0012252

START

ENGINEERING CHANGE NOTICE

Page 1 of 5

1. ECN 130783

Proj. ECN B-714-67

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.		4. Date
Supplemental ■	GARY L. KOCI, KEH, E6-31, 6-6049		11-20-90
Direct Revision ☐	5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Impact Level
Change ECN ☐	SEE BLOCK 12	218-E-16	3
Temporary ☐	8. Document Number Affected (include rev. and sheet no.)	9. Related ECN No(s).	10. Related PO No.
Supersedure ☐	(V-B714C2-003, REV 0) SPEC B-714-C2, REV 0	ECN B-714-26	N/A
Discovery ☐			
Cancel/Void ☐			

11a. Modification Work	11b. Work Package Doc. No.	11c. Complete Installation Work	11d. Complete Restoration (Temp. ECN only)
☐ Yes (fill out Blk. 11b)	UNKNOWN	Cog. Engineer Signature & Date	Cog. Engineer Signature & Date
☐ No (NA Blks. 11b, 11c, 11d) JNK			

12. Description of Change

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

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SEE PAGE 3 FOR CHANGES TO SPECIFICATION B-714-C2 (V-B714C2-003), REV 0 EDC

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JAN 1991 RECEIVED EDMC

13a. Justification (mark one)	13b. Justification Details
Criteria Change ■	WHC ECN REVISIONS TO THE FUNCTION DESIGN CRITERIA FOR DIFFUSION MATERIAL ON THE VAULTS AND A THERMAL GRADIENT ACROSS THE STRUCTURAL COVER. (Ref: WHC ECN # 140503 and # 140457)
Design Improvement ☐	
Environmental ☐	REFLECT SAFETY CLASS REVISIONS. REF; WHC. SD-B714-W-QAPP-001 REV.4
As-Found ☐	
Facilitate Const. ☐	
Const. Error/Omission ☐	
Design Error/Omission ☐	

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

KEH DISTRIBUTION		WHC DIST. (con't)	
Const Doc Cntl	E2-50	J. K. Epperley	S0-05
Engrg Doc Cntl	E6-52	O. A. Halverson	R3-09
		J. S. Hill [2]	H4-57
WHC DISTRIBUTION		D. B. Powell [4]	R4-03
Project Files	R1-28	J. E. Vanbeek	R3-27
S. R. Briggs(PE	R3-27	DOE	
T. K. Cordray	S1-54	A. G. Lassila	A5-18
STATION 10	A3-87		
LUPE GARZA	A3-80		

RELEASE STAMP

OFFICIAL RELEASE STAMP 13

DATE NOV 27 1990

Sta. 4A

A-7900-013 (11/88)

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ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): B 714-67

15. Design Verification Required	16. Cost Impact		17. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION CR 8714-050	
☐ Yes	Additional ■ $ 2500	Additional ☒ $ 200,000	Improvement ☐ NA
■ No	Savings ☐ $	Savings ☐ $	Delay ☐

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

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

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

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

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog./Project Engineer: JR Bugin	11/26/90	PE: K C Bergard	11/21/90 11-26-90
Cog./Project Engr. Mgr.: P Van Beek	11/26/90	QA: ~~TO Hamp~~	11/21/90
QA: D. K. Cardwell	11/26/90	Safety: D Bjorgsen	11-21-90
Safety: NA		Design: R Lufore	11/21/90
Security		Other: R Hollenbeck	11/21/90
Proj.Prog./Dept. Mgr.		SPECS: W.H. Zimmerman	11/21/90
Def. React. Div.			
Chem. Proc. Div.			
Def. Wst. Mgmt. Div.		DEPARTMENT OF ENERGY	
Adv. React. Dev. Div.			
Proj. Dept.			
Environ. Div.		ADDITIONAL	
IRM Dept.			
Facility Rep. (Ops)			
Other			

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CHANGES TO SPEC B-714-C2

1) SECTION 01300, PARA 1.3, SCHEDULE OF SUBMITTALS

ADD under PRECAST PRESTRESSED CONCRETE SECTIONS the following:

03419/1.2.7	Calculations	15	Before fabrication	
03419/1.2.8	Verification	15		Before Delivery
03419/1.2.9	Certified Test Reports	15	Before Installation	

2) SECTION 01400 (affects ECN B-714-26)

A) **SUB PARA 1.3.1.4.a.1:** Under Division 3-Concrete ADD the following

Section 03419 Dowel Bar Splicer System (Embedments in cover panels for excess water pit reinforcing)

B) **APPENDIX A:** ADD CGI Listing for Section 03419 as shown on page 5 of this ECN.

3) SECTION 03419

A) **SUB PARA 1.1.1.2:** Add the following

ACI 301-84 (Revised 1987) Specification for Structural Concrete for Buildings

B) **SUB PARA 1.1.1.3:** Add the following

A 370-89 Standard Test Methods and Definitions for Mechanical Testing of Steel Products

C) **PARA 1.2.1:** Change last sentence to read as follows

...lifting devices, details of penetrations and embedments, and method of sealing/joining adjacent cover panels.

D) **ADD** the following paragraphs:

1.2.7 Calculations: Submit design calculations per the requirements of Section 1.3.

1.2.8 Verification: Submit certification and documentation for vault roof panels per the requirements of Section 1.3.

1.2.9 Certified Test Reports: Submit for Dowel Bar Splicer System CGI Testing.

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CHANGES TO SPEC B-714-C2 CONTINUED

ITEM 3 (SECTION 03419) CONTINUED

E) **PARA 1.3.2:** Change last sentence to read as follows

Calculations shall include estimated camber and expected deflections for each sequence of applied loading.

F) **SUB PARA 1.3.3.1:** Change to read Soil/Overburden: 600 psf

G) **SUB PARA 1.3.3.4:** Replace subparagraph with the following

1.3.3.4 Thermal loading: Temperature gradients will exist between top and bottom of members as follows:

a. Construction: 60 F; 120 F at top to 60 F at bottom

b. Operations: 98 F; 60 F at top to 158 F at bottom

H) **ADD** the following paragraphs:

1.3.6 Design Verification: Independent vertification of computer programs utilized and design calculations provided for vault cover panels, is required and shall be performed by registered engineer from the State of Washington. Documented design reviews, alternate calculations, or qualification tests may be performed to provide verification. Documentation of design verification shall consist of a certification statement describing the method of verification and addressing the adequacy of design inputs/outputs, assumptions and methods, and signed by the engineer performing said verification.

1.3.7 Bearing Surfaces: Cover panel surfaces bearing on vault walls shall have smooth finish to provide full (uniform) contact with bearing pads.

J) **PART 2 - PRODUCTS:** Add the following subparagraph

2.1.8.3 Reinforcing splice inserts: DB-SAE Dowel Bar Splicer System manufactured by Richmond Screw Anchor Company.

K) **PART 3 - EXECUTION:** Add the following subparagraph
3.1.4.4 Finish cover panel bearing surfaces in accordance with ACI 301, paragraph 10.2.2 or 11.7.2 with finish tolerance per paragraph 11.9.2 in direction of bearing surface.

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PROJECT B-714

SPEC/DWG REF	ITEM DESCRIPTION	ACCEPTABLE VALUE, CONDITION OR TOLERANCE	METHOD OF VERIFICATION	SAMPLE SIZE
B-714-C2 03419 2.1.8.3	DB-SAE-Dowel Bar Splicer System manufactured by Richmond Screw Anchor Company	1. Minimum yield strength of 60,000 psi	1. Perform tensile test in accordance with ASTM A 370	1 splicer connection per heat of matl
		2. Dimensions in accordance with ASTM A 615	2. Visual, scale	1 splicer connection per 10 splicer systems
		3. Spacing and height in accordance with ASTM A 615 Paragraph 7	3. Visual, scale	1 splicer connection per 10 splicer systems
		4. Weight of material in accordance with ASTM A 615 Paragraph 10	4. Visual, weigh	1 splicer connection per 10 splicer systems