

# START

0023333

## ENGINEERING CHANGE NOTICE

Page 1 of 4

1. ECN ~~105926~~

Proj. ECN B-714-140

2. ECN Category (mark one)		Supplemental <input checked="" type="checkbox"/>	Change ECN <input type="checkbox"/>	Supersedure <input type="checkbox"/>
Cancel/Void <input type="checkbox"/>	Direct Revision <input type="checkbox"/>		Temporary <input type="checkbox"/>	Discovery <input type="checkbox"/>
3. Originator's Name, Organization, MSIN, and Telephone No. M. A. Haq, KEH, E6-42, 6-6837			4. Date 08-07-92	
5. Project Title/No./Work Order No. GROUTED WASTE DISPOSAL FACILITIES B714/ER8007		6. Bldg./Sys./Fac. No. 218-E-16		7. Impact Level 3Q /SC-2
8. Document Number Affected (include rev. and sheet no.) SEE BLOCK 12		9. Related ECN No(s). B-714-135		10. Related PO No. N/A
11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input checked="" type="checkbox"/> No (NA Blks. 11b, 11c, 11d)	11b. Work Package Doc. No. N/A	11c. Complete Installation Work N/A Cog. Engineer Signature & Date		11d. Complete Restoration (Temp. ECN only) N/A Cog. Engineer Signature & Date

12. Description of Change

Block 8: H-2-77581, Sh 2, Rev 2  
H-2-77594, Sh 1, Rev 0  
Specification B-714-C2, Rev 1 (V-B714C2-003)

SC-2: Item 3 Only  
SC-3: Item 1 & 2

### DESCRIPTION OF CHANGES ON SUCCEEDING PAGES



13a. Justification (mark one)	Criteria Change <input checked="" type="checkbox"/>	Environmental <input type="checkbox"/>	Facilitate Const. <input type="checkbox"/>
Design Error/Omission <input checked="" type="checkbox"/>	Design Improvement <input type="checkbox"/>	As-Found <input type="checkbox"/>	Const. Error/Omission <input type="checkbox"/>

13b. Justification Details  
 (DE-Item 1): Note number used in previous ECN.  
 (DE-Item 2): Painting requirements other than primer never defined.  
 (CC-Item 3): Safety class 2 non-shrink grout required when pits were upgraded from SC-3 to SC-2.  
**CHANGE MADE TO SAFETY CLASS ITEM DOES NOT IMPACT THE INTEGRITY OF THE ORIGINAL FACILITY DESIGN**

14. Distribution (include name, MSIN, and no. of copies)		L. GARZA 46-76	
<b>KEH DISTRIBUTION</b>		J. K. Epperley	R1-29
Const Doc Cntl E2-50		K. S. McCullough	N1-83
		R. K. Sanan [4]	R4-05
<b>WHC DISTRIBUTION</b>		T. W. Staehr (PE)	R3-27
Project Files R1-28		J. E. Vanbeek	R3-27
M. W. Cling H4-57		G. H. Weissberg	R3-10
T. K. Cordray S1-54		DOE	
STA 10 A3-87		A. G. Lassila	A5-10
STA 6 T2-03			

RELEASE STAMP

OFFICIAL RELEASE BY WHC **13**

DATE **AUG 12 1992**  
STA 4

73127601444

ENGINEERING CHANGE NOTICE

15. Design Verification Required [X] Yes [ ] No	16. Cost Impact		17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION	
	Additional	\$ 2024	Additional	\$ TBD
	Savings	[ ] \$	Savings	[ ] \$
			Improvement	[ ] N/A
			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	<i>[Signature]</i>	8-11-92	PE	<i>[Signature]</i>	8/11/92
Cog./Project Engr. Mgr.	<i>[Signature]</i>	8/11/92	QA	<i>[Signature]</i>	8-11-92
QA	<i>[Signature]</i>	8/11/92	Safety	<i>[Signature]</i>	8-10-92
Safety			Design	STRL: <i>[Signature]</i>	8.10.92
Security			Other	SREGS <i>[Signature]</i>	
Proj. Prog./Dept. Mgr.			ENVIR:	<i>[Signature]</i>	8-10-92
Def. React. Div.			PLE:	<i>[Signature]</i>	8-10-92
Chem. Proc. Div.			CQA:	<i>[Signature]</i>	8-11-92
Def. Wst. Mgmt. Div.			DEPARTMENT OF ENERGY	<i>[Signature]</i>	8-10-92
Adv. React. Dev. Div.					
Proj. Dept.					
Environ. Div.					
IRM Dept.					
Facility Rep. (Ops.)					
Other					

93127601445

1) ECN B-714-135 (Affects H-2-77581, Sh 2, Rev 2)

Item 2: In 3 places change the note number from "5" to "6". (No longer affects ECN B-714-93. New Note)

2) H-2-77594, Sh 1, Rev 0  
Add new Note 6 as follows:

6 - ALL PLATES AND TUBE STEEL (TS) PRODUCTS SHALL BE GALVANIZED, BY HOT-DIP PROCESS IN ACCORDANCE WITH ASTM A 123. COATING SHALL BE AT LEAST 2.8 OUNCES OF ZINC FOR EACH SQUARE FOOT OF SURFACE.

\*\*\*\*\*

3) SPECIFICATION B-714-C2, REV 1

A) Section 01300 Add the following to Article 1.3, Schedule of Submittals, Vault and Basin Cast-in-Place Concrete:

03301/1.2.26	Non-Shrink Grout	15	Before Application	-----
--------------	------------------	----	--------------------	-------

B) Section 01400

1. Add the following to Article 1.7, Schedule of Hold, Receiving, and Witness Points, Vault and Basin Cast-in-Place Concrete, On-Site:

H - All non-shrink grout applications

2. Add the following to Appendix A, CGI Tables:

B-714-C2 03301 2.1.12	Non-Shrink Grout	03301-2.1.12 Specified Values	Manufacturer's data. Lot Testing IAW ASTM standards identified in paragraph 2.1.12
-----------------------------	------------------	----------------------------------	--

C) Section 03301

1. Add the following ASTMs to paragraph 1.1.1.2:

C 109-90 Test Method for Hydraulic Cement Mortars (Using 2" or 50mm Cube Specimens)

C 939-87 Test Method for Flow of Grout for Preplaced Aggregate Cone (Flow Cone Method)

2. Add new paragraphs 1.2.26, 2.1.12, 3.2.12.8, and 3.3.3 as follows:

1.2.26 Non-Shrink Grout: Submit the following data for information and record before application.

1.2.26.1 Manufacturer's data defining material type, written instructions, procedures, and batch or lot tested compressive strengths and fluidity as tested by manufacturer.

73127601446

2.1.12 Non-Shrink Grout: Nonmetallic type, minimum compressive strength of 4000 psi at 7 days and 7000 psi at 28 days. "Five Star Grout" by US Grout Corp; "Por-Rok" Anchoring Cement by Minwax Construction Products Division; or "Masterflow 928" by Master Builders.

2.1.12.1 The grout shall meet the following requirements.

a. Fluidity: Verify a range of fluidity between 25 and 30 seconds by performing a flow cone test in accordance with ASTM C 939. Grout samples for testing, representative of field conditions, shall be obtained by using a mechanical mixer, such as a 5 gallon or larger portable drum.

b. Compressive Strength: Verify minimum compressive strength of 4000 psi at 7 days and 7000 psi at 28 days in accordance with ASTM C 109. Perform compression test on minimum 5 specimens; 2 specimens at 7 days and 3 specimens at 28 days. Await successful test results (4000 psi, minimum at 7 days) prior to actual use of grout..

c. For previously tested and approved grout products, additional product testing is not required for subsequent procurements if the application of grout is in accordance with subparagraph 3.2.12.8.

3.2.12.8 Use non-shrink grout for filling blackout areas and other confined or restrained areas (in excess water pits, leachate pits and vault pits) as shown on drawings Place non-shrinkage grout in accordance with manufacturer's approved written instructions and procedures.

3.3.3 Grout Testing: Sampling and testing of non-shrink grout will be the responsibility of KEH. Grout will be tested in accordance with subparagraph 2.1.12.1.

93127601447

\*\*\*\*\*

REGISTERED ENGINEER REVIEW - STRL ONLY



8/12/92

EXPIRES 4/10/93