

# START

0019366

Final

**Meeting Minutes Transmittal/Approval  
Unit Managers Meeting: Grout Treatment Facility**

Meeting Held January 22, 1992  
Washington State Department of Ecology  
7601 West Clearwater Avenue  
Kennewick, Washington

Appvl. *Clifford E. Clark* Date: 2/20/92  
 Clifford E. Clark, RL, Environmental ~~Restoration~~ Assurance, Policy & Permits Office Division, Unit Manager

Appvl. Not Present Date: \_\_\_\_\_  
 Daniel L. Duncan, EPA Region 10, RCRA Program Manager

Appvl. *J. Witczak* Date: 2/20/92  
 Joseph Witczak, Washington State Department of Ecology, Unit Manager

Appvl. *Ralph Wood* Date: 2/20/92  
 Ralph Wood, Contractor Representative, WHC

Meeting Minutes are attached.

- Attachment 1 - Summary of Discussion and Commitments
- Attachment 2 - Attendance List
- Attachment 3 - Agenda
- Attachment 4 - Action Items List with Status
- Attachment 5 - Grout Program Overview Special Schedule
- Attachment 6 - Engineering Change Notices B-174-107, 108, and 109



0 2 1 3 5 3 1 5 0 3

Attachment #1

Unit Managers Meeting:  
Grout Treatment Facility

Meeting Held January 22, 1992  
Washington State Department of Ecology  
7601 West Clearwater Avenue  
Kennewick, Washington

Summary of Discussion

Program Status

Discussion of program status included the following points:

- The Grout Program Overview Special Schedule prepared by WHC was given to Ecology (Attachment 5).
- Work has remained somewhat behind on grout formulation.
- The decision has been made by WHC/RL to fill the vaults in lifts, although the exact size of the lifts is still being determined. The size of the lift will be chosen so as to meet grout criteria of leach index, compressive strength, and temperature.
- Work on PSW coring was begun but discontinued due to lack of qualified personnel. DST core drilling equipment for Vault 102 is currently being procured for use on the mixed waste vaults.
- Commencement of the filling Vault 102 is tentatively scheduled to begin October 1992. The next TPA milestone to be met is to pour and core Vault 102 by September of 1993.
- Ecology needs to be provided with a final copy of the Grout Quality Verification Plan.

**ACTION ITEM:** Formally transmit the Grout Verification Plan to Ecology upon RL approval. Action: Ralph Wood (WHC), Cliff Clark (RL).

RCRA Topics

Engineering Change Notices (ECN)

Three ECNs were presented to Ecology (Attachment 6) and discussed.

**ECN B-714-107.** This ECN addresses a number of issues, including two as-built conditions: 1) The location of riser No. 40 on the cover panels for Vault 104 was cast by Yakima Precast two-and-a-half feet off the design location; 2) Allowance is needed for some extra tolerance on the spacing of the ends of the batten strips which will hold the exterior drainage path in place prior to backfilling with asphalt.

Also covered in ECN 107 are corrections for three design errors/omissions: 1) The inspection schedule for liquid penetrant testing needed to be added to the QA section of the specification; 2) There was a dimension error on the drawings of the vault caulking slab; 3) There was a redundant piping support depicted in one drawing.

**ECN B-714-108.** Two specification changes are called for in this notice: 1) The last 1/2 inch or so of hydro test water which cannot be sucked up and discharged over the wall and into the storm sewer will be removed by use of small sump pumps which will pump the water into trucks; 2) The extrudate for welding of the HDPE liner can come from a separate resin batch meeting the same requirements of the original resin batch.

**ECN B-174-109.** This is a specification change which allows for the use of a "foamed" HDPE which shows better properties for fabricating the drainage net than the originally specified density for the HDPE liner.

#### Status of Vault Construction

A short video was presented by WHC portraying the construction progress of the last approximately 18 months. The video showed construction progress from installation of the bottom diffusion barrier up to the hydro test.

#### General Topics

##### Past Action Items (See Attachment 4)

12-11-91:1: Ecology will forward to its consultant Wyatt WHC's draft responses to Ecology's comments to PNL Report 7644, and then contact RL to arrange a meeting on the subject. Action: Joe Witczak (Ecology). Status: OPEN.

8-9-91:2: Provide grout sampling plan to Ecology and EPA. Action: Ralph Wood (WHC). Status: OPEN. Will be transmitted upon RL's agreement and approval.

#### Schedule of Next Meeting

The next Grout Unit Managers Meeting is scheduled February 20, 1992 at the EPA Region 10 office, Seattle, Washington.

Attachment 2

Grout Treatment Facility  
Unit Managers Meeting  
January 22, 1992

Attendance List

| <u>NAME</u>    | <u>ORGANIZATION</u> | <u>PHONE #</u> |
|----------------|---------------------|----------------|
| R. Bowman      | WHC                 | (509) 376-4876 |
| R. Carreon     | RL                  | (509) 376-0709 |
| C. Clark       | RL                  | (509) 376-9333 |
| B. Cornwell    | WHC                 | (509) 376-3837 |
| K. Donato      | SWEC                | (509) 376-8210 |
| J. Epstein     | WHC                 | (509) 373-3885 |
| L. Gaddis      | KEH                 | (509) 373-3094 |
| J. King        | SWEC                | (509) 376-4726 |
| T. Staehr      | WHC                 | (509) 373-2925 |
| J. VanBeek     | WHC                 | (509) 373-1302 |
| J. Witczak     | Ecology             | (206) 438-7557 |
| T. Woebkenberg | SWEC                | (509) 376-5799 |
| R. Wood        | WHC                 | (509) 373-4731 |

02124631537

Attachment 3

**GROUT UNIT MANAGERS MEETING  
Kennewick, Washington  
Wednesday, January 22, 1992**

**AGENDA**

9:00 am - 12:00 pm PREVIOUS MEETING MINUTES

PROGRAM STATUS

RCRA TOPICS

- Engineering Change Notices (B-714-107, 108, 109)
- Status of Vault Construction

GENERAL TOPICS

- Action items
  - Past action items
  - New action items
- Schedule of next meeting
  - Tentative dates (February ??)
  - Proposed topics

There will be a technical working meeting at the end of the unit managers meeting. The working meeting will focus on the resolution of Ecology's comments regarding Hydrogen generation in the vault.

The meeting will take place at the Ecology office in Kennewick (7601 W. Clearwater, Suite #102).

22121631538

Attachment 4

Grout Treatment Facility Unit Managers Meeting

Commitments/Agreements Status (Status date: January 22, 1992)

| <u>ACTION ITEM</u> | <u>COMMITMENTS/AGREEMENTS STATUS LIST</u>   |
|--------------------|---|
| 1-22-92:1          | Formally transmit the Grout Verification Plan to Ecology following RL review. Action: Ralph Wood, Cliff Clark.<br><br>OPEN  |
| 12-11-91:1         | Ecology will forward to its consultant WHC's draft responses to Ecology's comments to PNL Report 7644, and then contact RL to arrange a meeting on the subject. Action: Joe Witczak (Ecology)<br><br>OPEN   |
| 11-12-91:1         | WHC will provide Ecology and EPA with a copy of ECN 104. Action: M. Cline<br><br>CLOSED   |
| 11-12-91:2         | WHC will provide Ecology and EPA with the specification designation number of the ECN dealing with design changes at the vent tubes by which the tube diameter was enlarged from 0.1 inch to 0.18 inch. Action: M. Cline<br><br>CLOSED            |
| 11-12-91:3         | WHC will finalize a draft response to Brown & Caldwell's comments on the PNL and Greg Whyatt report, and following a review by DOE, WHC will submit the draft response to Ecology the first week of December 1991. Action: J. Voogd<br><br>CLOSED |
| 11-12-91:4         | WHC will obtain laboratory test results and other data needed to resolve the hydrogen issue by the end of February or March 1992. Action: J. Voogd (WHC)<br><br>CLOSED  |
| 10-10-91:1         | Check the status of response to Ecology's concerns regarding tritium control and hydrogen venting. Action: Cliff Clark (RL)<br><br>CLOSED   |

92121531539

8-9-91:1 Provide list of 39 lessons learned on grout design and construction to Ecology and EPA. Action: Tom Staehr (WHC)

CLOSED

8-9-91:2 Provide grout sampling plan to Ecology and EPA. Action: Ralph Wood (WHC)

OPEN

4-29-91:1 Determine the status of the December, January, and February minutes. Action: John Steude and Joe King (SWEC)

CLOSED (6-26-91) Missing minutes were sent to DOE for distribution.

4-29-91:2 Determine the procedure for referencing dates for Dangerous Waste Regulations in the permit. Action: Joe Witczak (Ecology)

CLOSED (6-26-91)

4-29-91:3 Provide vendor information for the leak detection cable in ECN B-714-74 to Ecology. Action: Steve Briggs (WHC)

CLOSED (5-30-91)

3-22-91:1 The final report on the radiation test results will be given to Joe Witczak (Ecology) and Dan Duncan (EPA) as soon as it is available. Action: WHC

CLOSED (6-26-91)

1-29-91:1 WHC and DOE will provide greater detail on the practical quantitation limits and the relationship with the contract laboratory procedures by the next Unit Managers Meeting. Action: Jeff Voogd.

CLOSED (3-22-91) Information provided at meeting.

1-29-91:2 EPA Region X will inquire of EPA-HQ where in the waste stream the designation and regulations apply. Action: Dan Duncan.

CLOSED (4-29-91)

1-29-91:3 WHC will prepare a letter for DOE-RL through Kenneth Bracken to EPA Region X addressing the following items: 1) a statement of the nature of the wastes coming out of the candidate tanks; 2) a statement that in treating the effluent an apparent nonwaste water is created, whereas heretofore the tank effluent may have been a non-waste water; 3) Does the reduced concentration of TOC in the

615131519

treated waters mandate their designation as waste water?  
Action: Jeff Voogd.

CLOSED (4-29-91)

1-4-91:1 WHC to provide information on the rate of hydrogen build up  
within the vault and the rate of diffusion of hydrogen out  
of the vault. Action: Jeff Voogd.

CLOSED (4-29-91)

9-18-90:3 WHC will provide updated Bluelines at the January 1991 UMM.  
Action: Steve Briggs.

CLOSED (4-29-91)

7-23-90:3 A copy of the TPA change request will be sent to Dan Duncan  
(EPA). Action: Cliff Clark.

CLOSED (4-29-91)

9 2 1 2 4 5 3 1 5 4 1

Attachment #5

**GROUT UNIT MANAGERS MEETING  
Kennewick, Washington  
Wednesday, January 22, 1992**

**Grout Program Overview Schedule**

9 2 1 2 4 6 3 1 5 4 2

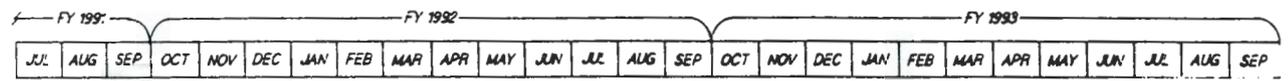


WESTINGHOUSE  
HANFORD COMPANY

DST WASTE DISPOSAL PROGRAM

LOW LEVEL WASTE DISPOSAL  
— GROUT —  
PROGRAM OVERVIEW  
SPECIAL SCHEDULE

(SIGNED ORIGINAL ON FILE)  
J. L. Epstein, Manager  
Group: Facilities  
Defense Waste Remediation Division

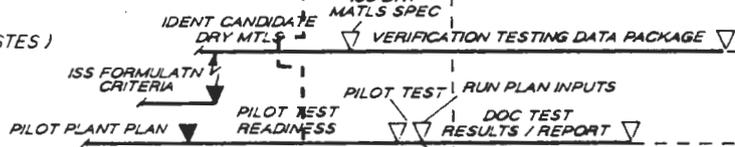


TECHNOLOGY

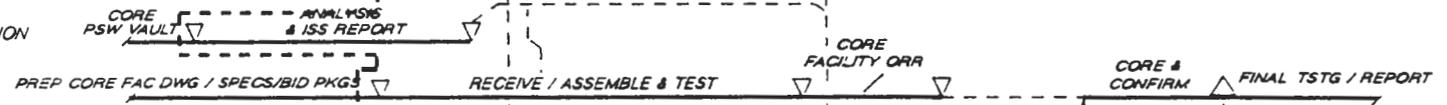
WASTE SAMPLING & CHARACTERIZATION



GROUT FORMULATION (AN-106 WASTES)

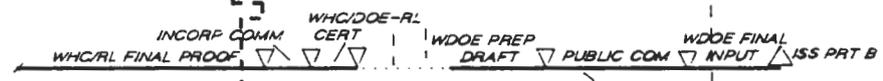


GROUT QUALITY VERIFICATION



DOCUMENTATION

PART "B" PERMIT



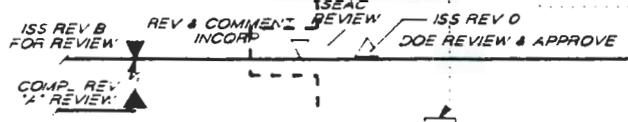
OPERATIONAL READINESS REVIEW



PERFORMANCE ASSESSMENT



FSAR



9 2 1 2 3 3 1 0 1 4

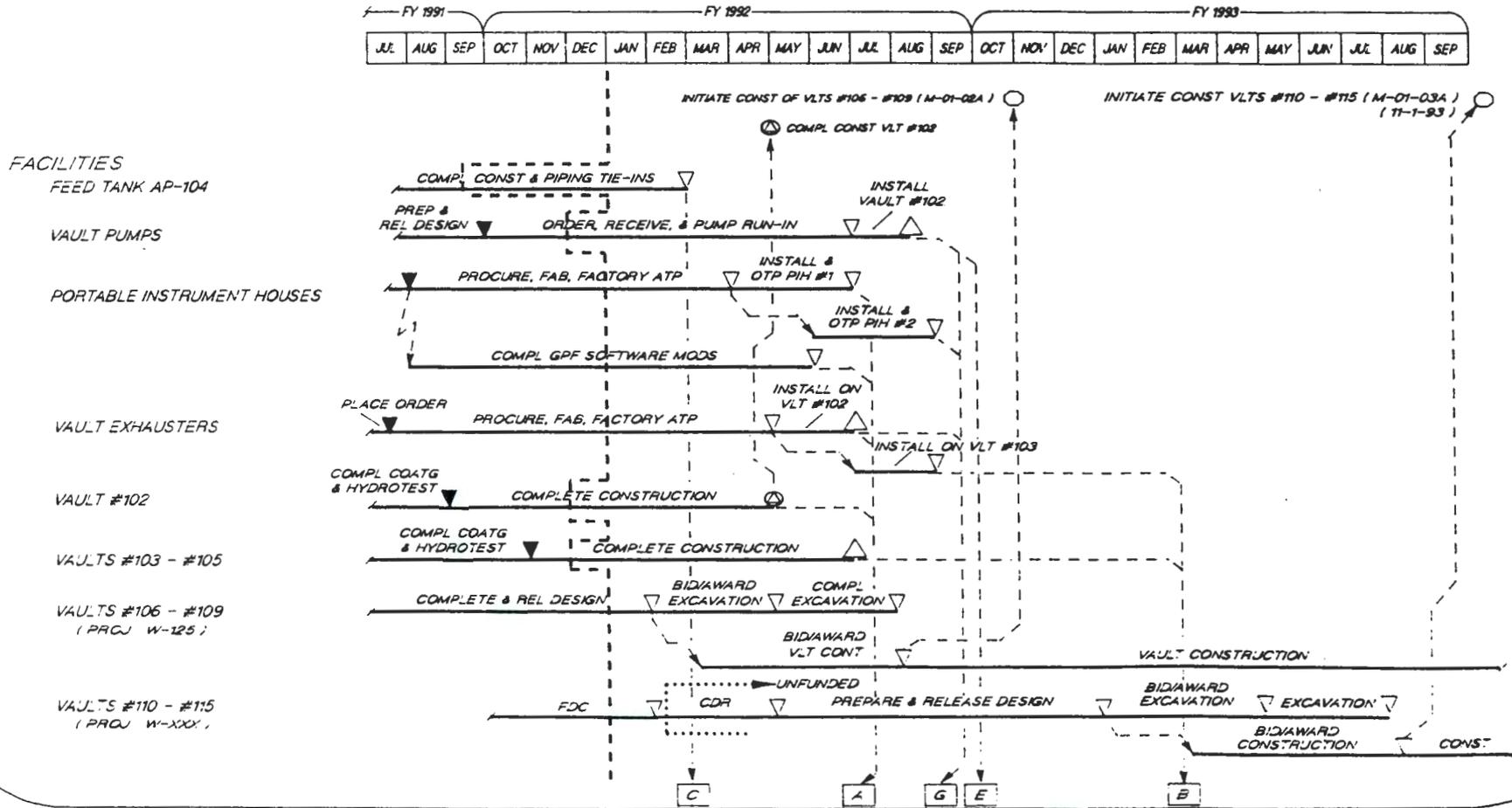


WESTINGHOUSE  
HANFORD COMPANY

DST WASTE DISPOSAL PROGRAM

LOW LEVEL WASTE DISPOSAL  
— GROUT —

PROGRAM OVERVIEW  
SPECIAL SCHEDULE



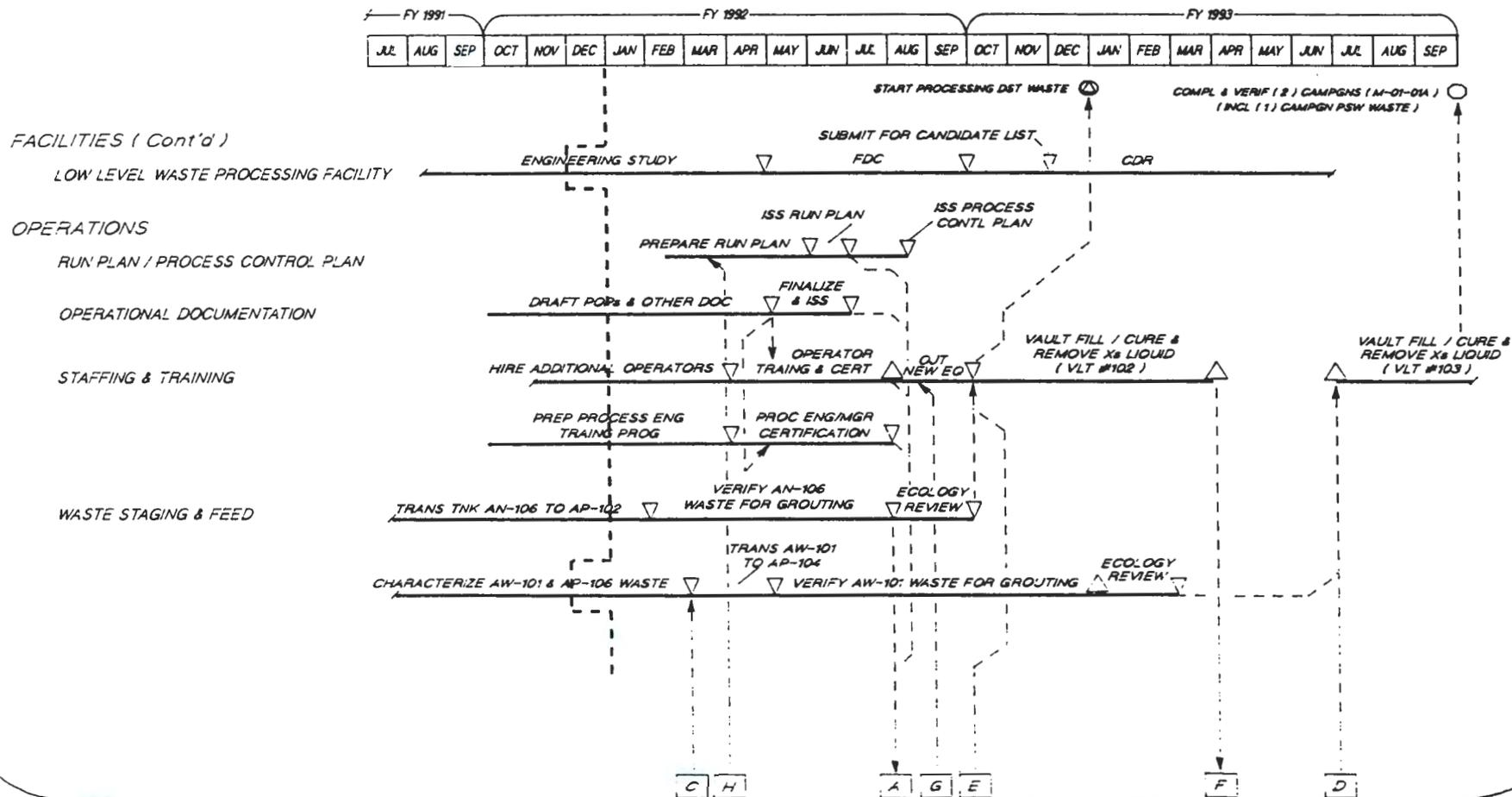


WESTINGHOUSE  
HANFORD COMPANY

DST WASTE DISPOSAL PROGRAM

LOW LEVEL WASTE DISPOSAL

— GROUT —  
PROGRAM OVERVIEW  
SPECIAL SCHEDULE



Attachment #6

**GROUT UNIT MANAGERS MEETING  
Kennewick, Washington  
Wednesday, January 22, 1992**

Engineering Change Notices: B-174-107, 108, and 109

9 2 1 2 4 5 3 1 5 1 5

ENGINEERING CHANGE NOTICE

Page 1 of 6

1. ECN ~~159209~~

Proj. ECN B-714-107

2. ECN Category (mark one)
- Supplemental
  - Direct Revision
  - Change ECN
  - Temporary
  - Supersedure
  - Discovery
  - Cancel/Void

3. Originator's Name, Organization, MSIN, and Telephone No.  
T. K. Ehrhard, KEH, E6-42, 6-0415

4. Date  
11-25-91

5. Project Title/No./Work Order No.  
See Block 12

6. Bldg./Sys./Fac. No.  
218-E-16

7. Impact Level  
3 /SC-2

8. Document Number Affected (include rev. and sheet no.)  
See Block 12

9. Related ECN No(s).  
B-714-94 & -97

10. Related PO No.  
N/A

- 11a. Modification Work
- Yes (fill out Blk. 11b)
  - No (NA Blks. 11b, 11d)
- UNKNOWN c. 11d

11b. Work Package Doc. No.  
UNKNOWN

11c. Complete Installation Work  
Cog. Engineer Signature & Date

11d. Complete Restoration (Temp. ECN only)  
Cog. Engineer Signature & Date

12. Description of Change

|                 |             |
|-----------------|-------------|
| Items 2 thru 11 | SC-3        |
| Item 1          | SC-2 & SC-3 |

Block 5: B-714, Grouted Waste Disposal Facilities/ER8007

Block 8: Specification B-714-C2, Rev 1 (V-B714C2-003)

|          |                        |                        |
|----------|------------------------|------------------------|
| Drawings | H-2-77581, Sh 3, Rev 1 | H-2-78457, Sh 3, Rev 1 |
|          | H-2-77582, Sh 1, Rev 1 | H-2-78458, Sh 1, Rev 1 |
|          | H-2-77598, Sh 1, Rev 1 | H-2-78458, Sh 3, Rev 0 |
|          | H-2-78451, Sh 1, Rev 1 | H-2-78459, Sh 1, Rev 1 |
|          | H-2-78457, Sh 1, Rev 1 | H-2-78459, Sh 2, Rev 1 |

1) SPEC B-714-C2, SECTION 01400  
Article 1.7 Schedule of Hold, Receiving and Witness Points. ADD the following to MECHANICAL Chemical Process Piping Systems:

- Off-Site\* W - All liquid penetrant testing
- On-Site W - All liquid penetrant testing

\*\*\*\*\*  
DESCRIPTION OF CHANGES  
CONTINUED ON SUCCEEDING PAGES  
\*\*\*\*\*

APPROVED FOR RELEASE  
J. Burkland  
1/16/92

- 13a. Justification (mark one)
- Criteria Change
  - Design Improvement
  - Environmental
  - As-Found
  - Facilitate Const.
  - Const. Error/Omission
  - Design Error/Omission

13b. Justification Details  
(CE): NCR #87. Contractor cast riser 2.5' off of design dimension. [Item 6 & 8 thru 11]. Modified bolt spacing provides adequate temp-support of ext. drain path until placement of diffusion material [Item 3 & 5]. (DE): Witness points added to Section 01400 to support requirements noted in Section 15493 pg 19 [Item 1]. Dimension error for topping slab [Item 2 & 7]. (2) pipe supports indicated at sloped pipe area and only one is required [Item 4].

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

|                         |  |                        |
|-------------------------|--|------------------------|
| <u>KEH DISTRIBUTION</u> | J. S. Hill  | H4-57                  |
| Const Doc Cntl          | E2-50  | K. S. McCullough N1-83 |
|                         |  | D. B. Powell [4] R4-03 |
| <u>WHC DISTRIBUTION</u> | T. W. Staehr (PE)  | R3-27                  |
| Project Files           | R1-28  | J. E. Vanbeek R3-27    |
| J. K. Epperley          | R1-29  | G. H. Weissberg R3-10  |
| T. K. Cordray           | S1-54  | DOE                    |
| STA 10                  | A3-87  | A. G. Lassila A5-18    |
| STA 6                   | T2-03  |                        |
| Lupe Garza              | A3-80  |                        |

RELEASE STAMP

OFFICIAL RELEASE   
BY WRC  
DATE DEC 09 1991  
*St 4*

# ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1)  
B-714-107

15. Design Verification Required

Yes  
 No

16. Cost Impact

|  |   |
|--|---|
| <p style="text-align: center;">ENGINEERING</p> <p>Additional <input checked="" type="checkbox"/> \$ <u>1000</u></p> <p>Savings <input type="checkbox"/> \$ _____</p> | <p style="text-align: center;">CONSTRUCTION</p> <p>Additional <input checked="" type="checkbox"/> \$ <u>0.00</u></p> <p>Savings <input type="checkbox"/> \$ _____</p> |
|--|---|

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.

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

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           |
|---|----------------|
| <b>OPERATIONS AND ENGINEERING</b>         |                |
| Cog./Project Engineer <u>[Signature]</u>  | <u>12/5/91</u> |
| Cog./Project Engr. Mgr <u>[Signature]</u> | <u>12/5/91</u> |
| QA <u>[Signature]</u>                     | <u>12/5/91</u> |
| Safety _____                              | _____          |
| Security _____                            | _____          |
| Proj. Prog./Dept. Mgr. _____              | _____          |
| Def. React. Div. _____                    | _____          |
| Chem. Proc. Div. _____                    | _____          |
| Def. Wst. Mgmt. Div. _____                | _____          |
| Adv. React. Dev. Div. _____               | _____          |
| Proj. Dept. _____                         | _____          |
| Environ. Div. _____                       | _____          |
| IRM Dept. _____                           | _____          |
| Facility Rep. (Ops) _____                 | _____          |
| Other _____                               | _____          |

| Signature                                     | Date            |
|---|-----------------|
| <b>ARCHITECT-ENGINEER</b>                     |                 |
| PE <u>[Signature]</u>                         | <u>12/3/91</u>  |
| QA <u>[Signature]</u> COA: <u>[Signature]</u> | <u>12-3-91</u>  |
| Safety <u>[Signature]</u>                     | <u>11-27-91</u> |
| Design <b>ENVIR:</b> <u>[Signature]</u>       | <u>11-26-91</u> |
| Other <b>STRL:</b> <u>[Signature]</u>         | <u>11-26-91</u> |
| <b>PIPING:</b> <u>[Signature]</u>             | <u>11-26-91</u> |
| <b>SPECS:</b> <u>[Signature]</u>              | <u>11/26-91</u> |
| <b>ENVIR/PLE:</b> <u>[Signature]</u>          | <u>11/26/91</u> |
| <b>DEPARTMENT OF ENERGY</b>                   |                 |
| _____   |                 |
| <b>ADDITIONAL</b>                             |                 |
| _____   |                 |
| _____   |                 |
| _____   |                 |
| _____   |                 |

(Continuation of Block 13b): SAFETY CLASS 2 ITEM DOES NOT IMPACT THE INTEGRITY OF THE ORIGINAL FACILITY DESIGN [Item 1].

(Continuation of Block 12):

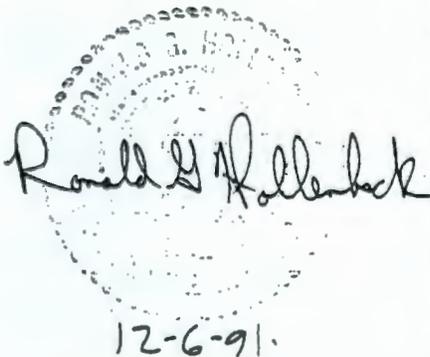
- 2) H-2-77581, Sh 3, Rev 1 (affects ECN B-714-94, pg 9)  
Concrete Topping Plan: Change 54.25' to 56.75'
- 3) H-2-77582, Sh 1, Rev 1 (affects ECN B-714-97, pg 4)  
Section B: Modify - See page 4 of this ECN.
- 4) H-2-77598, Sh 1, Rev 1  
Plan (ZE7): Modify - see page 5 of this ECN.
- 5) H-2-78451, Sh 1, Rev 1 (affects ECN B-714-97, pg 4)  
Section B: Modify - see page 4 of this ECN.
- 6) H-2-78457, Sh 1, Rev 1  
Plan (ZC3): Modify - see page 6 of this ECN.
- 7) H-2-78457, Sh 3, Rev 1 (affects ECN B-714-94, pg 12)  
Concrete Topping Plan: Change 54.25' to 56.75'
- 8) H-2-78458, Sh 1, Rev 1  
Plan (ZD4): Pictorially move Riser #40 2.5 feet South from present location (Riser should line up horizontally with Riser #34).
- 9) H-2-78458, Sh 3, Rev 0  
Vault 104 Table (ZF5): Change North Coordinate for Riser #40 to N40293.75
- 10) H-2-78459, Sh 1, Rev 1  
Plan (ZC4): Pictorially move Riser #40 2.5 feet South from present location (Riser should line up horizontally with Riser #34).
- 11) H-2-78459, Sh 2, Rev 1  
Riser Table (ZC7): Change North Coordinate for Riser #40 to N40293.75

REGISTERED ENGINEERING REVIEW

ENVIRONMENTAL (Item 3 & 5)

STRUCTURAL (Item 2 and 6 thru 11)

PIPING (Item 1 & 4)



Ronald D. Hollenbeck  
12-6-91



Mian A. Hao  
12.6.91



Albert W. Bjorkedal  
12/6/91

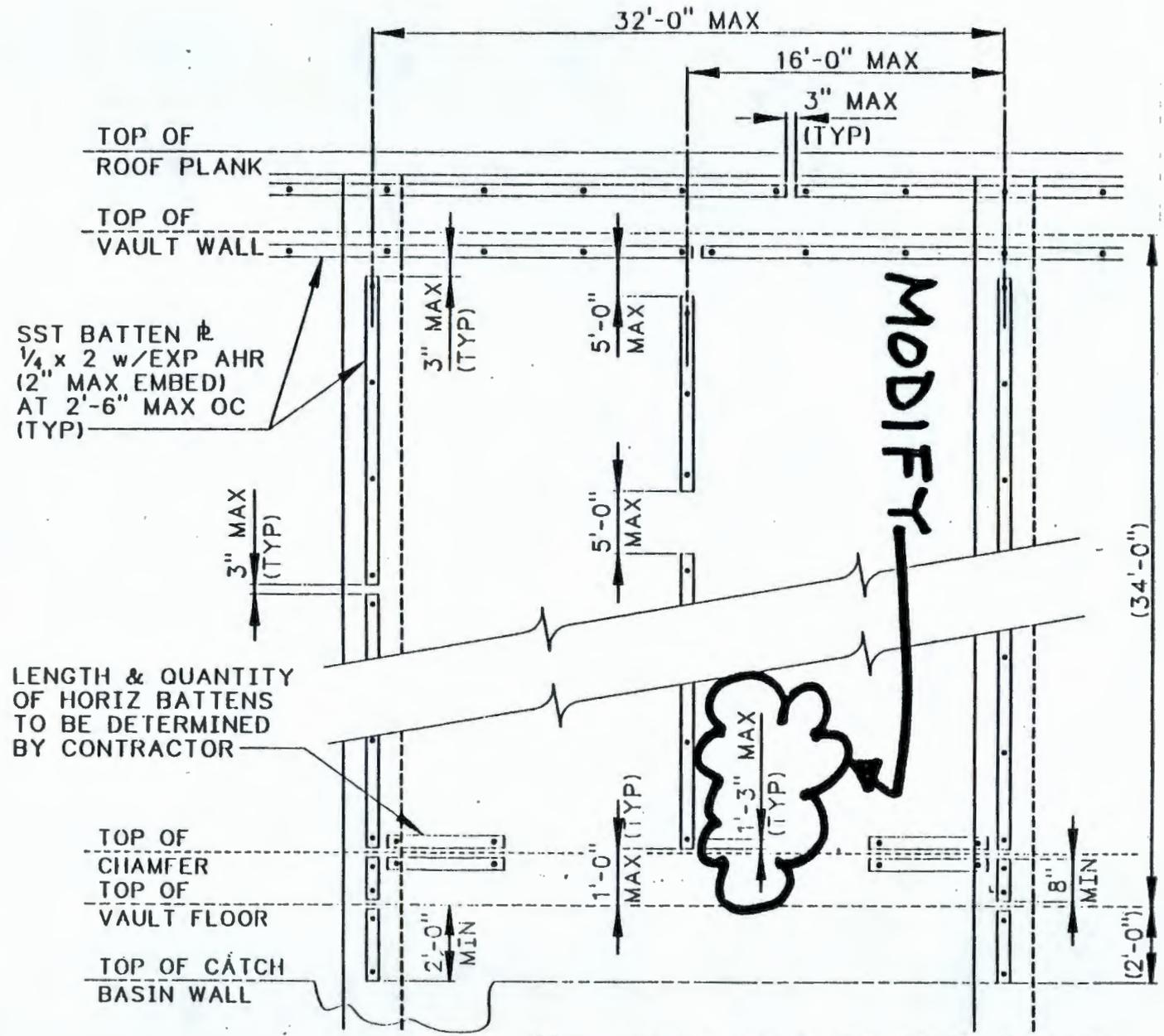
EXPIRES 7/15/92

72124631549

|                           |          |             |                            |                                   |                      |           |
|---------------------------|----------|-------------|----------------------------|-----------------------------------|----------------------|-----------|
| Ref. Dwg.<br>ECN B-714-97 | Sh.<br>4 | Rev.<br>N/A | Prepared By.<br>TK EHRHARD | Checked By.<br><i>[Signature]</i> | ECN No.<br>B-714-107 | Page<br>4 |
|---------------------------|----------|-------------|----------------------------|-----------------------------------|----------------------|-----------|

REFERENCE DWG H-2-77582, SH 1, REV 1 and H-2-78451, SH 1, REV 1.

9 2 1 2 4 6 3 1 5 5 0



NOTE: WHERE NECESSARY, ROUND CORNERS OF BATTEN PLATE OR PLACE 60 MIL HDPE RUB SHEET UNDER BATTENS TO PREVENT DAMAGE TO CURTAIN.

SST BATTEN #  
1/4 x 2 w/EXP AHR  
(2" MAX EMBED)  
AT 2'-6" MAX OC  
(TYP)

LENGTH & QUANTITY  
OF HORIZ BATTENS  
TO BE DETERMINED  
BY CONTRACTOR

Ref. Dwg.  
H-2-77598

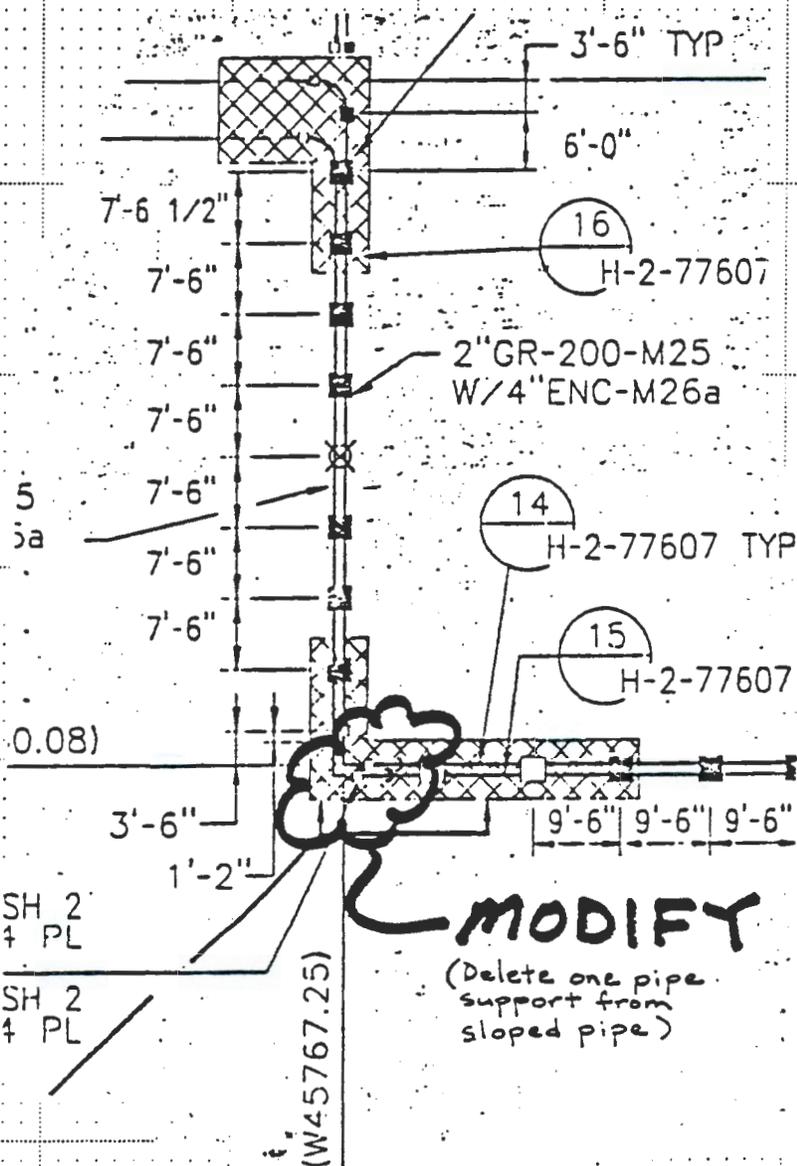
Sh. 1  
Rev. 1

Prepared By  
T.K. Ehrhard

Checked By  
*Mark McLean*

ECN No.  
B-714-107

Page  
5/6



3  
2  
1  
2  
3  
4  
5  
6  
7  
8  
9



**ENGINEERING CHANGE NOTICE**

Page 1 of 2

1. ECN ~~459210~~

Proj. ECN B-714-108

|   |   |                                    |                            |
|---|---|------------------------------------|----------------------------|
| 2. ECN Category (mark one)<br>Supplemental <input checked="" type="checkbox"/><br>Direct Revision <input type="checkbox"/><br>Change ECN <input type="checkbox"/><br>Temporary <input type="checkbox"/><br>Supersedure <input type="checkbox"/><br>Discovery <input type="checkbox"/><br>Cancel/Void <input type="checkbox"/> | 3. Originator's Name, Organization, MSIN, and Telephone No.<br>R. G. Hollenbeck, KEH, E6-42, 6-0513 |                                    | 4. Date<br>11-22-91        |
|   | 5. Project Title/No./Work Order No.<br>See Block 12   | 6. Bldg./Sys./Fac. No.<br>218-E-16 | 7. Impact Level<br>3 /SC-2 |
|   | 8. Document Number Affected (include rev. and sheet no.)<br>See Block 12                            | 9. Related ECN No(s).<br>None      | 10. Related PO No.<br>N/A  |

|  |                                       |  |   |
|--|---------------------------------------|--|---|
| 11a. Modification Work<br><input type="checkbox"/> Yes (fill out Blk. 11b)<br><input checked="" type="checkbox"/> No (NA Blks. 11b, UNKNOWNc, 11d) | 11b. Work Package Doc. No.<br>UNKNOWN | 11c. Complete Installation Work<br>_____<br>Cog. Engineer Signature & Date | 11d. Complete Restoration (Temp. ECN only)<br>_____<br>Cog. Engineer Signature & Date |
|--|---------------------------------------|--|---|

12. Description of Change SC-3

Block 5: B-714, Grouted Waste Disposal Facilities/ER8007  
 Block 8: Specification B-714-C2, Rev 1 (V-B714C2-003)

\*\*\*\*\*

1) SECTION 01500  
 Para 1.4.1.3.j: Change 1st sentence as follows:  
 ...inside protected area, or as directed by KEH.

2) SECTION 02753  
 Para 3.2.4.1: In the 1st sentence change "identical" to "similar"

3) SECTION 02755  
 A) Para 2.1.1.3: Delete 2nd sentence and change 1st sentence to read as follows:  
 Resin used for extrudate fusion welding shall be similar to HDPE sheet resin.  
 B) Para 3.2.3.2: Change "identical" to "similar"

APPROVED FOR PUBLIC RELEASE  
*J. Burkland*  
 1/16/92

|  |  |
|--|--|
| 13a. Justification (mark one)<br>Criteria Change <input type="checkbox"/><br>Design Improvement <input type="checkbox"/><br>Environmental <input type="checkbox"/><br>As-Found <input type="checkbox"/><br>Facilitate Const. <input checked="" type="checkbox"/><br>Const. Error/Omission <input type="checkbox"/><br>Design Error/Omission <input type="checkbox"/> | 13b. Justification Details<br>Allows more versatility for disposal of hydrotest water. [Item 1]<br>Allows use of extrudate produced from resin batch other than HDPE sheet resin batch. [Item 2 & 3] |
|--|--|

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

|                         |  |
|-------------------------|--|
| <u>KEH DISTRIBUTION</u> |  |
| Const Doc Cntl E2-50    | J. S. Hill [2] #4-57<br>K. S. McCullough N1-83<br>D. B. Powell [4] R4-03 |
| <u>WHC DISTRIBUTION</u> |  |
| Project Files R1-28     | T. W. Staehr (PE) R3-27  |
| J. K. Epperley R1-29    | J. E. Vanbeek R3-27  |
| T. K. Cordray S1-54     | G. H. Weissberg R3-10  |
| STA 10 #3-87            | DOE  |
| STA 6 T2-03             | A. G. Lassila A5-18  |
| WRL GARZA A3-80         |  |

RELEASE STAMP

OFFICIAL RELEASE BY WHC 13  
 DATE NOV 25 1991  
 STA 4

9 2 1 2 4 6 3 1 5 5 3

# ENGINEERING CHANGE NOTICE

Page 2 of 2

1. ECN (use no. from pg. 1)

**B-714-108**

**15. Design Verification Required**

Yes  
 No

**16. Cost Impact**

ENGINEERING

Additional  \$ 284<sup>00</sup>  
Savings  \$ \_\_\_\_\_

CONSTRUCTION

Additional  \$ 0<sup>00</sup>  
Savings  \$ \_\_\_\_\_

**17. Schedule Impact (days)**

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 <input type="checkbox"/><br>Functional Design Criteria <input type="checkbox"/><br>Operating Specification <input type="checkbox"/><br>Criticality Specification <input type="checkbox"/><br>Conceptual Design Report <input type="checkbox"/><br>Equipment Spec. <input type="checkbox"/><br>Const. Spec. <input type="checkbox"/><br>Procurement Spec. <input type="checkbox"/><br>Vendor Information <input type="checkbox"/><br>OM Manual <input type="checkbox"/><br>FSAR/SAR <input type="checkbox"/><br>Safety Equipment List <input type="checkbox"/><br>Radiation Work Permit <input type="checkbox"/><br>Environmental Impact Statement <input type="checkbox"/><br>Environmental Report <input type="checkbox"/><br>Environmental Permit <input type="checkbox"/> | Seismic/Stress Analysis <input type="checkbox"/><br>Stress/Design Report <input type="checkbox"/><br>Interface Control Drawing <input type="checkbox"/><br>Calibration Procedure <input type="checkbox"/><br>Installation Procedure <input type="checkbox"/><br>Maintenance Procedure <input type="checkbox"/><br>Engineering Procedure <input type="checkbox"/><br>Operating Instruction <input type="checkbox"/><br>Operating Procedure <input type="checkbox"/><br>Operational Safety Requirement <input type="checkbox"/><br>IEFD Drawing <input type="checkbox"/><br>Cell Arrangement Drawing <input type="checkbox"/><br>Essential Material Specification <input type="checkbox"/><br>Fac. Proc. Samp. Schedule <input type="checkbox"/><br>Inspection Plan <input type="checkbox"/><br>Inventory Adjustment Request <input type="checkbox"/> | Tank Calibration Manual <input type="checkbox"/><br>Health Physics Procedure <input type="checkbox"/><br>Spares Multiple Unit Listing <input type="checkbox"/><br>Test Procedures/Specification <input type="checkbox"/><br>Component Index <input type="checkbox"/><br>ASME Coded Item <input type="checkbox"/><br>Human Factor Consideration <input type="checkbox"/><br>Computer Software <input type="checkbox"/><br>Electric Circuit Schedule <input type="checkbox"/><br>ICRS Procedure <input type="checkbox"/><br>Process Control Manual/Plan <input type="checkbox"/><br>Process Flow Chart <input type="checkbox"/><br>Purchase Requisition <input type="checkbox"/><br>_____ <input type="checkbox"/><br>_____ <input type="checkbox"/><br>_____ <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            |
|-----------------------------------|--------------------|-----------------|-----------------------------|-----------------------------------|-----------------|
| <b>OPERATIONS AND ENGINEERING</b> |                    |                 | <b>ARCHITECT-ENGINEER</b>   |                                   |                 |
| Cog./Project Engineer             | <u>[Signature]</u> | <u>11/22/91</u> | PE                          | <u>[Signature] FOR KC BURGARD</u> | <u>11/22/91</u> |
| Cog./Project Engr. Mgr.           | <u>[Signature]</u> | <u>11/22/91</u> | QA                          | <u>[Signature]</u>                | <u>11-22-91</u> |
| QA                                | <u>[Signature]</u> | <u>11/22/91</u> | Safety                      | <u>[Signature]</u>                | <u>11-22-91</u> |
| Safety                            | _____              | _____           | Design                      | <u>ENVIR: [Signature]</u>         | <u>11-22-91</u> |
| Security                          | _____              | _____           | Other                       | <u>SPECS: [Signature]</u>         | <u>11/22/91</u> |
| Proj. Prog./Dept. Mgr.            | _____              | _____           | PLE:                        | <u>[Signature] FOR G.L. KOGL</u>  | <u>11/22/91</u> |
| Def. React. Div.                  | _____              | _____           | ENVIR:                      | <u>[Signature]</u>                | <u>11/22/91</u> |
| Chem. Proc. Div.                  | _____              | _____           | COA:                        | <u>[Signature]</u>                | <u>11/22/91</u> |
| Def. Wst. Mgmt. Div.              | _____              | _____           | <b>DEPARTMENT OF ENERGY</b> |                                   |                 |
| Adv. React. Dev. Div.             | _____              | _____           | _____                       |                                   |                 |
| Proj. Dept.                       | _____              | _____           | _____                       |                                   |                 |
| Environ. Div.                     | _____              | _____           | <b>ADDITIONAL</b>           |                                   |                 |
| IRM Dept.                         | _____              | _____           | _____                       |                                   |                 |
| Facility Rep. (Ops)               | _____              | _____           | _____                       |                                   |                 |
| Other                             | _____              | _____           | _____                       |                                   |                 |
| _____                             | _____              | _____           | _____                       |                                   |                 |
| _____                             | _____              | _____           | _____                       |                                   |                 |

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN ~~159285~~  
 Proj. ECN B-714-109

2. ECN Category (mark one)
- Supplemental
  - Direct Revision
  - Change ECN
  - Temporary
  - Supersedeure
  - Discovery
  - Cancel/Void

3. Originator's Name, Organization, MSIN, and Telephone No.  
 R.G. Hollenbeck, KEH, E6-42, 6-0513

4. Date  
 12-06-91

5. Project Title/No./Work Order No. B-714/ER8007  
 Grouted Waste Disposal Facilities

6. Bldg./Sys./Fac. No.  
 218-E-16

7. Impact Level <sup>FAC-13-71</sup>  
 3 /SC-23

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
- Yes (fill out Blk. 11b)
  - No (NA Blks. 11b, 11c, 11d)
- UNKOWN

11b. Work Package Doc. No.  
 UNKOWN

11c. Complete Installation Work  
 \_\_\_\_\_  
 Cog. Engineer Signature & Date

11d. Complete Restoration (Temp. ECN only)  
 \_\_\_\_\_  
 Cog. Engineer Signature & Date

12. Description of Change

Block 8: Specification B-714-C2, Rev 1 (V-B714C2-003)

SC-3

\*\*\*\*\*

1) SECTION 02753, Para 2.1.2.1

Change Density requirements as follows:

Resin Density (g/cm<sup>3</sup>) <sup>Final</sup> ~~RM~~ ASTM D 1505 0.932 to 0.94  
 12-6-91

APPROVED FOR PUBLIC RELEASE  
 V. Birkland  
 1/16/92



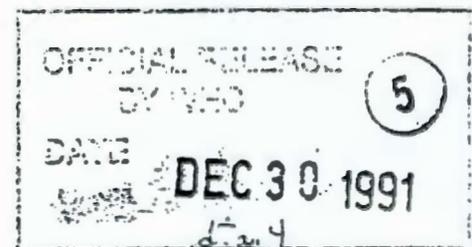
- 13a. Justification (mark one)
- Criteria Change
  - Design Improvement
  - Environmental
  - As-Found
  - Facilitate Const.
  - Const. Error/Omission
  - Design Error/Omission

13b. Justification Details  
 Allows contractor option of using foamed HDPE netting.

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

|                         |       |                   |       |
|-------------------------|-------|-------------------|-------|
| <b>KEH DISTRIBUTION</b> |       | J. S. Hill [2]    | H4-57 |
| Const Doc Cntl          | E2-50 | K. S. McCullough  | N1-83 |
|                         |       | D. B. Powell [4]  | R4-03 |
| <b>WHC DISTRIBUTION</b> |       | T. W. Staehr (PE) | R3-27 |
| Project Files           | R1-28 | J. E. Vanbeek     | R3-27 |
| J. K. Epperley          | R1-29 | G. H. Weissberg   | R3-10 |
| T. K. Cordray           | SI-54 | DOE               |       |
| STA. 6                  | T2-03 | A. G. Lassila     | A5-18 |
| STA. 10                 | A3-87 |                   |       |

RELEASE STAMP



# ENGINEERING CHANGE NOTICE

Page 2 of 32  
12-10-91

1. ECN (use no. from pg. 1)  
B-714-109

15. Design Verification Required

Yes

No

16. Cost Impact

|   |  |
|---|--|
| <p>ENGINEERING</p> <p>Additional <input checked="" type="checkbox"/> \$ <u>210</u></p> <p>Savings <input type="checkbox"/> \$ _____</p> | <p>CONSTRUCTION</p> <p>Additional <input type="checkbox"/> \$ _____</p> <p>Savings <input checked="" type="checkbox"/> \$ <u>300</u></p> |
|---|--|

17. Schedule Impact (days)

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.

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

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            |
|--|-----------------|---------------------------------|-----------------|
| <b>OPERATIONS AND ENGINEERING</b>          |                 | <b>ARCHITECT-ENGINEER</b>       |                 |
| Cog./Project Engineer <u>[Signature]</u>   | <u>12/10/91</u> | PE <u>K C Burgard</u>           | <u>12/9/91</u>  |
| Cog./Project Engr. Mgr. <u>[Signature]</u> | <u>12/10/91</u> | QA <u>[Signature]</u>           | <u>12-6-91</u>  |
| QA <u>J. K. [Signature]</u>                | <u>12/12/91</u> | Safety <u>[Signature]</u>       | <u>12-6-91</u>  |
| Safety _____                               | _____           | Design <u>[Signature]</u>       | <u>12-6-91</u>  |
| Security _____                             | _____           | Other <u>SPECS: [Signature]</u> | <u>12-6-91</u>  |
| Proj. Prog./Dept. Mgr. _____               | _____           | PLE: <u>[Signature]</u>         | <u>12-6-91</u>  |
| Def. React. Div. _____                     | _____           | ENVIR: <u>[Signature]</u>       | <u>12-6-91</u>  |
| Chem. Proc. Div. _____                     | _____           | CQA: <u>David McDev</u>         | <u>12-10-91</u> |
| Def. Wst. Mgmt. Div. _____                 | _____           | <b>DEPARTMENT OF ENERGY</b>     |                 |
| Adv. React. Dev. Div. _____                | _____           | _____                           |                 |
| Proj. Dept. _____                          | _____           | _____                           |                 |
| Environ. Div. _____                        | _____           | <b>ADDITIONAL</b>               |                 |
| IRM Dept. _____                            | _____           | _____                           |                 |
| Facility Rep. (Ops) _____                  | _____           | _____                           |                 |
| Other _____                                | _____           | _____                           |                 |
| _____                                      | _____           | _____                           |                 |
| _____                                      | _____           | _____                           |                 |

Distribution:

9 2 1 2 3 1 5 5 7

|                 |              |
|-----------------|--------------|
| J.H. Anttonen   | RL (A5-10)   |
| E.J. Bitten     | WHC (L4-73)  |
| R.M. Carosino   | RL (A4-52)   |
| G.D. Carpenter  | WHC (B2-16)  |
| C.E. Clark      | RL (A6-95)   |
| M.W. Cline      | WHC (H4-57)  |
| M. Dev          | RL (A6-80)   |
| L.P. Diediker   | WHC (T1-30)  |
| C.K. Disibio    | WHC (B3-03)  |
| D.L. Duncan     | EPA (HW-074) |
| J.L. Epstein    | WHC (R4-01)  |
| C.J. Geier      | WHC (H4-57)  |
| R.D. Izatt      | RL (A6-95)   |
| M. Jaraysi      | Ecology      |
| R.T. Kimura     | WHC (S4-43)  |
| D.W. Lindsey    | WHC (B2-35)  |
| P.J. Mackey     | WHC (B3-15)  |
| K.S. McCullough | WHC (N1-83)  |
| T.M. Michelena  | Ecology      |
| S.M. Price      | WHC (H4-57)  |
| J.E. Rasmussen  | RL (A5-19)   |
| S.H. Rifaey     | WHC (R4-02)  |
| S.H. Sanan      | WHC (R4-05)  |
| G.H. Sanders    | WHC (A5-21)  |
| J.E. Van Beek   | WHC (R3-27)  |
| T.B. Veneziano  | WHC (B2-35)  |
| J.A. Voogd      | WHC (R4-03)  |
| J.L. Waite      | WHC (B2-35)  |
| G.F. Williamson | WHC (R4-01)  |
| J.J. Witczak    | Ecology      |
| G.D. Wright     | WHC (R3-09)  |

ADMINISTRATIVE RECORD (Grout Treatment Facility, TD-2-1)  
[Care of Susan Wray, WHC (H4-22C)]

Washington State Department of Ecology, Nuclear And Mixed Waste Library,  
Mail Stop PV-11

Environmental Protection Agency Region 10, Mail Stop HW-074