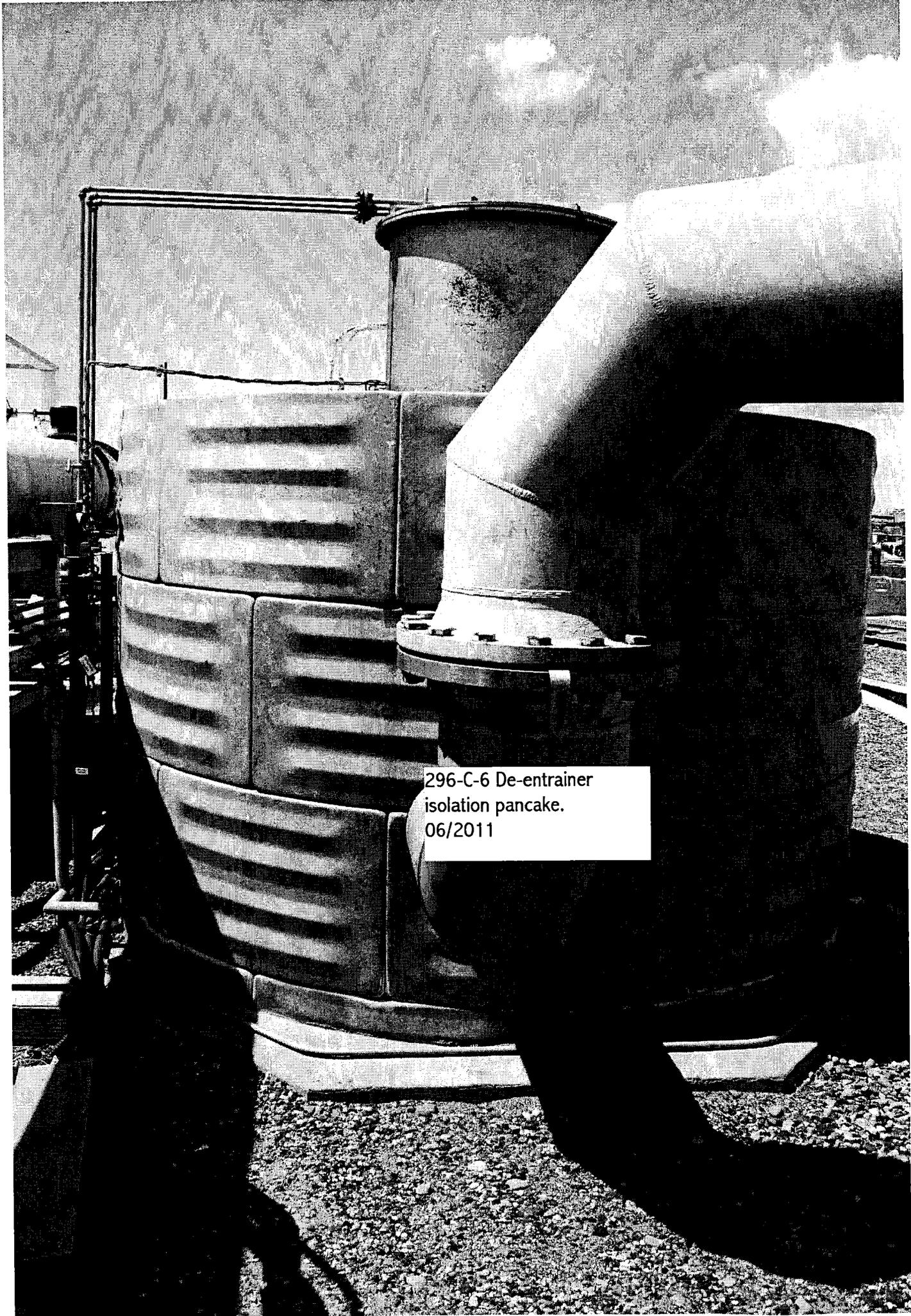
IS:

UTILITY  
480V  
RECEP.  
PANEL  
C241-  
SEE S1

NO POWER PRESENT DURING CIRCUIT VERIFICATION  
POWER CABLES COULD NOT BE VERIFIED AT 241-CR-271 MCC  
SEE H-2-41336

NO POWER PRESENT DURING CIRCUIT VERIFICATION  
POWER CABLES COULD NOT BE VERIFIED AT 241-CR-271 MCC  
SEE H-2-41336





296-C-6 De-entrainer  
isolation pancake.  
06/2011

296-C-6 Condensate  
Isolation  
06/2011



DISCONNECTED AT SOURCE  
PER ECN 724070 RO

UP  
**ON**

Heavy Duty  
Vacu-Break Switch with  
Clampmatic® Contacts  
DAT NO.      SWITCH  
                  Type 4  
                  Square D Code  
                  SOLTS 4.2  
Phase      Vol.      Amp.  
                  H.P.  
See notes and instructions  
on nameplate.  
Labels for use in safety enclosure

**⚠ DANGER**



HAZARDOUS VOLTAGE. WE  
CAUSE SAFETY SHOCKS TO ELIM-  
inate all unsafe working conditions of  
switching gear. Turn off power ahead  
of switch before doing any work.  
Labels: Clear panel before locking  
cover on.

DOWN  
**OFF**

C241-VTP-DS-129  
HEAT TRACE  
DISCONNECT SWITCH  
FED FROM: C241-VTP-DS-127  
8034811WT

DISCONNECTED AT SOURCE  
PER ECN 724070 RO

**SQUARE D**  
GENERAL DUTY  
SAFETY SWITCH  
DESCONECTADOR  
DE SEGURIDAD  
1-1/2"      150A

READ THESE INSTRUCTIONS CAREFULLY. Before any application  
check voltage with a test lamp.  
Turn off switch before reconnection. Working inside or adding  
leads is dangerous.  
Always use a properly fitted safety cap on all live  
parts and never touch another person during any work.  
Do not touch any other parts of the switch when working  
on it.

296-C-6 Electrical  
Isolation  
06/2011

DISCONNECTED AT SOURCE  
PER ECN 724070 RO



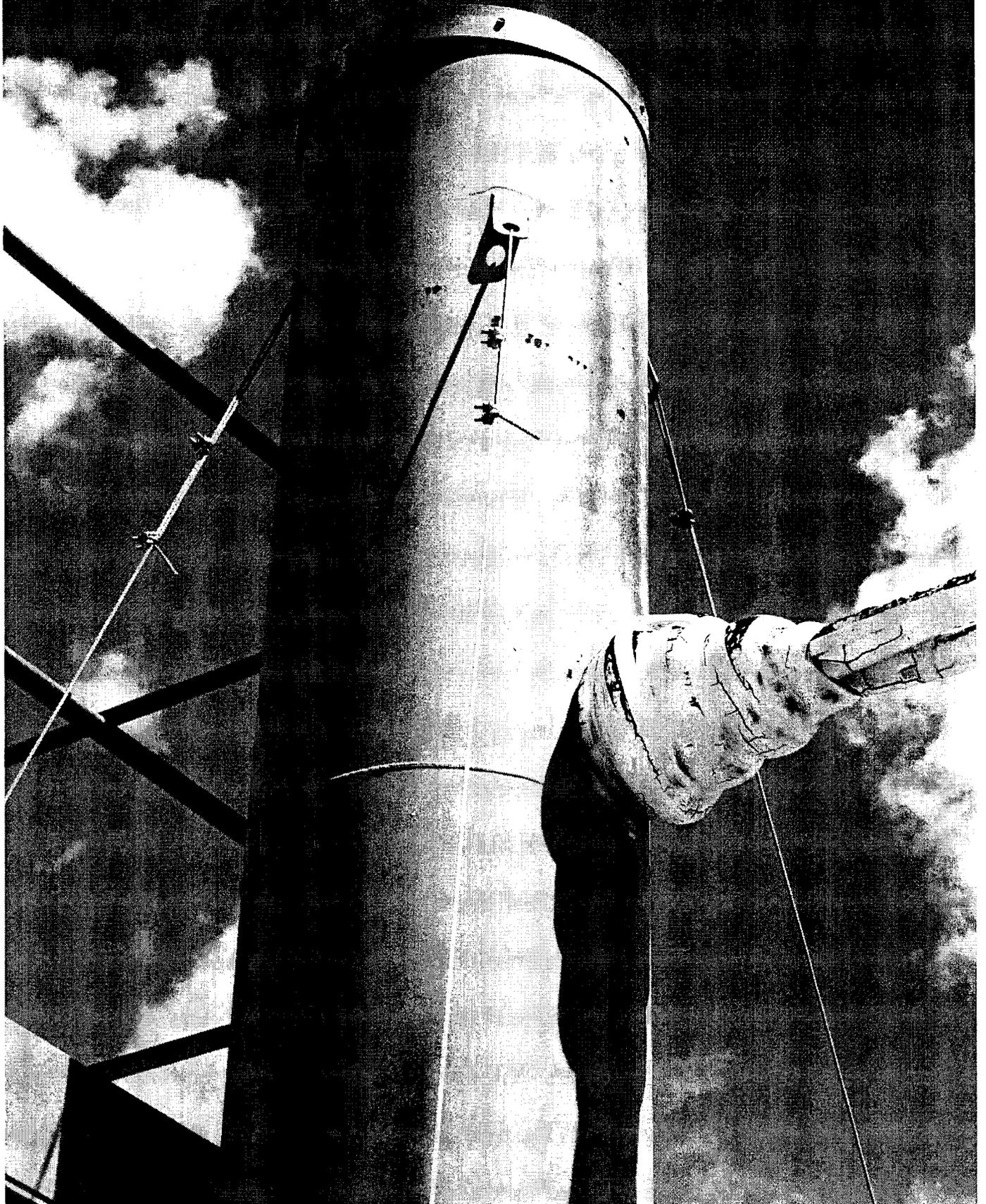
**SQUARE D**  
GENERAL DUTY  
SAFETY SWITCH  
DESCONECTOR  
DE SEGURIDAD  
30 A 1P  
240 VAC / V

  
HAZARD OF ELECTRICAL SHOCK, SURT OR EXPLOSION  
Never operate switch with door open  
• Turn off switch before removing or installing fuses or making load side connections  
• Always use a properly rated voltage sensing device at all time and load side fuse clips to confirm switch is off  
• Turn off power supplying switch before doing any other work on or inside switch  
Failure to follow the above instructions will cause death, severe personal injury or electrical damage

**C241-VTP-DS-130**  
HEAT TRACE SAFETY SWITCH #2  
DISCONNECT SWITCH  
FED FROM: C241-VTP-DS-127  
  
SD24012WT  
WH797 © EDJW 745 1

296-C-6 Electrical Isolation  
06/2011

296-C-6 Cap on Stack  
06/2011

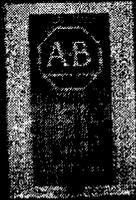


296-C-6 Stack Cabinet  
Isolation  
06/2011

C296-VIP-ENCLOSURE-500  
FED FROM  
C244-VIP-DS-26 H-14-0300  
C244-VIP-DS-26 H-14-0300  
GREATER THAN 50 VOLT SOURCES  
DISCONNECTED AT  
PER EON 72407

296-C-6 Heater Isolation  
06/2011

VENT HEATER NO. 1



VENT HEATER NO. 2



296-C-6 Blower  
Isolation  
06/2011

VENT BLOWER

C241-V7P-BKR-141  
VENT BLOWER  
CIRCUIT BREAKER  
100 AMP 480V 3P4W  
MAY 2008

VENT  
BLOWER

## Report of Closure/Permit Revision

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 08/31/2011

**NOC Application Revision**

New NOC Rev Number: \_\_\_\_\_

**Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: See below

**ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Report of closure for P-Vadose-002, Air Rotary Drilling

Current NOC Application Number: AOP Permit 00-05-006/ License Number FF-01

AEI ID Number (AOP Emission Unit Number(s): P-Vadose-002

Current WDOH Approval Letter Number(s): AIR 10-801

WDOH NOC ID Number: 539

### DESCRIPTION OF CHANGE

Number of Attachments 0

## Report of Closure for P-Vadose-002

### Summary/Introduction

In accordance with Washington Administrative Code 246-247-080(6), this report of closure is being submitted to the State of Washington Department of Health (WDOH) to document cessation of radionuclide emitting activities from P-Vadose-002. NOC 785 will remain open under EU ID 486 only.

The following information is provided in this document:

- Date of closure
- Remaining material
- Assessment of potential continued emissions
- Future plans
- Emissions control and monitoring

#### 1. Date of closure:

The P-Vadose-002 emission unit is no longer operationally needed and will not be used. The closure date is 06/08/2011.

2. Remaining material: The P-Vadose-002 was vendor equipment. Upon completion of the work scope, the vendor took their equipment.

3. Assessment of potential continued emissions:

- a. The unit is vendor owned and is not on site.
- b. The unit is vendor owned and is not on site.
- c. The unit is vendor owned and is not on site.
- d. The unit is vendor owned and is not on site.
- e. The P-Vadose-002 does not have a potential for continued emissions.

4. Future plans:

There are no plans to use the equipment.

5. Emissions control and monitoring:

Emissions control and monitoring is not required for the inactive and isolated P-Vadose-002. The unit is vendor owned and is no longer on site.

Based on this report of closure it is requested that emission unit P-Vadose-002 be removed from the Hanford Site Air Operating Permit (AOP Permit 00-05-006/ License Number FF-01).

**SIGNATURES**

Reviewed by Contractor	Reviewed by RL/ORP	Approved by WDOH
<i>Aurinda Penn</i>		
Date: 8/31/11	Date:	Date:

## Report of Closure/Permit Revision

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 08/31/2011

**NOC Application Revision**

New NOC Rev Number: \_\_\_\_\_

**Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: See below

**ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Report of closure for P-Vadose-003, Air Hammer Drilling

Current NOC Application Number: AOP Permit 00-05-006/ License Number FF-01

AEI ID Number (AOP Emission Unit Number(s)): P-Vadose-003

Current WDOH Approval Letter Number(s): AIR 10-801

WDOH NOC ID Number: 541

### DESCRIPTION OF CHANGE

Number of Attachments 0

## Report of Closure for P-Vadose-003

### Summary/Introduction

In accordance with Washington Administrative Code 246-247-080(6), this report of closure is being submitted to the State of Washington Department of Health (WDOH) to document cessation of radionuclide emitting activities from P-Vadose-003. NOC 785 will remain open under EU ID 486 only.

The following information is provided in this document:

- Date of closure
- Remaining material
- Assessment of potential continued emissions
- Future plans
- Emissions control and monitoring

#### 1. Date of closure:

The P-Vadose-003 emission unit is no longer operationally needed and will not be used. The closure date is 06/08/2011.

2. Remaining material: The P-Vadose-003 was vendor equipment. Upon completion of the work scope, the vendor took their equipment.

3. Assessment of potential continued emissions:

- a. The unit is vendor owned and is not on site.
- b. The unit is vendor owned and is not on site.
- c. The unit is vendor owned and is not on site.
- d. The unit is vendor owned and is not on site.
- e. The P-Vadose-003 does not have a potential for continued emissions.

4. Future plans:

There are no plans to use the equipment.

5. Emissions control and monitoring:

Emissions control and monitoring is not required for the inactive and isolated P-Vadose-003. The unit is vendor owned and is no longer on site.

Based on this report of closure it is requested that emission unit/notice of construction approval P-Vadose-003 be removed from the Hanford Site Air Operating Permit (AOP Permit 00-05-006/ License Number FF-01).

**SIGNATURES**

Reviewed by Contractor	Reviewed by RL/ORP	Approved by WDOH
<i>Aucinda Penn</i>		
Date: 8/31/11	Date:	Date:

## Report of Closure/Permit Revision

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 08/31/2011

**NOC Application Revision**

New NOC Rev Number: \_\_\_\_\_

**Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: See below

**ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Report of closure for P-244CR-003, 244-CR Vault Passive Filter B

Current NOC Application Number: AOP Permit 00-05-006/ License Number FF-01

AEI ID Number (AOP Emission Unit Number(s)): P-244CR-003

Current WDOH Approval Letter Number(s): AIR 10-1103

WDOH NOC ID Number: 714

### DESCRIPTION OF CHANGE

Number of Attachments 0

## Report of Closure for P-244CR-003

### Summary/Introduction

In accordance with Washington Administrative Code 246-247-080(6), this report of closure is being submitted to the State of Washington Department of Health (WDOH) to document cessation of radionuclide emitting activities from P-244CR-003.

The following information is provided in this document:

- Date of closure
- Remaining material
- Assessment of potential continued emissions
- Future plans
- Emissions control and monitoring

#### 1. Date of closure:

The P-244CR-003, 244-CR Vault Passive Filter B has not been installed and there are no future plans to install the passive filter. The closure date is 06/08/2011.

2. Remaining material: The P-244CR-003, 244-CR Vault Passive Filter B has not been installed and there are no future plans to install the passive filter.

3. Assessment of potential continued emissions:

- a. The unit is not installed.
- b. The unit is not installed.
- c. The unit is not installed.
- d. The unit is not installed.
- e. The P-244CR-003, 244-CR Vault Passive Filter B does not have a potential for continued emissions.

4. Future plans:

There are no plans to install the passive filter.

5. Emissions control and monitoring:

Emissions control and monitoring is not required P-244CR-003, 244-CR Vault Passive Filter B as it has not been installed.

Based on this report of closure it is requested that emission unit/notice of construction approval P-244CR-003, 244-CR Vault Passive Filter B be removed from the Hanford Site Air Operating Permit (AOP Permit 00-05-006/ License Number FF-01).

**SIGNATURES**

Reviewed by Contractor	Reviewed by RL/ORP	Approved by WDOH
<i>Aucinda Penn</i>		
Date: 8/31/11	Date:	Date: