



Westinghouse
Savannah River Company

P.O. Box 616
Aiken, SC 29802

ESH-FSS-95-0248

April 27, 1995

CERTIFIED

Mr. John J. Schnabel, P. E.
Facility Engineering Section
Division of Solid Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, SC 29201

Dear Mr. Schnabel:

**SUBMITTAL OF PLANS FOR CAPPING THE REMAINDER OF VAULT ONE, Z-
AREA SALTSTONE FACILITY (IWP-217) (U)**

John, per your request, three additional sets of original P. E. stamped plans are enclosed along with the original submittal package. Please review the plan and let us know if it is acceptable to you. If you have any questions or if I can be of further help, please let me know.

Sincerely,

A handwritten signature in cursive script that reads "Larry Haney".

Larry C. Haney
RCRA Recordkeeping, Compliance & Permitting
Environmental Protection Department

LCH:sam
Enclosures

CC: EPD File, 742-A



SOUTH CAROLINA

Department of Health and Environmental Control
Office of Solid Waste Reduction and Recycling
Phone: (803) 734-5210 Fax: (803) 734-4901

Date: March 23, 1995

To: Larry C. Haney

PAGES: _____

In response to your request.

I am pleased to send you the enclosed material.
Thank you for your interest. Please call me if I can help you further.

May I have your comments.

From: John Schnabel

DHEC

Telephone: 803-896-4216

or attach business card

** I need three copies of the enclosed documents.

printed on recycled paper

Design Change Package Continuation Sheet

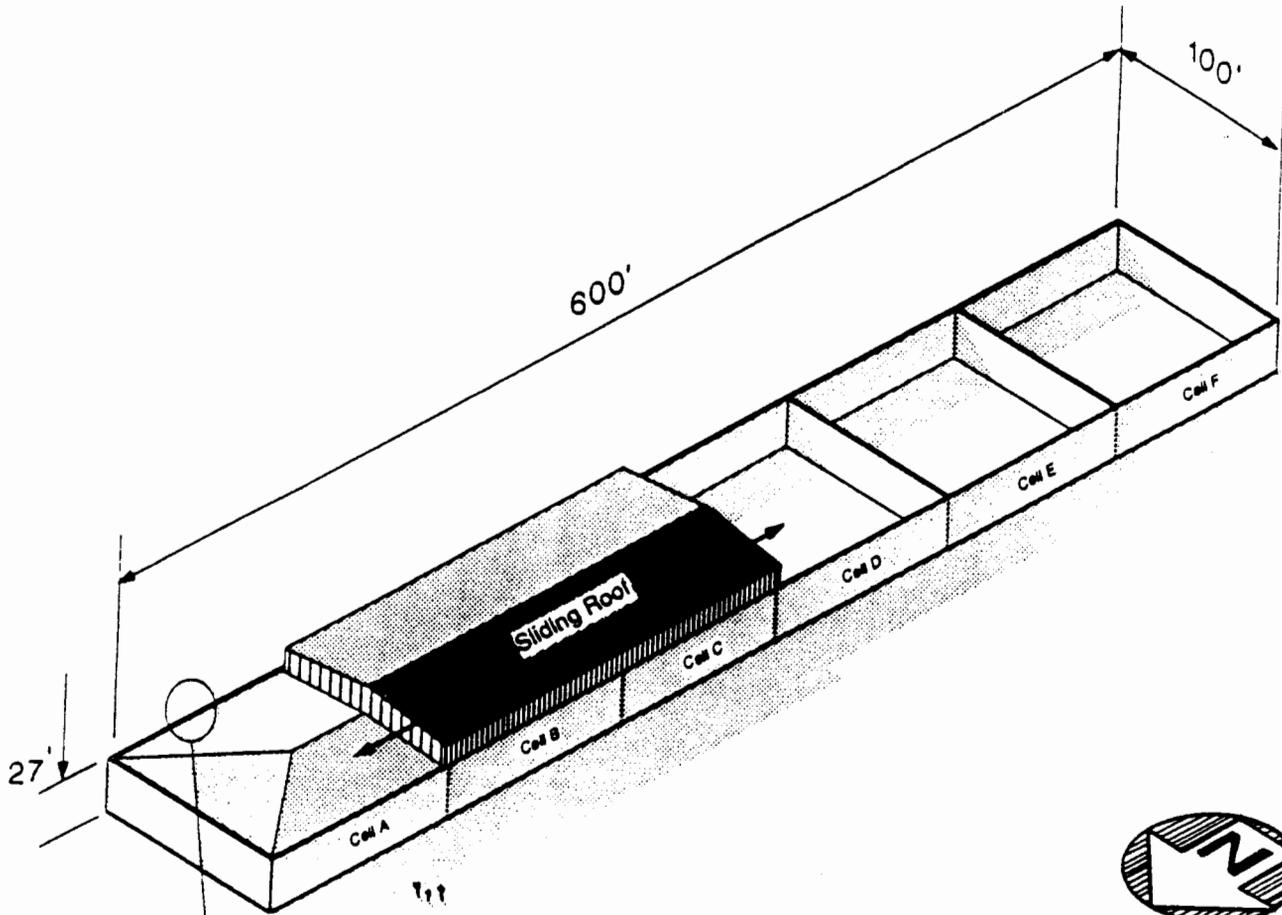
Design Change Package

OCP No. -C-DCP-Z-93001

Rev. 7

Page 2

Description



See Detail 1 for an enlargement of this area.

SALTSTONE VAULT #1 ISOMETRIC

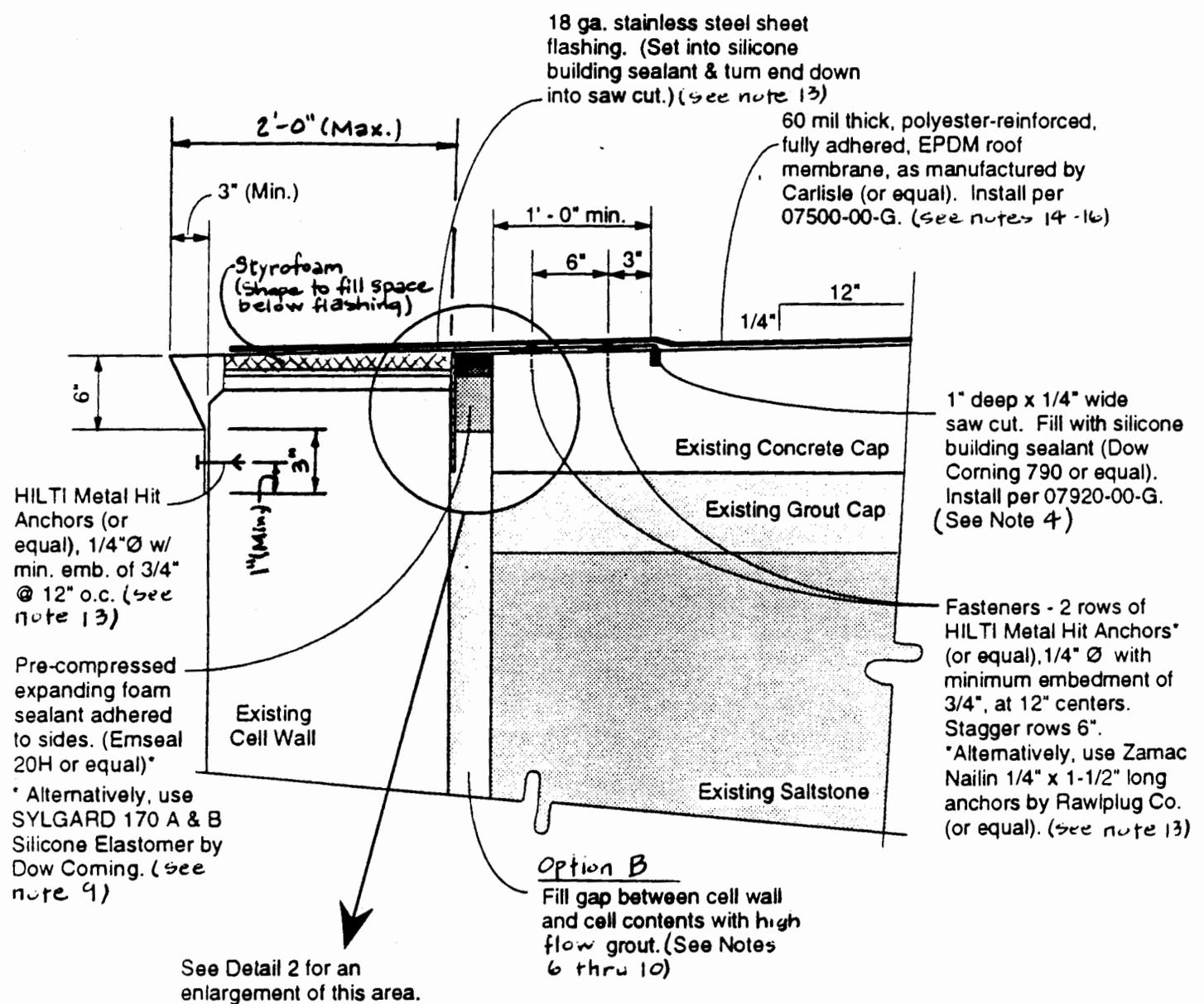
SCALE: 1" = 100'-0"

Design Change Package Continuation Sheet

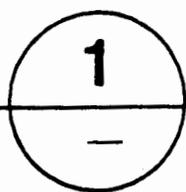
Design Change Package

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Description



DETAIL



SCALE: 1" = 1'-0"

Design Change Package Continuation Sheet

Design Change Package

DCP No.

C-DCP-Z-93001

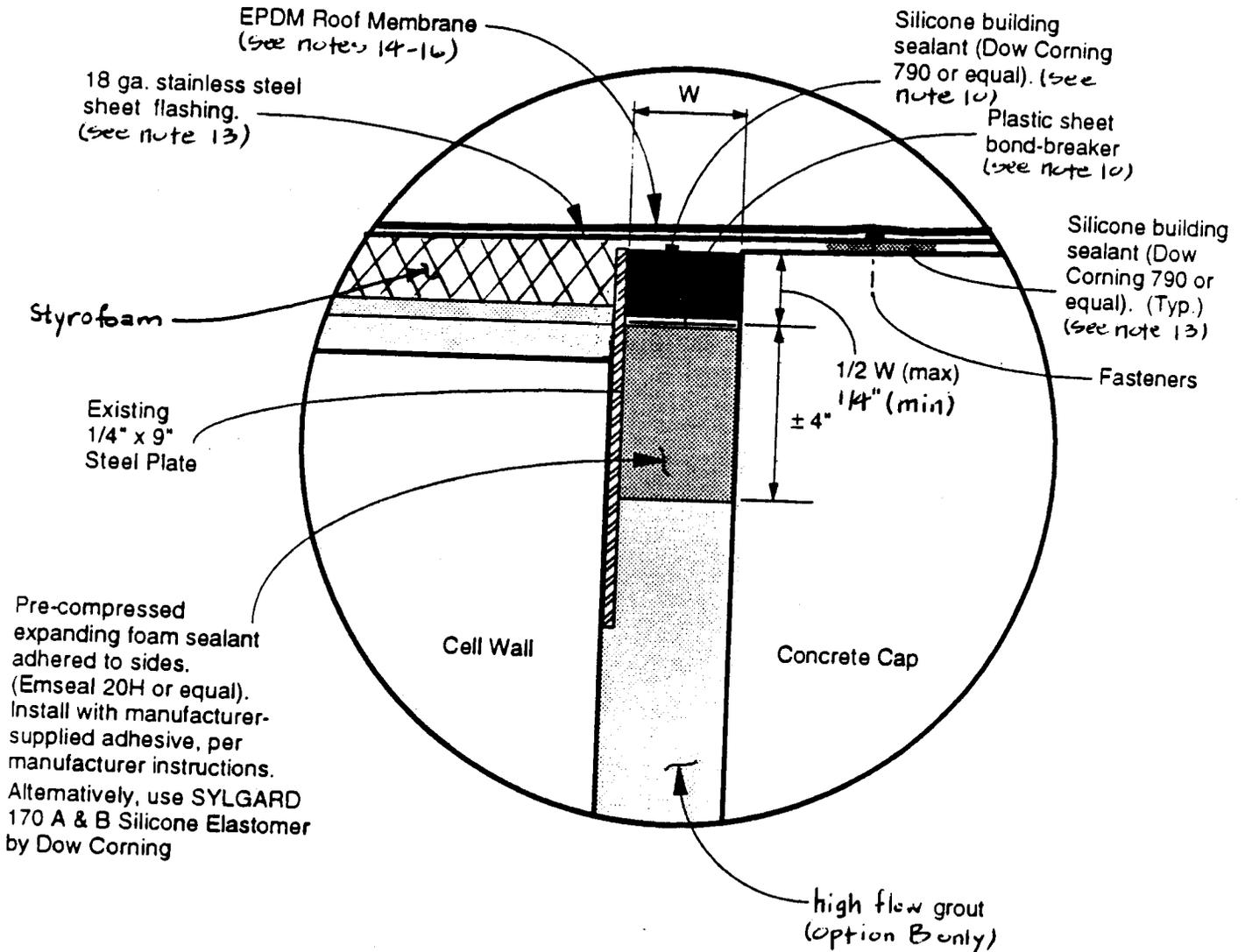
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4

Description



DETAIL

2

SCALE: 3" = 1'-0"

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Design Change Package (U)

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Since the original design for capping cell A of Saltstone Vault No. 1, as shown on drawing C-CC-Z-0010, has been changed due to lessons learned during the construction phase of cell A, the remaining cells (B through F) need a new design.

The capping of Cells B through F shall be completed in accordance with Drawing No. C-CC-Z-0010, sketches on pages 2 through 4 of this DCP, and with the requirements listed below.

There are two options provided. **Option A assumes there is essentially no gap between the vault wall and the interior grout/concrete layers. Option B assumes that there is a gap.** (Note: If Option A or Option B are not shown with a note, then the note applies to both options).

1. The 6" (min.) "Clean Grout" layer shall be poured prior to removing the temporary/movable roof. This clean grout layer (or personal protection layer) shall be as level as possible, prior to pouring the 6" (min.) reinforced concrete layer, by pouring through the existing 4 portholes at the four quadrants of the existing movable roof at an equal rate and volume and through the center porthole, in order to provide a level surface. The grout to be used shall be high flow grout, type A2000-X-0-0-AB, in accordance with C-SPS-G-00041.
2. Field shall take extra precaution to prevent water infiltration while performing the task of placing the final cap and roof (via temporary roof or reinforced fabric tarp (see "Notes to Construction")). A cover over the cell shall be provided as soon as possible after the sliding roof has been removed, but no more than 24 hours after the cell is exposed to the atmosphere (this includes installation of concrete expansion anchors for tie downs for the tarp).
3. Place the 6" reinforced concrete layer in accordance with Drawing No. C-CC-Z-0010. **Option A:** Place a 2" x 5-1/2" expansion joint strip and a 2" wide x 1/2" deep (max.) filler strip (on top), wrapped in a plastic bond-breaker sheet, at the edge of this layer. These 2" wide strips shall be placed flush with the inside face of the cell wall and up to the top of the existing vertical embedded plate.
4. On the east and west sides of the concrete cap of the cell (and also the south side for Cell F), saw-cut a groove 1-inch deep and 1/4-inch wide on the top surface. The groove shall be a minimum of 1 foot away from the edge of the concrete cap. Clean out groove ensuring the removal of all loose materials.
5. **Option A:** Remove the 2" x 1/2" filler strip and bond breaker (if used) after the concrete has cured for a minimum of 24 hours. Insert a new bond breaker sheet in this notch and fill with silicone building sealant (Dow Corning 790 or equal).

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Design Change Package (U)

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6. **Option B:** Prior to installation of gap seal materials on the north, east and west walls of the current cell (and also the south side for Cell F), and the south side of the previous cell, ensure that entire gap has been cleared of existing water stop, debris, dust, and other foreign materials.
7. **Option B:** Where accessible, remove any rust, debris or loose material in the gap.
8. **Option B:** Install grout in the gap between the cell walls and the cell contents in accordance with the requirements of SRSESM 03600-01-R. Grout shall be in a flowable form, and shall be placed in maximum 3-foot lifts to ensure that vault walls do not deflect excessively due to hydraulic pressure. Top of grout shall be a minimum of 6 inches below top of vertical steel plate. No aggregate shall be included in the grout. Grout shall be allowed to cure a minimum of 18 hours between lifts.
9. **Option B:** In the gap between the clean grout/reinforced concrete layers and the existing vault wall, install Emseal 20H expanding foam strips (or equal). Alternatively, SYLGARD 170 A & B silicone elastomer by Dow Corning may be used. Install in accordance with manufacturer's instructions. For Emseal, use manufacturer-supplied adhesive on both sides of the gap. Use appropriately sized material for width of gap.
10. **Option B:** Insert plastic bond-breaker sheet on top of expanding foam strips (or existing expansion joint material) prior to installing the single component silicone building sealant. Sealant shall be Dow Corning 790 silicone building sealant (or equal). Depth of sealant shall not exceed 1/2 the width of the gap width. Ensure placement of bond-breaker sheet does not prevent adherence of sealant to sides of gap.
11. Remove both rails along the cell as follows:
 - Cut the rails at a point south of the last section of new flashing and no more than 12 inches north of an existing rail clip.
 - Remove nuts, rail clips, and rail. Cut studs flush with top of rail base plate. Salvage existing rail stops and reinstall, similar to original installation, at the new ends of the rails.
 - Remove nuts from anchor bolts and cut the bolts flush with top of the base plates. As an option, if new flashing can be installed without interference, the nuts may be left in place and the bolts cut flush with the top of the nuts.
12. Remove existing temporary handrail, which is on the vault wall.

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13. Install 18 gage stainless steel sheet flashing on top of concrete cap, in a bed of silicone (Dow Corning 790, or equal) on the east and west sides of the cell (and also the south side of Cell F). Turn upper end of top flashing down into the saw-cut groove. Flashing shall be attached to the concrete cap on top by two rows of HILTI Metal HIT 1/4" Φ anchors, with a minimum embedment of 3/4 inch; alternatively, use Rawlplug Zamac Nailin anchors, 1/4" Φ x 1-1/2" long, or other equal. Stagger the two row of fasteners by 6 inches. The flashing shall be attached on the outside face of the vault wall with HILTI Metal HIT anchors, 1/4" Φ with 3/4" minimum embedment @ 12" o.c.. Lap flashing joints 2 inches minimum and seal laps with silicone building sealant (Dow Corning 790 or equal). Fill saw-cut groove completely with silicone building sealant, and tool top of sealant flush with top edges of saw-cut groove.
 - 14.* Lift existing movable roof flashing, with neoprene skirt, that is attached to the sliding roof structure at the south end of the cell. Install, per manufacturer's instructions, a fully adhered, 60-mil thick, polyester-reinforced EPDM roof membrane (Carlisle or equal) across top of entire cell concrete cap. On the east and west sides, overlap the EPDM membrane over the flashing and terminate no less than 2 feet from the exterior face of the cell wall. Overlap the EPDM on the north side with the remaining EPDM membrane on the previous cell's south side a minimum of 1 foot and splice in accordance with manufacturer's instructions. On the south side of the current cell, leave a minimum of 2 feet of extra membrane rolled up (except Cell F, where membrane shall be terminated at end of south side wall). For cells B through E, this will be used to overlap and splice with the roof membrane that will be installed on the next adjacent cell in the future. The rolled-up excess EPDM membrane shall be placed underneath the existing sliding roof flashing.
 - 15.* The EPDM roof membrane shall be protected from damage due to Operations or Construction activities on the adjacent cell.
 - 16.* Field shall provide yellow and black safety stripe 4 feet from edge of the new flashing on all sides where roof flashing occurs. Paint warning sign on EPDM roof at every 20 feet and adjacent to inside of the safety stripe. Sign shall read as follows: "DO NOT GO PAST SAFETY STRIPE." Sign shall be painted in yellow, 3 inch high, block letters.
- * (NOTE: NOTES 14, 15 AND 16 ABOVE ARE TO BE DONE LATER BY OTHERS).

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Notes to Construction (For information only):

As stated above, provision must be made to prevent rainwater from infiltrating into the cell during the construction phase of placing the reinforced concrete layer and final cap/roof. The following systems are provided as options to be considered by Construction in order to provide adequate cover; however, the final method chosen will be based on cost and constructability.

(1) Griffolyn fabric by REEF Industries, Inc. (1-800-231-6074)*

General Description: A heavy-duty laminated nylon reinforced plastic fabric, which can be rolled out in large sheets (e.g. 100' x 100'). The seams are vulcanized to prevent leakage and it is made with a laminated geotextile backing for improved puncture and abrasion resistance. The fabric has built-in UV ray protection to increase durability and life expectancy. It can be rolled up and continuously reused. Eyelets (or grommets) can be provided in order to have a tie-down system. It weighs approximately .07 psf and the cost is approximately \$0.25/SF. This cover can be made to overhang the cell roof and can be tied down by strapping to expansion anchors on the side of the vault walls. (Note: Other product characteristics and a sample of the material is available upon request to Design Engineering).

(2) Fabric Building Systems by CANSPEC (1-813-351-6096)

General Description: A modular aluminum frame covered with a vinyl coated polyester fabric. The fabric is tensioned over the frame, which creates a very strong shell capable of withstanding wind loads over 120 mph. This shell frame can have personnel doors, roll-up doors, windows and a variety of other options as needed. The frame can span up to 200 feet and can be easily assembled and reassembled within 2 to 4 days. The life expectancy of the fabric can be up to 20 years, depending on the type chosen; therefore, this structure can be reused many times. The cost of a 100' x 100' structure with a standard eave height of 10' is approximately \$125,000 (totally installed - including on-site vendor representatives fees). (Note: Product literature available upon request to Design Engineering).

* If the Griffolyn fabric is chosen as the preferred method of preventing rainwater infiltration, the following notes shall apply:

- 1) Supports in the middle of the cell (e.g. metal or wood saw-horse), which are spaced in the north-south direction, shall be provided in order to supply a slope on the cover to allow for rainwater runoff. A continuous horizontal member in the north-south direction shall be furnished in order to prevent sagging of the fabric cover. A neoprene rubber (or equal) material shall be attached to the top of the support where it interfaces with the fabric cover, in order to prevent puncturing.

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- 2) The tie-down anchor bolts (for the turnbuckles on the removable roof) on the rail base plate shall be cut below the top of the rail and low enough to prevent any contact with the fabric cover.
- 3) The fabric cover shall have grommets (eyelets) in order to provide a method for tie-down to the anchors.
- 4) Expansion anchors with eyelet ends, such as HILTI HKT 14 KWIK TIE (or equal) shall be installed on the outside face of the cell wall and a minimum of 2 feet below the top surface of wall on either the east or west side. The anchors shall be spaced a maximum of 5 feet apart.
- 5) The opposite side of the vault cell (east or west side) shall utilize eyelets in the tarp (fabric cover) at 5 ft. intervals and shall be anchored with heavy duty steel cable and concrete dead weight blocks at the ground level.
- 6) At the north end of the current cell use 3/8" Φ expansion anchors with 2-1/2" minimum embedment at 5 ft. intervals, to anchor tarp.
- 7) At the south end of the current cell, roll up the tarp underneath the sliding roof skirt flashing and use sand bags to hold down tarp.
- 8) The center temporary support for the fabric cover shall be removed prior to pouring the concrete for the reinforced layer.

Design Change Package Revision Summary Sheet

DCP No. C-DCP-Z-93001		Sheet Revision Φ	Sheet <u>1</u> of <u>1</u>
Rev No. -	Description	Date	
Φ	Original Issue, for construction of the personal protection layer (PPL) for Z-Area, saltstone vault #1	01/29/93 01/29/93 APR 29 1993	
1	DISPOSITION OF DCF = C-DCF-Z-0001 R/O FLASHING (WEATHER PROTECTION) DETAIL	FEB 24	1994 <i>DC 7/24/94</i> FEB 23 1994
2	DISPOSITION OF DCF = C-DCF-Z-0002 R/O CURING COMPOUND APPLICATION TIME FRAME		
2	DISPOSITION OF DCF = C-DCF-Z-0003 R/O IN LIEU OF 4 COATS - USE 1 COAT CURING AND POLYETHYLENE SHEET.		MAR 16 1994
3	DISPOSITION OF C-DCF-Z-0004 R/O PLACEMENT OF EXPANDABLE MATERIAL NOTE DCN C-003. <i>N 3/25/94</i>		
4	DRILLING INSTRUCTIONS TO RELIEVE HYDROSTATIC PRESSURE PER REQUEST OF C-DCF-Z-0005. NOTE ITEMS OF DCF NOT FULLY ADDRESSED, TO BE PERFORMED IN PROCEEDING (REV 5). REVISIONS.		MAR 17 1994
5	PARTIAL DISPOSITION OF C-DCF-Z-0005. PROVIDES DESIGN/DETAILS FOR JOINT SEAL, PROTECTIVE FLASHING AND ROOFING MATERIAL.		AUG 05 1994
6	DISPOSITION OF C-DCF-Z-0007 TO REDUCE GROUT CURE TIME AND TO MODIFY EAST WALL GROUT PLACEMENT. ALSO, PARTIAL DISPOSITION OF C-DCF-Z-0005 TO COMPLETE CAPPING DETAILS OF CELL A.		
7	FINAL DISPOSITION OF REMAINING PORTION OF C-DCF-Z-0005 TO PROVIDE CAP DESIGN FOR CELLS B THROUGH F.		

C-DCP-Z-93001 ~~Rev. 0~~ ~~6-29-94~~

Design Change Package Service Group Estimate Sheet

<u>ESTIMATED COST</u>	<u>DCP Rev 0:</u>	<u>ESTIMATED COST</u>	<u>DCP Rev : 1</u>
DA-TWC	_____	DA-TWC	_____
LABOR	_____	LABOR	_____
MATERIALS	_____	MATERIALS	_____
CONTRACTS	_____	CONTRACTS	_____
INDIRECT	_____	INDIRECT	_____
TOTAL	_____	TOTAL	_____
ESTIMATED BY	<u>MGM 3-9-93</u>	ESTIMATED BY	<u>MGM 7-23-94</u>
TOTAL ALL DCP's	_____	TOTAL ALL DCP's	_____

<u>ESTIMATED COST</u>	<u>DCP Rev : 2</u>	<u>ESTIMATED COST</u>	<u>DCP Rev : 3</u>
DA-TWC	_____	DA-TWC	_____
LABOR	_____	LABOR	_____
MATERIALS	_____	MATERIALS	_____
CONTRACTS	_____	CONTRACTS	_____
INDIRECT	_____	INDIRECT	_____
TOTAL	_____	TOTAL	_____
ESTIMATED BY	<u>MGM 3-16-94</u>	ESTIMATED BY	<u>JAA 3/25/94</u>
TOTAL ALL DCP's	_____	TOTAL ALL DCP's	_____

<u>ESTIMATED COST</u>	<u>DCP Rev : 4</u>	<u>ESTIMATED COST</u>	<u>DCP Rev : 5</u>
DA-TWC	_____	DA-TWC	_____
LABOR	_____	LABOR	_____
MATERIALS	_____	MATERIALS	_____
CONTRACTS	_____	CONTRACTS	_____
INDIRECT	_____	INDIRECT	_____
TOTAL	_____	TOTAL	_____
ESTIMATED BY	<u>J. D. Cabell 3/16/94</u>	ESTIMATED BY	<u>Adel 6-3-94</u>
TOTAL ALL DCP's	_____	TOTAL ALL DCP's	_____

<u>ESTIMATED COST</u>	<u>DCP Rev : 6 ⁶⁻²⁹⁻⁹⁴</u>	<u>ESTIMATED COST</u>	<u>DCP Rev : 6 ¹²⁻⁵⁻⁹⁴</u>
DA-TWC	_____	DA-TWC	_____
LABOR	_____	LABOR	_____
MATERIALS	_____	MATERIALS	_____
CONTRACTS	_____	CONTRACTS	_____
INDIRECT	_____	INDIRECT	_____
TOTAL	_____	TOTAL	_____
ESTIMATED BY	<u>Adel 12-5-94</u>	ESTIMATED BY	<u>M. G. ... 3/14/95</u>
TOTAL ALL DCP's	_____	TOTAL ALL DCP's	_____

Design Change Package Documentation List

Sheet 1 of 23 *1/1/94*

Documents Associated With Change									
DCP No./Rev	Complete Document No. (If Vendor-Incl Sub + AC)	Rev	Affected Document No.	Rev	Title	In DCP	Info Only	Remarks	Closure Action (If none, enter N/A)
						Yes	No		
	COVER SHEET		C-DCP-Z-93001	φ	DCP COVER SHEET	✓			
	REV. SUMMARY SHT		"	φ	REVISION SUMMARY SHT	✓			
	DOCUMENT LIST		"	φ	DCP DOCUMENT LIST	✓		2 PAGES	
	DESIGN BASIS		"	φ		✓			
	ALARA REVIEW CK. Lst		"	φ	ALARA DESIGN REVIEW CK Lst		✓		
	ALARA DISPOSITION FORM		"	φ	ALARA DESIGN REVIEW DISPOSITION		✓		
	DWG C-CC-Z-0010	φ	"	φ	SALTSTONE VAULT #7	✓			
					PERSONAL PROTECTION				
					LAYERS, PLANS, SECTIONS				
					AND DETAILS				
	DWG 780626	2	Saltstone Surface M/A Disposition Form	φ	Saltstone Surface Disposition Vault		✓		
	QUALITY INSPECTION PLAN		C-DCP-Z-93001	φ	QUALITY INSPECTION PLAN (QIP)		✓		
	DCP ESTIMATE SHEET		"	φ	DCP ESTIMATE SHEET		✓		
	WAD NO. DP213277		C-DCP-Z-93001	φ	WORK AUTH. Doc. (2)		✓		
	TECHNICAL REVIEW CHECKLIST	φ	C-DCP-Z-93001	φ	TECHNICAL REVIEW CHECKLIST		✓		

SK. 30F3

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DESIGN CHANGE PACKAGE DOCUMENTATION LIST

DCP No./Rev. C-DCP-Z-93001 / R.1, R.2, R.3 Sheet 2 of 2 D/C 6/1/94

2220

Complete Document No. If Vendor - Incl Sub + AC	Rev.	Affected Document No.	Rev.	Title	In DCP		Remarks	Closure Action (If none, enter N/A)
					Yes	No		
DCP COVER SHEET		C-DCP-Z-93001	1	COVER SHEET (1)	✓			
DCF C-DCF-Z-001				DCF (1)	✓		FOR INFO ONLY	
DCN C-002		C-CC-Z-0010	0	CAC 2/23/94				
REMOVE INSERT SH				DCN (1)	✓			
TRC C-DCP-Z-93001	1	C-DCP-Z-93001	2	RIS (1)	✓			
			2/3	TECH REVISE CHECKLIST	✓			
DUP COVER SHIT		C-DCP-Z-93001	2	COVER SHEET (1)	✓			
DCF-C-DCF-Z-0002	D			DCF (1)	✓		FOR INFO ONLY	
C-DCP-Z-93001	1	C-DCP-Z-93001	2,3	QIP	✓			
DCF-C-DCF-Z-0003	D			DCF (1)	✓		FOR INFO ONLY	
DCP COVER SHIT		C-DCP-Z-93001	3	COVER SHIT (1)	✓			
DCF-C-DCF-Z-0004	0			DCF (2)	✓			
DCN C-003		C-CC-Z-0010	0	DCN (1)	✓		REVISED DRAWING FROM HO TO HI.	
REMOVE INSERT SH				REMOVE (1)	✓			
TRC								
QIP					✓			

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DESIGN CHANGE PACKAGE DOCUMENTATION LIST

DCP No./Rev.	Documents Associated With Change			Title	In DCP		Remarks	Sheet 3 of 3	Closure Action (if none, enter N/A)
	Complete Document No. If Vendor - Incl Sub + AC	Rev.	Affected Document No.		Rev.	Yes			
	C-DCP-Z-93001/R.4, 5, 6, 7								
DCP COVER SHIT	-								
DEF: C-DCP-Z-93001	D			DCP (2)	X				
REMOVE INSERT	N/A			DCP (2)		X			
RIP SHEET	N/A			RIS (1)	X				
TECH C-DCP-Z-93001	2	C-DCP-Z-93001	4, 5	RIP ^{TECH REVISED} (7)	X				
QIP	N/A			TECH REVISED CHECKLIST (8)	X				
C-DCP-Z-93001	N/A			QIP (1)	X				
DCP COVER SHITS	N/A	N/A		QIP ^{FOR REV. 6} (1)	X		INSPECTION FOR JOINING & REWORKING MATERIAL		SUBMIT I.R.
C-PUNCHLIST	N/A	N/A		DCP COVER CONT. (5)	X		DETAILS & NOTES FOR REPAIR		N/A
QIP/QID				C-PUNCHLIST (2)	X		FOR INFO ONLY		
DCP R/I SHIT				QIP (1)	X				
DCP COVER SHIT	N/A	N/A		REMOVE/INSERT SHIT	X				
QIP	N/A	N/A		DCP COVER SHEETS (7)	X				
C-Punch List	N/A	N/A		QIP FOR REV. 6 (1)	X				
REMOVE INSERT SHIT	N/A	N/A		C-PUNCHLIST	X				
DATRR	N/A	N/A		REMOVE/INSERT SHIT Design Authority	X				
DCP COVER SHEET	N/A	N/A		TECH. REVIEW REPORT	X				
				DCP COVER SHEETS (7)	X				

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DR 1-11-75

QUALITY ASSESSMENT REPORT / INSPECTION PLAN

DATE 2-22-93
 SHEET 1 OF 2
 SHEET REV N/A

DCP NUMBER C-D-P-Z-93001/R7

REV N/A

ITEM DESCRIPTION / FUNCTION	PROCURE LEVEL	FUNCTIONAL CLASS	INSPECTION REQUIREMENTS/ACTIONS TO ASSURE QUALITY	IMPLEMENTING AGENCY	HOLD WITNESS	REMARKS	RESULTS
INSTALLATION, CURING AND TESTING OF GROUT	01 02 03 04	ONS DCP MPS UGS	INSPECTION & QUALITY CONTROL PER SRFSM REC # 03000-01-R	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
INSTALLATION & TESTING OF CONCRETE ANCHORS	01 02 03 04	ONS DCP MPS UGS	COMPLIANCE WITH SRFSM REC # 03251-03-R	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
PLACING REINFORCING STEEL	01 02 03 04	ONS DCP MPS UGS	COMPLIANCE WITH SRFSM REC # 03211-01-R	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
FORMING, PLACING, FINISHING AND CURING OF CONCRETE	01 02 03 04	ONS DCP MPS UGS	COMPLIANCE WITH SRFSM REC # 03010-02-R	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
SAW CUTTING AND CHIPPING OF CONCRETE	01 02 03 04 N/A	ONS DCP MPS UGS	COMPLIANCE WITH SRFSM REC # 03010-01-R	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
INSTALLATION OF JOINT MATERIAL	01 02 03 04	ONS DCP MPS UGS	COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS AND DETAILS & NOTES ON PAGES 3-6 OF THIS DEP.	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
REMOVAL OF RAILS AND ANCHORS	01 02 03 04 N/A	ONS DCP MPS UGS	COMPLIANCE WITH NOTES 11 & 12 OF THIS DEP (COVER/CONTINUATION SHEET)	CDE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT

QUALITY ASSESSMENT REPORT / INSPECTION PLAN

DATE 2-22-15
 SHEET 2 OF 2
 SHEET REV

DCP NUMBER C-Per-2-13001/R.7

REV N/A

ITEM DESCRIPTION / FUNCTION	PROCURE LEVEL	FUNCTIONAL CLASS	INSPECTION REQUIREMENTS/ ACTIONS TO ASSURE QUALITY	IMPLEMENTING AGENCY	HOLD WITNESS	REMARKS	RESULTS
INSTALLATION OF FLASHING	01	ONS	VISUAL INSPECTION PER C-7022-6	C-DE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
	02	OCP					
	03	OPS					
	04	OGS					
INSTALLATION OF EPDM ROOF MEMBRANE	01	ONS	INSTALL & INSPECT PER MANUFACTURER'S INSTRUCTIONS AND PER NOTES 1A-1G OF THIS REP COVER/CONT. SHEET	C-DE	<input type="checkbox"/> HOLD <input checked="" type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
	02	OCP					
	03	OPS					
	04	OGS					
	01	ONS			<input type="checkbox"/> HOLD <input type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
	02	OCP					
	03	OPS					
	04	OGS					
	01	ONS			<input type="checkbox"/> HOLD <input type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
	02	OCP					
	03	OPS					
	04	OGS					
	01	ONS			<input type="checkbox"/> HOLD <input type="checkbox"/> WITNESS <input type="checkbox"/> N/A		<input type="checkbox"/> ACCEPT <input type="checkbox"/> REJECT
	02	OCP					
	03	OPS					
	04	OGS					

Design Authority Technical Review Report

Section 1.0 — Scope of Review

Design Authority Technical Review Report No. C-DCP-2-93001 R17		Functional Classification (Check only one; leave others blank) <input type="checkbox"/> NS <input type="checkbox"/> CP <input checked="" type="checkbox"/> PS <input type="checkbox"/> GS	
Work Package <input type="checkbox"/>	Work Package No.	Work Package Title	
Procedure <input type="checkbox"/>	Procedure No.	Procedure Title and Rev	
Lock Out Plan <input type="checkbox"/>	Lock Out Plan No.	Lock Out Plan Title	
Temporary Modification <input type="checkbox"/>	Temporary Modification No.	Temporary Modification Title	
Plant Modification <input type="checkbox"/>	Plant Modification No.	Plant Modification Title	
Other <input checked="" type="checkbox"/>	Other (list) C-DCP-2-93001 R17 SALTSTONE VAULT # 1; CELL B THRU F CAPPING DESIGN MODIFICATIONS		

Brief Description of the Proposed Activity Being Reviewed

SALTSTONE VAULT # 1, CELL B THRU F CAPPING DESIGN BASED ON THE LESSON LEARNED IN CAPPING THE VAULT # 1, CELL A.

Listing of Documents Reviewed

C-DCP-2-00005
C-SPS-G-00041
SSD-SS-02 AND SAR-2-AREA-COSAL-SA-3

Classification

UNCLASSIFIED

Section 2.0 — Review Categories

Section 2.1 — Design Adequacy			Section 2.2 — Nuclear Criticality and Process Safety				
	Yes	No	N/A		Yes	No	N/A
Alignment of Design Outputs with Inputs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shielding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Systems Interaction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ALARA Considerations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mechanical Design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Accessibility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-VAC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Maintainability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Hydraulic Design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Operability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seismic Design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Constructability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electrical Design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Human Factors	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electrical Distribution Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Functional Testability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Instrumentation and Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Inservice Inspections	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Chemical Design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Service Systems (Compressed Air, Water, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Material Selection, Compatibility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fire Protection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nuclear Design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Security Systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiological Containment Design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Structural Design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Confinement and Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Process Hazard Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instrumentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Explosion Prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mass and Isotopic Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire Detection and Suppression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Standby Electrical Power	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Design Authority Technical Review Report (Continued)

Design Authority Technical Review Report No.

C-DCP-2-93001 R17

Page 2

Section 2.0 - Review Categories (Continued)

Section 2.3 - Industrial Safety	Yes	No	N/A		Yes	No
Falls and Falling Objects	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Explosive Hazards		
Mechanical Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Chemical Hazards		<input checked="" type="checkbox"/>
Heat and Temperature Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Toxic Material Hazards		<input checked="" type="checkbox"/>
Pressure Hazards	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Electrical Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Vibration and Noise Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fires and Fire Suppression	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Life Safety Codes		<input checked="" type="checkbox"/>

Section 2.4 - Operations	Yes	No	N/A		Yes	No
Operator Logs	<input type="checkbox"/>	<input type="checkbox"/>		Operator Aide	<input type="checkbox"/>	<input type="checkbox"/>
Operator Rounds	<input type="checkbox"/>	<input type="checkbox"/>		Tagging/Labeling	<input type="checkbox"/>	<input type="checkbox"/>

Section 2.5 - Training and Procedures	Yes	No	N/A		Yes	No
Administrative Procedures	<input type="checkbox"/>			Simulator Hardware/Software	<input type="checkbox"/>	
Operating Procedures	<input type="checkbox"/>			Training Courses (Job/Task Analyses, Objectives, Lesson Plans, Aids, etc.)	<input type="checkbox"/>	
Maintenance Procedures	<input type="checkbox"/>					
Test Procedures	<input type="checkbox"/>					

Section 2.6 - Miscellaneous	Yes	No	N/A	Other (List)	Yes	No
Security Plan	<input type="checkbox"/>	<input type="checkbox"/>		_____	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Plan	<input type="checkbox"/>	<input type="checkbox"/>		_____	<input type="checkbox"/>	<input type="checkbox"/>
Permitted Outlets	<input type="checkbox"/>	<input type="checkbox"/>		_____	<input type="checkbox"/>	<input type="checkbox"/>
Federal Facilities Agreement	<input type="checkbox"/>	<input type="checkbox"/>		_____	<input type="checkbox"/>	<input type="checkbox"/>

Section 2.7 - Additional Reviews Required	Yes	No
An Unreviewed Safety Question Determination Screening (11Q)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Environmental Evaluation Checklist (3Q)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Process Hazards Screening Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Section 3.0 - Review Summary and Conclusions

List all Adverse Impacts Noted During the Review Process

THE PROPOSED ACTIVITY WILL IMPROVE VAULT #1, CELL B TRAP & CAPPING DESIGN AND PREVENT RAINWATER FROM FLOWING INTO THE CELLS. IN THIS TECHNICAL REVIEW THERE ARE NO ADVERSE IMPACTS OR NOTED.

Conclusion

THE DESIGN PACKAGE C-DCP-2-93001 R17 IS APPROVED.

Section 4.0 - Approval

Preparer	Print Name	Signature	Date
	SUBASH EJANTIKAR	Subash Ejantkar	2/24/95
Contributing Reviewers			

Approver (Design Authority Manager)	Signature	Date
Robert Schwamberger	Robert Schwamberger	2/24/95

UNREVIEWED SAFETY QUESTION PROCESS
USQ SCREENING - PART A

C-DCR-2-93001

USQ # _____

Page 3 of 4
4/4/95 4/14/95

Title: SALTSTONE VAULT # 1 ; CELL B THRU F CAPPING DESIGN

Description of Proposed Activity (or Discovery):
SALTSTONE VAULT # 1 CELL B THRU F CAPPING DESIGN BASED ON THE LESSON
LEARNED IN CAPPING VAULT # 1 CELL A

Reference Documents: C-DCR-2-93001 C-DCR-2-00005 ; SSD-SS-02 ; C-SPS-G-0041
4/4/95 WSRG-SA-3

*Include intermediate configurations which might result from the proposed activity.

1 Does the Proposed Activity involve a change to TSRs/OSRs? NO YES _____

Justification and References: AS PER SSD-SS-02 THERE ARE NO TSRS/OSRS.

If YES prior DOE approval through the TSR/OSR change process is required, so further screening or evaluation is required, GO TO Block 3 and 4 and complete. If NO, continue with screening.

2 Does the Proposed Activity involve:
a. Change to the facility as described in the Authorization Basis? NO YES _____

Justification and References: THE PROPOSED ACTIVITY WILL IMPROVE THE CAPPING
CAPABILITY TO PREVENT RAINWATER FROM FLOWING INTO THE CELLS AND
MEET THE AUTHORIZATION BASIS DESIGN REQUIREMENTS (SEE SSD-SS-02)(WSRG-SA-3)

b. Change to the procedures as described in the Authorization Basis? NO YES _____

Justification and References: SEE 2a

c. Test or experiment not described in the Authorization Basis? NO YES _____

Justification and References: SEE 2a

d. Analytical errors, omissions, or deficiencies in the Authorization Basis? NO YES _____

Justification and References: _____

If any question above is answered "YES", complete a USQ Safety Evaluation.

3 SAFETY EVALUATION ORIGINATOR

Is a USQ Safety Evaluation required? (If "YES", complete a USQ Safety Evaluation) NO YES _____

Comments: BASED ON INITIAL SCREENING (SEE ABOVE) USQ EVALUATION
IS NOT REQUIRED.

Signature: Sushash Ekanikal Print Name: SUSHASH EKANIKAL Location: 704-2 Date: 2/24/95
QUALIFIED REVIEWER

Is a USQ Safety Evaluation required? (If "YES", and a USQ Safety Evaluation has not been completed, return to the SEO) NO YES _____

Comments: _____

Returned to SEO for: _____ USQ Safety Evaluation Implementation of PA

Signature: J. D. Looka Print Name: T.D. LOOKA Location: 704-2 Date: 2/24/95

Screening Process Hazards Review Report

EFFECTIVE DATE 6
REVISION 6

PAGE 4 of 4
4/24/95 4/24/95

No. of Docs. Reviewed C-DCP-2-95001 47

PSM Representative _____
CC Custodian Coordinator _____

Date _____ Screening PSM No. _____ Will this Screening PSM serve as preliminary or preoperational PSM? _____
Indirect Work Request No., Software Change Request No., or Project Problem No. (if Available) _____

Title of Process Change - include the Process and Building Location _____

Brief Description of Proposed Process Change _____

Identify hazards, analyze events, evaluate the consequences. Then check the appropriate boxes.

Accident Criteria	Exceeded?		Action Items
	Yes	No	
1. Single Fatality	<input type="checkbox"/>	<input type="checkbox"/>	
2. Radiation Exposure			
Onsite: 5 rem	<input type="checkbox"/>	<input type="checkbox"/>	
Offsite: 500 mrem (All Pathways)	<input type="checkbox"/>	<input type="checkbox"/>	
3. Toxic Material Exposure			
Onsite: Immediately Dangerous to Life and Health (IDLH)	<input type="checkbox"/>	<input type="checkbox"/>	
Offsite: Emergency Action Level	<input type="checkbox"/>	<input type="checkbox"/>	
4. Nuclear Safety			
Uncontrolled Nuclear Criticality	<input type="checkbox"/>	<input type="checkbox"/>	
High Temperature Damage to Reactor Component	<input type="checkbox"/>	<input type="checkbox"/>	
5. Loss of Equipment or Facilities			
> \$1,000,000 (including cleanup costs)	<input type="checkbox"/>	<input type="checkbox"/>	
6. Loss of Production > 6 months	<input type="checkbox"/>	<input type="checkbox"/>	
7. Others as specified by PMT	<input type="checkbox"/>	<input type="checkbox"/>	
			Use Additional Sheets if Necessary

Brief Reason Why the Process Change May or May Not Exceed Criteria _____

Obtain Approval Signatures as Stated in Note 3

Reviewer <u>Sueann Epauve</u>	Date <u>2/24/95</u>
Cognizant Technical Function Manager or Cognizant <u>Robert Schwamberger / Robert Schwamberger</u>	Date <u>2/24/95</u>
Custodian Area Cognizant Manager	Date
Cognizant Technical Function Level 4 Manager <u>Robert Schwamberger / Robert Schwamberger</u>	Date <u>2/24/95</u>
Custodian Level 4 Manager	Date
PMT PSM Representative	Date

DCP # C-DCP-2-92001 Rev. 7

DCP Description SALTSTONE VALVE #1 } CELL B TRU F CAPPING

DESIGN MODIFICATION

Req'd	Item Description	Forecast Completion	Assigned Group	Action Code	Completed (print, sign, date)
<u>2</u>	Revise Operating Procedures:				
#	_____ # _____	_____	Procedures	A	_____
#	_____ # _____	_____			(print, sign, date)
#	_____ # _____	_____			
<u>2</u>	Revise Maintenance Procedures:				
#	_____ # _____	____/____/____	Procedures	A	_____
#	_____ # _____	_____			(print, sign, date)
#	_____ # _____	_____			
<u>2</u>	Revise Sketches:				
#	_____ # _____	____/____/____	Procedures	A	_____
#	_____ # _____	_____			(print, sign, date)
<u>2</u>	SAR Update: (Negative USQ Evaluation Only)				
Section:	_____	____/____/____	Reg. Compliance	B	_____
Section:	_____	_____			(print, sign, date)
<u>2</u>	Process Requirements Update: (If No DTA Required)				
Section:	_____	_____	Cognizant Engineer	B	_____
Section:	_____	_____			(print, sign, date)
<u>2</u>	BDR Update:				
Section:	_____	____/____/____	Cognizant Engineer	B	_____
Section:	_____	_____			(print, sign, date)
<u>2</u>	Waste Form Compliance Plan Update:				
Section:	_____	____/____/____	Reg. Compliance	B	_____
Section:	_____	_____			(print, sign, date)
<u>2</u>	Waste Form Qualification Report Update:				
Section:	_____	____/____/____	Reg. Compliance	B	_____
Section:	_____	_____			(print, sign, date)
<u>2</u>	System Description Document Update:				
Section:	_____	____/____/____	Cognizant Engineer	B	_____
Section:	_____	_____			(print, sign, date)
<u>2</u>	Update Scaling Sheets:				
#	_____ # _____	____/____/____	Cognizant Engineer	A	_____
#	_____ # _____	_____			(print, sign, date)
<u>2</u>	Calibrate Equipment:				
#	_____ # _____	____/____/____	Maintenance	A	_____
#	_____ # _____	_____			(print, sign, date)
<u>2</u>	Label Equipment:				
#	_____ # _____	____/____/____	Maintenance	A	_____
#	_____ # _____	_____			(print, sign, date)
<u>2</u>	Spare Parts Datasheets:				
#	_____ # _____	____/____/____	Spare Parts Group	B	_____
#	_____ # _____	_____			(print, sign, date)
<u>2</u>	Update WMS Basic Record:				
#	_____ # _____	____/____/____	Work Control	B	_____
#	_____ # _____	_____			(print, sign, date)
<u>2</u>	PM Schedule Change:				
#	_____ # _____	____/____/____	Cognizant Engineer	B	_____
#	_____ # _____	_____			(print, sign, date)

