

START

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NEW ORIGINAL 9-20-90

ENGINEERING CHANGE NOTICE

Page 1 of 4

1. ECN ~~112362~~
 Proj. ECN B-714-57

2. ECN Category (mark one) <input checked="" type="checkbox"/> Supplemental <input type="checkbox"/> Direct Revision <input type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Supersedeure <input type="checkbox"/> Discovery <input type="checkbox"/> Cancel/Void	3. Originator's Name, Organization, MSIN, and Telephone No. HAL J. STEFFENS, KEH, E6-32, 6-6355		4. Date 09-18-90
	5. Project Title/No./Work Order No. SEE BLOCK 12	6. Bldg./Sys./Fac. No. 218-E-16	7. Impact Level 3
	8. Document Number Affected (include rev. and sheet no.) SEE BLOCK 12	9. Related ECN No(s). NONE	10. Related PO No. N/A
11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input type="checkbox"/> No (NA Blks. 11b, 11c, 11d) UNK	11b. Work Package Doc. No. UNKNOWN	11c. Complete Installation Work <u>N/A</u> Cog. Engineer Signature & Date	11d. Complete Restoration (Temp. ECN only) <u>N/A</u> Cog. Engineer Signature & Date

12. Description of Change

Block 5: B-714, GROUT VAULT PAIR (218-E-16-102 & 103)(218-E-16-104 & 105)/ER8007

Block 8: AFFECTED DOCUMENTS (DRAWINGS)

VAULTS 102 & 103	VAULTS-104 & 105
H-2-77622, SH 1, REV 0	H-2-78493, SH 1, REV 0
H-2-77622, SH 4, REV 0	H-2-78493, SH 4, REV 0
H-2-77622, SH 5, REV 0	H-2-78493, SH 5, REV 0

SEE PAGE 3 & 4 FOR CONTINUATION OF DESCRIPTION OF CHANGES



13a. Justification (mark one) <input type="checkbox"/> Criteria Change <input type="checkbox"/> Design Improvement <input type="checkbox"/> Environmental <input type="checkbox"/> As-Found <input checked="" type="checkbox"/> Facilitate Const. <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/> Design Error/Omission	13b. Justification Details <p>a) Tolerance too close b) T/C leadwire tag too large c) solder specified unavailable d) Delivered T/C cable were flat instead of round e) RTV foam setting up too fast for distance & area intended to flow to. CHANGES ARE DUE TO MEETING WITH CONTRACTOR & SUBCONTRACTOR ON 12 SEP 90. CHANGES WILL NOT AFFECT THE PERFORMANCE REQUIREMENTS OF THE T/C AS REQUIRED BY THE FDC AND WILL PROVIDE OPTIONS ON MATERIALS.</p>
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14. Distribution (include name, MSIN, and no. of copies)	
<u>KEH DISTRIBUTION</u> Const Doc Cntl E2-50 Engng Doc Cntl E6-52	<u>WHC DIST. (con't)</u> O. A. Halverson R3-09 J. F. Hill [2] H4-57 J. R. McGee S1-54 D. B. Powell [4] R4-03 J. E. Vanbeek R3-27 STATION 10 A3-87 DOE A. G. Lassila A5-18
<u>WHC DISTRIBUTION</u> Project Files R1-28 S. R. Briggs(PE R3-27 J. K. Epperley S0-05	

RELEASE STAMP

OFFICIAL RELEASE BY WHC

DATE SEP 21 1990

STATION #4

911210359

888841

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1)
B-714-57

15. Design Verification Required

Yes

No

16. Cost Impact

ENGINEERING		CONSTRUCTION	
Additional	<input checked="" type="checkbox"/> \$ 850	Additional	<input checked="" type="checkbox"/> \$ 5000
Savings	<input type="checkbox"/> \$ _____	Savings	<input type="checkbox"/> \$ _____

17. Schedule Impact (days)

Improvement NA

Delay _____

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

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

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

Document Number/Revision	Document Number/Revision	Document Number/Revision
_____	_____	_____
_____	_____	_____
_____	_____	_____

20. Approvals

Signature		Date	Signature		Date
<u>OPERATIONS AND ENGINEERING</u>			<u>ARCHITECT-ENGINEER</u>		
Cog./Project Engineer	<i>DR Bunn</i>	9/20/90	PE	<i>KC Bergand</i>	9/20/90
Cog./Project Engr. Mgr.	<i>2RD / J. E. Van Der ...</i>	9/20/90	QA	<i>DJ Rymay</i>	9-20-90
QA	<i>JJ ...</i>	9-20-90	Safety	<i>D ...</i>	9-20-90
Safety	_____	_____	Design	<i>WSTM ...</i>	9/20/90
Security	_____	_____	Other	<i>ENVIR ...</i>	9/20/90
Proj. Prog./Dept. Mgr.	_____	_____	PLE	<i>...</i>	9/20/90
Def. React. Div.	_____	_____	<u>DEPARTMENT OF ENERGY</u>		
Chem. Proc. Div.	_____	_____	_____		
Def. Wst. Mgmt. Div.	_____	_____	_____		
Adv. React. Dev. Div.	_____	_____	_____		
Proj. Dept.	_____	_____	_____		
Environ. Div.	_____	_____	<u>ADDITIONAL</u>		
IRM Dept.	_____	_____	_____		
Facility Rep. (Ops)	_____	_____	_____		
Other	_____	_____	_____		

91121250360

CHANGES TO DRAWINGS1) H-2-77622, SH 1, REV 0

A) PARTS LIST:

- Change PN8 Description to GALV OR BLACK STEEL
- Change PN10 Description to CONDUIT ELBOW, RIGID STEEL, 1", STD RADIUS

B) NOTES:

- NOTE 3: Change to read ...ALL-STATE #107 SOLDER AND #107 FLUX....
- NOTE 6: Change to read as follows:
THE CONDUITS SHALL BE FILLED WITH "DOW CORNING 3-6548 SILICONE RTV FOAM" OR "CROUSE-HINDS CHICO A" SEALING COMPOUND AS EACH PAIR OF THERMOCOUPLES IS INSTALLED AT EACH LEVEL. FILL THE CONDUIT AND PIPE CAP TO CONCEAL THE THERMOCOUPLE TRANSITION JOINT. DO NOT FILL THE REMAINING CONDUIT, CROSSES AND TEES.
- NOTE 7: Add at end of paragraph the following
END OF PIPE CAP SHALL BE FLUSH WITH EXTERIOR EDGE OF REBAR TO WITHIN $\pm \frac{1}{8}$ ".
- NOTE 9: Change to read as follows:
WHEN USING BLACK STEEL PIPE CAPS, SPRAY EACH PIPE CAP WITH "WELCO SUPER COLD-GALV" GALVANIZED PAINT, THEN WRAP ALL PIPE CAPS AND 1" OF KYNAR PIPE WITH ELECTRICAL TAPE (PN13). LEAVE THE END OF PIPE CAP BARE OF TAPE. MAKE A SPIRAL WITH A 1/8" PITCH.
- Add NOTE 17 as follows
17. PRIOR TO THERMOCOUPLE LEADWIRE INSTALLATION IN THE CONDUIT, REPLACE THE METAL TAG WITH A HEAT SHRINKABLE TUBULAR PLASTIC CABLE MARKER IMPRINTED WITH THE THERMOCOUPLE TAG NUMBER AND LENGTH.

2) H-2-77622, SH 4, REV 0, DETAIL 1

- (ZC5): Change 2" (TYP) to $2\frac{1}{2}$ " $\pm \frac{1}{2}$ " (TYP)
- (ZD5): Replace the 2" (TYP) w/dimension lines & arrow WITH the following note leadered to the pipe cap. SEE NOTE 7 (TYP)

3) H-2-77622, SH 5, REV 0, DETAIL 2

- (ZC5): Change 2" (TYP) to $2\frac{1}{2}$ " $\pm \frac{1}{2}$ " (TYP)
- (ZD5): Replace the 2" (TYP) w/dimension lines & arrow WITH the following note leadered to the pipe cap. SEE NOTE 7 (TYP)
- (ZD7): Delete 5" RAD & arrowed leader

4) H-2-78493, SH 1, REV 0

A) PARTS LIST:

- Change PN8 Description to GALV OR BLACK STL
- Change PN10 Description to CONDUIT ELBOW, RIGID STEEL, 1", STD RADIUS

B) NOTES:

- NOTE 3: Change to read ...ALL-STATE #107 SOLDER AND #107 FLUX....
- NOTE 6: Change to read as follows:
THE CONDUITS SHALL BE FILLED WITH "DOW CORNING 3-6548 SILICONE RTV FOAM" OR "CROUSE-HINDS CHICO A" SEALING COMPOUND AS EACH PAIR OF THERMOCOUPLES IS INSTALLED AT EACH LEVEL. FILL THE CONDUIT AND PIPE CAP TO CONCEAL THE THERMOCOUPLE TRANSITION JOINT. DO NOT FILL THE REMAINING CONDUIT, CROSSES AND TEES.
- NOTE 7: Add at end of paragraph the following
END OF PIPE CAP SHALL BE FLUSH WITH EXTERIOR EDGE OF REBAR TO WITHIN $\pm \frac{1}{8}$ ".

CHANGES TO DRAWINGS CONTINUED

- NOTE 9: Change to read as follows:
WHEN USING BLACK STEEL PIPE CAPS, SPRAY EACH PIPE CAP WITH "WELCO SUPER COLD-GALV" GALVANIZED PAINT, THEN WRAP ALL PIPE CAPS AND 1" OF KYNAR PIPE WITH ELECTRICAL TAPE (PN13). LEAVE THE END OF PIPE CAP BARE OF TAPE. MAKE A SPIRAL WITH A 1/8" PITCH.
 - Add NOTE 17 as follows
17. PRIOR TO THERMOCOUPLE LEADWIRE INSTALLATION IN THE CONDUIT, REPLACE THE METAL TAG WITH A HEAT SHRINKABLE TUBULAR PLASTIC CABLE MARKER IMPRINTED WITH THE THERMOCOUPLE TAG NUMBER AND LENGTH.
- 5) H-2-78493, SH 4, REV 0, DETAIL 1
- (ZC5): Change 2" (TYP) to $2\frac{1}{2}" \pm \frac{1}{2}"$ (TYP)
 - (ZD5): Replace the 2" (TYP) w/dimension lines & arrows WITH the following note leadered to the pipe cap. SEE NOTE 7 (TYP)
- 6) H-2-78493, SH 5, REV 0, DETAIL 2
- (ZC5): Change 2" (TYP) to $2\frac{1}{2}" \pm \frac{1}{2}"$ (TYP)
 - (ZD5): Replace the 2" (TYP) w/dimension lines & arrows WITH the following note leadered to the pipe cap. SEE NOTE 7 (TYP)
 - (ZD7): Delete 5" RAD & arrowed leader