START

0029634

Mr. John Grantham
State of Washington
Department of Ecology
Nuclear & Mixed Waste Program
P.O. Box 47600
Olympia, WA 98504-8711

FLUOR DANIEL, INC.

Date: October 12, 1992

Reference: Hanford Waste Vitrification Plant
DOE Contract DE-AC06-86RL10838
Fluor Contract 8457

Transmittal No.: WDOE-235

Dear Mr. Grantham:

TRANSMITTAL

We enclose 2 copies of the items listed below. These are issued per US-DOE request.

Response due to Fluor: N/A
Responds to: N/A

	Rev.	Date	
SEE TRANSMITTAL ATTACHMENT			PIPING AND INSTRUMENTATION DIAGRAMS AND TABLE OF CONTENTS VOLUME 1A & 1B
CONTROLLED COPIES 25 & 26			PLEASE REMOVE OLD REVISIONS AND TABLE OF CONTENTS FROM YOUR P&ID MANUAL AND REPLACE WITH THE ATTACHED REVISIONS
			TO ACKNOWLEDGE RECEIPT OF THE DOCUMENTS LISTED ABOVE, PLEASE SIGN AND DATE A COPY OF THIS TRANSMITTAL FORM AND MAIL TO: FLUOR DANIEL HWVP - EDC - 513J 3333 MICHELSON DRIVE IRVINE, CA 92730

Distribution:
Reference:FRP-589, FUP-255
R. L. Long: DOE-RL W/O
VPO/AME Corresp Cntrl Cntr, MSIN A5-10
(SYSTEMS 20C & 52),w/O
Environmental Data Management Center
(MSIN H4-22)w/1 #31
D. Duncan, US EPA, Region X w/O

Very truly yours,

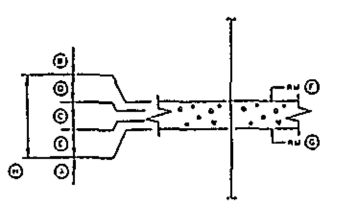
Rosalie Cadenas for/
R. S. Poulter
Project Director

KMC
RSP:KMC:ts

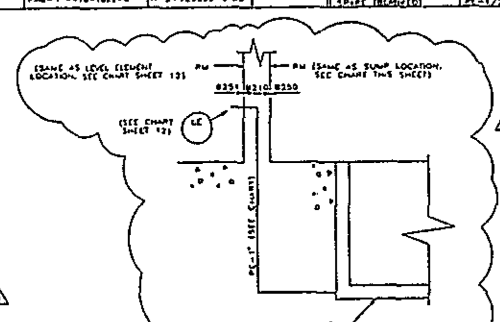
9312975.1463

9312975.1479

SUMP	LOCATION	JET	PUMP	UTILITIES: LINE NUMBERS	UTILITIES: INTERFACE DRAWING NUMBER, COORDINATE	UTILITIES: UTILITY ROOM PENETRATION BLDG./ROOM	IN CELL LINE NUMBERS	WALL PENETRATION LINE NUMBERS (SEE DETAIL "A" THIS SHEET)	DETAIL "A" CWBS PACKAGE BREAKS DESCRIPTION: 8210	8220	8350	8237	ROOM NO. F	ROOM NO. G	LEAK DETECTION (SEE DETAIL "B" THIS SHEET UNLESS NOTED OTHERWISE): WALL PENETRATION LINE NUMBER	DRAWING
SU-20C-001	CPC (SUMP 1) (ROOM 0048)	JE-20C-001	—	MPS-1"-420-013-L-M PAE-1/2"-410-618-G PAC-1"-410-619-G	H-2-123351-1 D7 H-2-123350-5 C7 H-2-123350-5 D7	VIT BLDG. RM 3040	MPS-1"-420-035-A PAE-1/2"-410-383-A ME-1/2"-410-384-A SPARE (BLANKED)	PE-1"-420-075-A-M PE-1/2"-410-1241-A PE-1/2"-410-933-A PE-1/2"-410-765-A							PE-1"-20C-144 (DETAIL "B" DOES NOT APPLY SEE SH. 8)	H-2-123060-8
SU-20C-002	CPC (SUMP 2)	JE-20C-002	—	MPS-1"-420-014-L-M PAE-1/2"-410-630-G PAC-1"-410-631-G	H-2-123351-1 D6 H-2-123350-5 D8 H-2-123350-5 C6	VIT BLDG RM 3040	MPS-1"-420-040-A PAE-1/2"-410-385-A ME-1/2"-410-386-A SPARE (BLANKED)	PE-1"-420-080-A-M PE-1/2"-410-954-A PE-1/2"-410-955-A PE-1/2"-410-1329-A							PE-1"-20C-145-A	H-2-123060-8
SU-20C-003	CPC (SUMP 3) (ROOM 0048)	JE-20C-003	—	MPS-1"-420-013-L-M PAE-1/2"-410-632-G PAC-1"-410-633-G	H-2-123351-1 D4 H-2-123350-5 C4 H-2-123350-5 D4	VIT BLDG. RM 3040	MPS-1"-420-041-A PAE-1/2"-410-381-A ME-1/2"-410-423-A SPARE (BLANKED)	PE-1"-420-081-A-M PE-1/2"-410-819-A PE-1/2"-410-856-A PE-1/2"-410-1330-A							PE-1"-20C-149-A	H-2-123060-8
SU-20C-004	MELTER CELL (SUMP 1) (ROOM 0047)	JE-20C-004	—	MPS-1"-420-025-L-M PAE-1/2"-410-619-G PAC-1"-410-620-G	H-2-123351-1 D6 H-2-123350-5 E6 H-2-123350-5 E6	VIT BLDG. RM 3260	MPS-1"-420-047-A PAE-1/2"-410-382-A ME-1/2"-410-424-A SPARE (BLANKED)	PE-1"-420-083-A-M PE-1/2"-410-957-A PE-1/2"-410-958-A PE-1/2"-410-1331-A		H	A	B	3260 3260 3260 3260	0047	PE-1"-20C-144-A	H-2-123060-8
SU-20C-005	PCDC (ROOM 0053)	—	PE-20C-030	PAE-1/2"-410-680-G LPW-1"-480-301-G	H-2-123350-5 E2 H-2-123357-3 C4	VIT BLDG. RM 3280(PIPE) RM 2200(ELEC)	PAE-1/2"-410-431-A LPW-2"-480-483-A ME-1/2"-410-433-A CELL REFERENCE SPARE (BLANKED)	PE-1/2"-410-858-A PE-1"-480-714-A PE-1/2"-410-960-A (M-190) PE-1/2"-410-825-A (M-188) PE-1/2"-410-737-A							PE-1"-20C-151-A (DETAIL "B" DOES NOT APPLY SEE SH. 8)	H-2-123060-8
SU-20C-006	CDC (ROOM 0036)	JE-20C-006	—	MPS-1"-420-031-L-M PAE-1/2"-410-613-G PAC-1"-410-614-G	H-2-123351-1 D7 H-2-123350-5 E7 H-2-123350-5 E7	VIT BLDG. RM 3280	MPS-1"-420-056-A PAE-1/2"-410-435-A ME-1/2"-410-436-A SPARE (BLANKED)	PE-1"-420-043-A-M PE-1/2"-410-981-A PE-1/2"-410-982-A PE-1/2"-410-1332-A		H	A	B	3280	0036	PE-1"-20C-141-A	H-2-123060-8
SU-20C-007	CDHC (ROOM 0066)	—	PE-20C-031	PAE-1/2"-410-613-G LPW-1"-480-310-G	H-2-123350-5 E1 H-2-123357-3 E3	VIT BLDG RM 3280(PIPE) RM 2200(ELEC)	PAE-1/2"-410-437-A LPW-1"-480-487-A ME-1/2"-410-438-A CELL REFERENCE	PE-1/2"-410-863-A PE-1"-480-711-A PE-1/2"-410-964-A (M-603) PE-1/2"-410-1330-A (M-601)	C,E	D	A	B	3280 3280 3280	0066	PE-1"-20C-154-A (DETAIL "B" DOES NOT APPLY SEE SH. 14)	H-2-123060-(14)
SU-20C-008	CRANE MAINTENANCE AREA (SUMP 1) (ROOM 0038)	—	PE-20C-032	PAE-1/2"-410-606-G LPW-1"-480-392-G	H-2-123350-5 D6 H-2-123357-3 C6	VIT BLDG. RM 3040	PAE-1/2"-410-387-A LPW-1"-480-553-A ME-1/2"-410-425-A CELL REFERENCE	PE-1/2"-410-965-A PE-1"-480-712-A PE-1/2"-410-966-A (M-625) PE-1/2"-410-1348-A (M-626)								H-2-123060-(14)
SU-20C-009	CRANE MAINTENANCE AREA (SUMP 2) (ROOM 0038)	—	PE-20C-073	PAE-1/2"-410-607-G LPW-1"-480-393-G	H-2-123350-5 C8 H-2-123357-3 B6	VIT BLDG. RM 3320	PAE-1/2"-410-466-A LPW-1"-480-551-A ME-1/2"-410-426-A CELL REFERENCE	PE-1/2"-410-967-A PE-1"-480-713-A PE-1/2"-410-968-A (M-673) PE-1/2"-410-1349-A (M-674)								H-2-123060-(14)
GB-210-001 (VENDOR PKG)	DECON GLOVE BOX	JE-20C-010	—	MPS-1"-420-019-L-M PAE-1/2"-410-572-G PAC-1"-410-571-G	H-2-123351-1 A8 H-2-123350-4 D8 H-2-123350-4 D8	MANIPULATOR REPAIR BLDG	MPS-1"-420-044-A-15 PAE-1/2"-410-377-A ME-1/2"-410-427-A CELL REFERENCE	PE-1"-420-084-A-M PE-1/2"-410-969-A PE-1/2"-410-970-A (M-467) PE-1/2"-410-1338-A (M-425)								H-2-123060-5
SU-20C-012	ENTRY TUNNEL	JE-20C-012	—	MPS-1"-420-024-L-M PAE-1/2"-410-617-G PAC-1"-410-618-G	H-2-123351-1 C6 H-2-123350-5 E4 H-2-123350-5 E6	VIT BLDG. RM 3280	MPS-1"-420-025-A-15 PAE-1/2"-410-439-A ME-1/2"-410-428-A CELL REFERENCE	PE-1"-420-086-A-M PE-1/2"-410-972-A PE-1/2"-410-973-A (M-407) PE-1/2"-410-1341-A (M-405)	C,E	D	A	B	3280	0040		H-2-123060-8
SU-20C-013	HLC-CDC TRANSFER TUNNEL (ROOM 0044)	JE-20C-013	—	MPS-1"-420-023-L-M PAE-1/2"-410-613-G PAC-1"-410-616-G	H-2-123351-1 D8 H-2-123350-5 E7 H-2-123350-5 E7	VIT BLDG RM 3280	MPS-1"-420-047-A PAE-1/2"-410-407-A ME-1/2"-410-429-A SPARE (BLANKED)	PE-1"-420-087-A-M PE-1/2"-410-974-A PE-1/2"-410-975-A PE-1/2"-410-1333-A	C,E	D	A	B	3280	0044	PE-1"-20C-143-A	H-2-123060-8
SU-20C-014	CANISTER EXIT TUNNEL	JE-20C-014	—	MPS-1"-420-020-L-M PAE-1/2"-410-611-G PAC-1"-410-612-G	H-2-123351-1 D7 H-2-123350-5 E8 H-2-123350-5 E8	VIT BLDG. RM 3280	MPS-1"-420-048-A-15 PAE-1/2"-410-380-A ME-1/2"-410-417-A CELL REFERENCE	PE-1"-420-088-A-M PE-1/2"-410-976-A PE-1/2"-410-977-A (M-447) PE-1/2"-410-738-A (M-445)								H-2-123060-8
SU-20C-015	AR [illegible] (ROOM 0047)	JE-20C-015	—	MPS-1"-420-012-L-M PAE-1/2"-410-683-G PAC-1"-410-681-G	H-2-123351-1 D3 H-2-123350-5 D3 H-2-123350-5 D3	VIT BLDG. RM 3040	MPS-1"-420-049-A-15 PAE-1/2"-410-441-A ME-1/2"-410-430-A CELL REFERENCE	PE-1"-420-089-A-M PE-1/2"-410-978-A PE-1/2"-410-979-A (M-487) PE-1/2"-410-1342-A (M-485)	C,E	D	A	B	3260 3260 3260 3260	0047		H-2-123060-8
SU-20C-016	REGULATED MAINTENANCE AREA	JE-20C-016	—	MPS-1"-420-018-L-M PAE-1/2"-410-625-G PAC-1"-410-624-G	H-2-123351-1 D7 H-2-123350-5 C8 H-2-123350-5 C8	VIT BLDG. RM 3040	MPS-1"-420-055-A-15 PAE-1/2"-410-463-A ME-1/2"-410-443-A CELL REFERENCE	PE-1"-420-090-A-M PE-1/2"-410-980-A PE-1/2"-410-981-A (M-347) PE-1/2"-410-1332-A (M-345)								H-2-123060-8
SU-20C-017	RR AIRLOCK	JE-20C-017	—	MPS-1"-420-006-L-M PAE-1/2"-410-367-G PAC-1"-410-368-G	H-2-123351-1 B2 H-2-123350-4 B3 H-2-123350-4 B3	VIT BLDG. RM 33X	MPS-1"-420-051-A-15 PAE-1/2"-410-484-A ME-1/2"-410-444-A CELL REFERENCE	PE-1"-420-091-A-M PE-1/2"-410-982-A PE-1/2"-410-983-A (M-307) PE-1/2"-410-1343-A (M-305)								H-2-123060-9
SU-20C-020	EXHAUST TUNNEL	—	PE-20C-012	PAE-1/2"-410-357-G LPW-1"-480-340-G	H-2-123350-4 A3 H-2-123357-3 F8	VIT BLDG RM 3280(PIPE) RM 0082(ELEC)	PAE-1/2"-410-372-A LPW-1"-480-483-A ME-1/2"-410-462-A CELL REFERENCE	PE-1/2"-410-984-A PE-1"-480-710-A PE-1/2"-410-985-A (M-597) PE-1/2"-410-1352-A (M-595)	C,E	D	–	B,A	3280	0014		H-2-123060-10
SU-20C-021	SAND FILTER INLET	—	PE-20C-013	PAE-1/2"-410-518-G LPW-1"-480-420-G	H-2-123350-4 E8 H-2-123357-2 F8	SAND FILTER BLDG	PAE-1/2"-410-466-A LPW-1"-480-561-A ME-1/2"-410-420-A CELL REFERENCE	PE-1/2"-410-986-A PE-1"-480-715-A PE-1/2"-410-987-A (M-577) PE-1/2"-410-1345-A (M-575)								H-2-123060-10
SU-20C-022	SAND FILTER OUTLET	—	PE-20C-014	PAE-1/2"-410-515-G LPW-1"-480-618-G	H-2-123350-4 F7 H-2-123357-2 F8	SAND FILTER BLDG.	PAE-1/2"-410-476-A LPW-1"-480-540-A ME-1/2"-410-445-A CELL REFERENCE	PE-1/2"-410-988-A PE-1"-480-708-A PE-1/2"-410-989-A (M-587) PE-1/2"-410-1347-A (M-585)								H-2-123060-10
SU-20C-026	SCT DECON AREA	JE-20C-026	—	MPS-1"-420-007-L-M PAE-1/2"-410-394-G PAC-1"-410-393-G	H-2-123351-1 B8 H-2-123350-4 D7 H-2-123350-4 D7	MANIPULATOR REPAIR BLDG	MPS-1"-420-052-A-15 PAE-1/2"-410-486-A ME-1/2"-410-446-A CELL REFERENCE	PE-1"-420-092-A-M PE-1/2"-410-990-A PE-1/2"-410-991-A (M-937) PE-1/2"-410-1340-A (M-935)								H-2-123060-9
SU-20C-027	MELTER CELL (SUMP 2) (ROOM 0047)	JE-20C-027	—	MPS-1"-420-031-L-M PAE-1/2"-410-638-G PAC-1"-410-639-G	H-2-123351-1 D4 H-2-123350-5 E5 H-2-123350-5 E5	VIT BLDG. RM 3280	MPS-1"-420-053-A PAE-1/2"-410-493-A ME-1/2"-410-447-A SPARE (BLANKED)	PE-1"-420-093-A-M PE-1/2"-410-992-A PE-1/2"-410-993-A PE-1/2"-410-1334-A							PE-1"-20C-148-A	H-2-123060-8
SU-20C-028	CONTACT MAINTENANCE ROOM	JE-20C-028	—	MPS-1"-420-035-L-M PAE-1/2"-410-640-G PAC-1"-410-641-G	H-2-123351-1 C3 H-2-123350-5 B2 H-2-123350-5 B2	VIT BLDG. RM 3040	MPS-1"-420-054-A-15 PAE-1/2"-410-498-A ME-1/2"-410-454-A CELL REFERENCE	PE-1"-420-094-A-M PE-1/2"-410-994-A PE-1/2"-410-995-A (M-337) PE-1/2"-410-1344-A (M-335)	C,E	D	A	B	3040	0053		H-2-123060-9
SU-20C-029	EXHAUST STACK	—	PE-20C-024	PAE-1/2"-410-516-G LPW-1"-480-421-G	H-2-123350-4 E8 H-2-123357-2 F8	STACK	PAE-1/2"-410-517-A LPW-1"-480-559-A ME-1/2"-410-457-A CELL REFERENCE	PE-1/2"-410-996-A PE-1"-480-709-A PE-1/2"-410-997-A (M-645) PE-1/2"-410-1346-A (M-643)								H-2-123060-10
SU-20C-030	STAGED EQUIPMENT [illegible] CELL (ROOM 0032)	JE-20C-030	—	MPS-2"-420-070-L-M PAE-1/2"-410-761-G PAC-1"-410-763-G	H-2-123351-1 D3 H-2-123350-5 E3 H-2-123350-5 E3	VIT BLDG RM 3280	MPS-2"-420-045-A PAE-1/2"-410-518-A ME-1/2"-410-763-A SPARE (BLANKED)	PE-2"-420-181-A-M PE-1/2"-410-998-A PE-1/2"-410-999-A PE-1/2"-410-1335-A							PE-1"-20C-146-A	H-2-123060-8
SU-20C-031	CPC (SUMP 4) (ROOM 0048)	JE-20C-031	—	MPS-1"-420-135-L-M PAE-1/2"-410-1023-G PAC-1"-410-671-G	H-2-123351-1 D7 H-2-123350-5 D6 H-2-123350-5 D6	VIT BLDG. RM 3040	MPS-1"-420-120-A PAE-1/2"-410-536-A ME-1/2"-410-787-A SPARE (BLANKED)	PE-1"-420-115-A-M PE-1/2"-410-1011-A PE-1/2"-410-1013-A PE-1/2"-410-1336-A							PE-1"-20C-142-A	H-2-123060-8
SU-20C-032	CPC (SUMP 5) (ROOM 0048)	JE-20C-032	—	MPS-1"-420-128-L-M PAE-1/2"-410-1033-G PAC-1"-410-1021-G	H-2-123351-1 D6 H-2-123350-5 D3 H-2-123350-5 D3	VIT BLDG RM 3040	MPS-1"-420-121-A PAE-1/2"-410-627-A ME-1/2"-410-789-A SPARE (BLANKED)	PE-1"-420-116-A-M PE-1/2"-410-1015-A PE-1/2"-410-1020-A PE-1/2"-410-1337-A							PE-1"-20C-147-A	H-2-123060-8



CWBS PACKAGE BREAK DESCRIPTION
DETAIL "A" (1)



CWBS PACKAGE BREAK DESCRIPTION
DETAIL "B"

GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123060-1.

NOTES:

(1) SEE CHART FOR SPECIFIC ROOM NUMBERS AND CWBS PACKAGE BREAKS.

RELEASED FOR PROJECT BASELINE CONTROL

OCT 12 1992

SAFETY CLASS 3

REV	DATE	DESCRIPTION				
1	7/6/93	MINOR REVISIONS FOR 8210A SUAB ONLY DESIGN DEVELOPMENT				
0	8/12/92	THIS DRAWING WAS CONSTRUCTED FROM PORTIONS OF H-2-123060-12 REV 3 DUE TO SPACE LIMITATIONS. INCREASED FLUSH LINE TO 2" TO CORRESPOND TO [illegible] CONNECTOR SIZE PER CR-0878. ADDED LEAK DETECTION PE NUMBERS PER CR-0587. ADDED PACKAGE BREAKS. ADDED PE NUMBERS FOR CELL REF AND SPARE LINES, AND ADDED INSULATION TO MPS EMBEDS PER CR-0768	EH	SDS	RMC	VMG
			BGJ	AKY	JGH	RSP

8123060R — 28 IEW ACD2 10 C2 55

U.S. DEPARTMENT OF ENERGY

FLUOR DANIEL, INC. ADVANCED TECHNOLOGY DIVISION

P & I D
SYSTEM 20C
SUMP INSTRUMENT / PIPING SUMMARY

HANFORD WASTE VITRIFICATION PLANT

Name	Date
R S POULTER	3/11/92
J KELLY	3/11/92
A YEE	7/14/92
B JOHNSON	7/12/92
V. GRANGER	7/13/92
K U CRABB	7/11/92
S.D. SHARP	7/16/92
E POOLES	7/13/92

B-595 — 8437 — 3214

NONE — NOT REQ'D — H-2-123060 — 15 — 34 — 1

DISTRIBUTION CODE: — ACAD — DATE 22 SEP 92

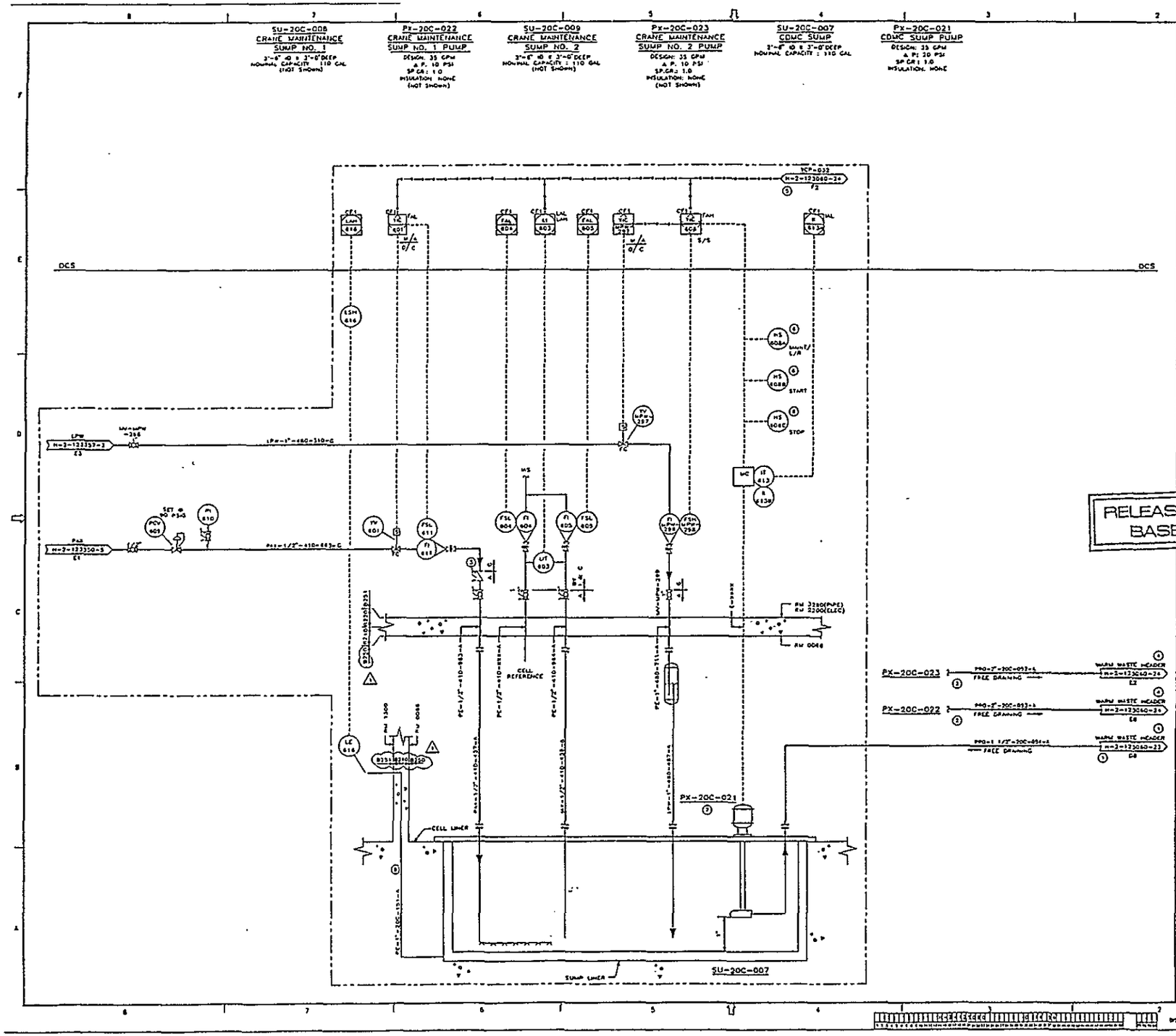
TRANSMITTAL ATTACHMENT

VOLUME 1A

DRAWING NUMBER	SHT NO.	REV.	DRAWING TITLE
H-2-123060	09	5	SYSTEM 20C CONTACT MAINTAINED SUMP JETS
H-2-123060	14	1	SYSTEM 20C CONTACT MAINTAINED SUMP PUMPS
H-2-123060	15	1	SYSTEM 20C SUMP INSTRUMENT / PIPING SUMMARY

DRAWING NUMBER	SHT NO.	REV.	DRAWING TITLE
H-2-123360	06	6	SYSTEM 52 LIQUID WASTE COLLECTION VITRIFICATION BUILDING

9312975.1464



GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123060-1.

NOTES:

1. CDMC RUN-ON TANK DRAIN IS PIPED TO SU-20C-007.
2. CRANE MAINTENANCE AREA SUMPS (SU-20C-008 & 009) HAVE DRAINS HARD PIPED IN FROM THE CRANE DECON FEED TANKS (TK-210-001 & 002).
3. CHECK VALVE IS LOCATED MINIMUM DISTANCE FROM CELL WALL.
4. WARM WASTE HEADER DRAINS TO WAT-4.
5. CDMC LEVEL INDICATOR (LI-20C-603) ALSO PROVIDES SIGNAL TO IC-210-555 ON DRAWING H-2-123160-13.
6. HANDSWITCH LOCATED AT MCC.
7. TYPICAL FOR THE THREE CONTACT MAINTAINED SUMPS WITH LEAK DETECTION. DASHED LINES INDICATE REPLICATED EQUIPMENT. PIPING & INSTRUMENTATION NUMBERS APPLY TO CDMC SUMP ONLY. PIPING AND INSTRUMENTATION FOR ALL OTHER SUMPS ARE SHOWN ON DRAWINGS H-2-123060-12 & 13.
8. MINIMUM OF TWO TURNS WITH A TOTAL OF 180°.

RELEASED FOR PROJECT BASELINE CONTROL

OCT 12 1992

SAFETY CLASS 3

REV	DATE	DESCRIPTION	DR	CHK	ENG	PROJ
1	8/11/92	MINOR REVISIONS FOR 8210A SUMP ONLY DESIGN DEVELOPMENT	BJ	MF	RSC	TOLLEY
0	8/12/91	THIS DRAWING WAS CONSTRUCTED FROM PORTIONS OF H-2-123060-10 REV 1 DUE TO SPACE LIMITATIONS. ADDED WATER BOOT VALVES PER CR-0544. REVISED WATER FAC NO'S AND ADDED VALVE NO'S PER CR-0703. ADDED LINER AND LEAK DETECTION PER CR-0747. ADDED FACILITY SYMBOLS. REVISED SUMP UNITS TO 1-HOW MECH. ASSEMBLY. DELETED ELECTRICAL CONN. AND DELETED PIPING RESPONSIBILITY ON ELEC. LINER PER CR-0749.	BCS	MFY	JCW	PTP

DRAWING 8123060P — 28 18W ACD2 10 C2 SS

ENGINEERING RELEASE
REV. ____ DATE ____
CHG ____

U.S. DEPARTMENT OF ENERGY

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

P & I D
SYSTEM 20C
CONTACT MAINTAINED
SUMP PUMPS

R S POULTER	8/11/92	
J K ELLY	8/11/92	
A LEE	8/11/92	
B JOHNSON	7/14/92	
V CRANCER	7/15/92	
K CRABB	7/15/92	
S D SHARP	7/14/92	
T P BROWN	10/13/92	

SCALE: NONE — SIZE: D — DRAWING NO. H-2-123060 — SHEET 14 OF 34 — REV. 1

NONE — NOT REQ'D

DISTRIBUTION CODE: ACAD

INITIALS: CP
DATE: 23 SEPT 92

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
** VOLUME NUMBER: 1B				
H-2-123161	01	3	SYSTEM 23 SMEAR TEST STATION	3220
H-2-123161	02	3	SYSTEM 23 EMPTY CANISTER ENTRY TUNNEL TRANSFER CAR	3220
H-2-123161	03	3	SYSTEM 23 MC/CDC TUNNEL CANISTER TRANSFER CAR	3220
H-2-123161	04	3	SYSTEM 23 CANISTER INSPECTION EQUIPMENT	3220
H-2-123166	01	00	SYSTEM 36 EMERGENCY DIESEL FUEL STORAGE TANKS	6370
H-2-123166	02	00	SYSTEM 36 EMERGENCY DIESEL GENERATOR	6370
H-2-123166	03	00	SYSTEM 36 EMERGENCY DIESEL GENERATOR	6370
H-2-123170	01	3	SYSTEM 63 LIQUID SAMPLING SYSTEM	3218
H-2-123170	02	3	SYSTEM 63 LIQUID SAMPLING FLUSH WATER AND PLANT AIR HEADERS	3218
H-2-123170	03	3	SYSTEM 63 SAMPLE & ANALYTICAL CELLS DECONTAMINATION SYSTEM	3218
H-2-123170	04	3	SYSTEM 63 SAMPLE CELL DRAIN SYSTEM	3218
H-2-123170	05	3	SYSTEM 63 MOG/PVV SBS OUTLET GAS SAMPLERS	3218
H-2-123170	06	3	SYSTEM 63 HEME OUTLET AND BACKUP HEME OUTLET GAS SAMPLERS	3218
H-2-123170	07	3	SYSTEM 63 MOG HEPA FILTER OUTLET GAS SAMPLER	3218
H-2-123170	08	3	SYSTEM 63 PVV HEPA FILTER OUTLET GAS SAMPLER	3218
H-2-123170	09	3	SYSTEM 63 RPVV HEPA FILTER OUTLET GAS SAMPLER - VOIDED PER CR-058	3218
H-2-123170	10		NOT USED - VOIDED PRIOR TO BEING UNDER CONFIGURATION MANAGEMENT	
H-2-123170	11	3	SYSTEM 63 GLASS SAMPLE RABBIT SYSTEM	3218
H-2-123170	12	3	SYSTEM 63 ANALYTICAL FACILITY SAMPLE RABBIT SYSTEM	3218
H-2-123170	13	3	SYSTEM 63 SAMPLE CELL RABBIT SYSTEM	3218
H-2-123171	01	3	SYSTEM 64 ANALYTICAL CELL A	3218
H-2-123171	02	3	SYSTEM 64 ANALYTICAL CELL B	3218
H-2-123171	03	3	SYSTEM 64 ANALYTICAL CELL C	3218
H-2-123171	04	3	SYSTEM 64 ANALYTICAL CELL D	3218
H-2-123171	05	3	SYSTEM 64 ANALYTICAL CELL E	3218
H-2-123171	06	3	SYSTEM 64 ANALYTICAL CELL F	3218
H-2-123171	07	3	SYSTEM 64 ANALYTICAL CELL G	3218
H-2-123171	08	3	SYSTEM 64 ANALYTICAL CELL H	3218
H-2-123171	09	3	SYSTEM 64 LABORATORY HOODS	3218
H-2-123171	10	3	SYSTEM 64 AT FLAME HOOD AND ICP & AA HOOD	3218
H-2-123171	11	3	SYSTEM 64 DECONTAMINATION HOOD SAMPLE RECEIVING GLOVE BOX AND LABORATORY SINKS	3218

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GB-210-001
DECON GLOVE BOX SUMP (5)
(SEE DRAWING H-2-123060-153)

SU-20C-014
CANISTER EXIT TUNNEL SUMP
2'-6"D x 3'-0" DEEP
NOMINAL CAPACITY: 130 GAL

SU-20C-016
REGULATED MAINTENANCE AREA SUMP
2'-6"D x 3'-0" DEEP
NOMINAL CAPACITY: 6 GAL
(NOT SHOWN)

SU-20C-026
SCT DECON AREA SUMP
2'-6"D x 3'-0" DEEP
NOMINAL CAPACITY: 110 GALLONS
(NOT SHOWN)

SU-20C-012
ENTRY TUNNEL SUMP
2'-6" D x 3'-0" DEEP
NOMINAL CAPACITY: 110 GAL
(NOT SHOWN) (4)

SU-20C-015
RR WELL SUMP
2'-6" D x 3'-0" DEEP
NOMINAL CAPACITY: 110 GAL
(NOT SHOWN) (3)

SU-20C-017
RR AIRLOCK SUMP
2'-6" D x 3'-0" DEEP
NOMINAL CAPACITY: 110 GAL
(NOT SHOWN) (3)

JX-20C-010
DECON GLOVE BOX SUMP JET (6)
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)

JX-20C-014
CANISTER EXIT TUNNEL SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG

JX-20C-016
REGULATED MAINTENANCE AREA SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)

JX-20C-026
SCT DECON AREA SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)

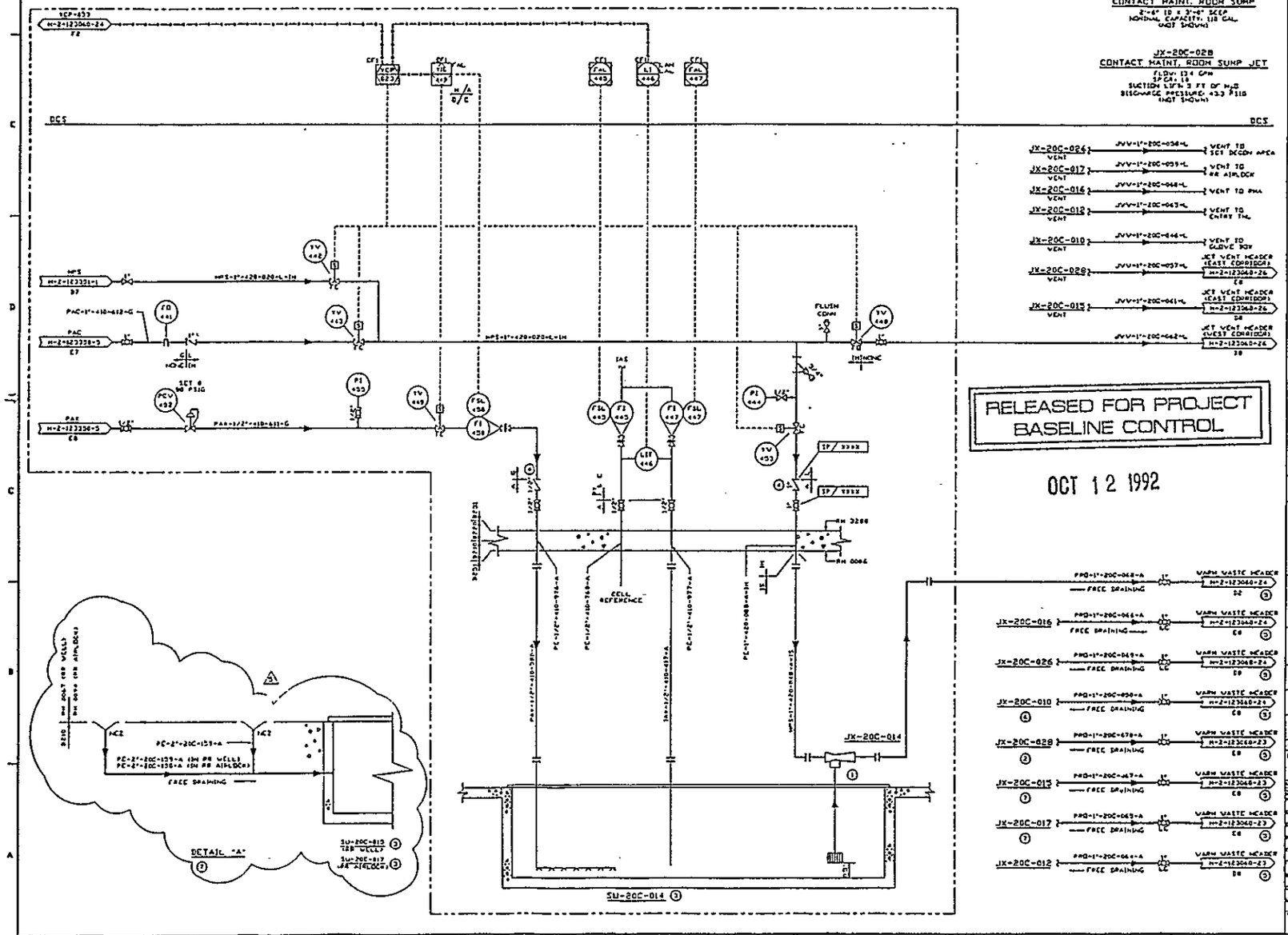
JX-20C-012
ENTRY TUNNEL SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)

JX-20C-015
RR WELL SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)

JX-20C-017
RR AIRLOCK SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)

SU-20C-028
CONTACT MAINT. ROOM SUMP
2'-6" D x 3'-0" DEEP
NOMINAL CAPACITY: 110 GAL
(NOT SHOWN)

JX-20C-028
CONTACT MAINT. ROOM SUMP JET
FLOW: 13.4 GPM
SP GR: 1.0
SUCTION LIFT: 3 FT OF H_2O
DISCHARGE PRESSURE: 43.3 PSIG
(NOT SHOWN)



RELEASED FOR PROJECT BASELINE CONTROL

OCT 12 1992

GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123060-L

NOTES:

1. TYPICAL FOR NINE CONTACT MAINTAINED SUMP JETS. DASHED LINES INDICATE REPLICATED EQUIPMENT PIPING AND INSTRUMENTATION NUMBERS APPLY TO CANISTER EXIT TUNNEL SUMP ONLY. PIPING AND INSTRUMENTATION INFORMATION FOR ALL OTHER SUMPS IS SHOWN ON DRAWING H-2-123060-LE & LS.
2. MISCELLANEOUS SEAL LOOP DRAINS IN EHM ARE ROUTED TO SU-20C-128.
3. CELL LINER NOT SHOWN
4. CHECK VALVE IS LOCATED MINIMUM DISTANCE FROM CELL WALL.
5. WARM WASTE HEADER DRAINS TO VAT-A
6. THE INTERFACE DETAILS BETWEEN THE GLOVE BOX (GB-210-001) AND THE RADIOACTIVE LIQUID WASTE COLLECTION AND TREATMENT SYSTEM (SYSTEM 20) WILL BE DETERMINED IN DETAILED DESIGN
7. THE RR WELL (PM 00673) AND THE RR AIRLOCK (PM 00743) HAVE FLOOR DRAINS THAT COLLECT LIQUID FROM BETWEEN THE RAILS AND FROM ONE SIDE OF THE ROOM AND ROUTE IT TO THE SUMP LOCATED ON THE OPPOSITE SIDE OF THE ROOM (SEE DETAIL "A"). FLOOR DRAINS WILL BE COVERED WITH A SCREEN

SAFETY CLASS 3

REV	DATE	DESCRIPTION	DRAWN	CHK'D	ENGR	PROJ ENGR
5	12/91	MINOR REVISIONS FOR 3216A SLAB ONLY DESIGN DEVELOPMENT	RB	LFF	[illegible]	[illegible]
4	5/12/92	ADDED INSTRUMENT FOOT VALVES PER CR-0594. INCREASED SUMP VOLUMES PER CR-0721. ADDED PACKAGE BREAKS. ADDED LC DESIGNATION TO VALVES FOR 3DVC IDENTIFICATION. ADDED INSTALLATION TO HPS PENETRATIONS. REVISED SUMP LINES TO ILLUSTRATE MECHANICAL ASSEMBLY, AND ADDED DRAIN LINES TO RR WELL AND RR AIRLOCK PER CR-0762.	RB	MF	EHC	VWC
			BGJ	MFT	JCR	RSP
3	12/91	ADDED SP NUMBERS TO VALVES. CHANGED LINE NUMBERS. CHANGED AIR LINE FROM "A" SPEC TO "G". CHANGED TRANSMITTERS TO INDICATING TYPE. ADDED NOTE 6 AND ADDED ASSUMPTION NOTE PER CR-0572	CB	MF	BPQ	MF / BS
			CBP	AS	HJH	DPC	RNG
2	7/29/91	DELETED GLOVE BOX #2. ADDED PENETRATION NO.5. CHANGED SLOPE TO FREE DRAINING. RELEASED FOR PROJECT BASELINE CONTROL PER CR-0590	MF	VP	PGT	MF
			CBP	FGB	DPC	RNG
1	4/29/91	*RELEASED FOR PROJECT BASELINE	MF	VP	PGT	MF
		CONTROL* WITHDRAWN PER CR-0443	CBP	FGB	DPC	RNG
0	12/20/90	RELEASED FOR PROJECT INSPECTION CONTROL PER CR [illegible]	MF	VP	PGT	MF
			CBP	FGB	DPC	RNG
C0	4/4/90	*RELEASED FOR DETAILED DESIGN	RMC	VP	PGT	MF
			SJM	FB	DPC	RNG

ENGINEERING RELEASE
REV. ____ DATE ____
ERO ____

U.S. DEPARTMENT OF ENERGY
Richland Operations Office
DE - AC06-86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

PIPING & INSTRUMENT DIAGRAM
SYSTEM 20C
CONTACT MAINTAINED
SUMP JETS

HANFORD WASTE VITRIFICATION PLANT

DRAWN BY	DATE	
M. ACTISONS	5/11/92	
DESIGNED BY		
D. CHAVALA	5/11/92	
CHECKED BY		
F. SIMONS	5/11/92	
ENGINEER		
R.J. MCCANNA	5/11/92	
PROJ. ENGR		
M. FELDON	5/11/92	
ENGINEERING MANAGER		
R. STACKEY	5/11/92	
PROJECT MANAGER		
F. M. GRABB	5/11/92	
PROJECT ENGINEER		
V. MIRENDE	5/11/92	
MANAGER, CONSTRUCTION		
NONE	5/11/92	

SCALE: NONE
SHEET 1 OF 1
CONTRACT NO. DE-AC06-86RL10838
PROJ. NO. 3216
DWG NO. NONE
REV. NO. NONE
NOT RC'D
H-2-123060
9 | 34 | 5

EA / MA7F2403
23 SEPT 92

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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123171	12	3	SYSTEM 64 HOT ICP GLOVE BOX	3218
H-2-123171	13	3	SYSTEM 64 SERVICE ROOMS HOODS	3218
H-2-123171	14	3	SYSTEM 64 PROCESS WATER ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	15	3	SYSTEM 64 HOT WATER ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	16	3	SYSTEM 64 TEMPERED WATER ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	17	3	SYSTEM 64 DEIONIZED WATER ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	18	3	SYSTEM 64 PLANT AIR AND INSTRUMENT AIR ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	19	3	SYSTEM 64 GAS CYLINDERS ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	20	3	SYSTEM 64 GAS CYLINDERS & LIQUID NITROGEN ANALYTICAL AREA DISTRIBUTION	3218
H-2-123171	21	3	SYSTEM 64 HOODS AND GLOVE BOXES DRAIN SYSTEM	3218
H-2-123171	22	3	SYSTEM 64 COLD CHEMICAL LABORATORY HOODS AND SINK	3218
H-2-123250	01	4	SYSTEM 14A FILM COOLER	3215
H-2-123250	02	4	SYSTEM 14A MOG SUBMERGED BED SCRUBBER	3215
H-2-123250	03	4	SYSTEM 14A MOG SUBMERGED BED SCRUBBER	3215
H-2-123250	04	4	SYSTEM 14A MOG SUBMERGED BED SCRUBBER	3215
H-2-123250	05	4	SYSTEM 14A PIPING	3215
H-2-123250	06	4	SYSTEM 14A HIGH EFFICIENCY MIST ELIMINATOR	3215
H-2-123250	07	4	SYSTEM 14A MOG HEMF FILTER	3215
H-2-123250	08	4	SYSTEM 14B HIGH EFFICIENCY MIST ELIMINATOR	3215
H-2-123250	09	4	SYSTEM 14B MOG HEMF FILTER	3215
H-2-123250	10	4	SYSTEM 14A MOG CONTACT HEPA FILTER	3215
H-2-123250	11	4	SYSTEM 14A FUTURE IODINE ADSORBER	3215
H-2-123250	12	4	SYSTEM 14A MOG EXHAUSTERS	3215
H-2-123250	13	4	SYSTEM 14A BACK-UP FILM COOLER	3215
H-2-123250	14	4	SYSTEM 14A FUTURE NOX REDUCER	3215
H-2-123250	15	4	SYSTEM 14A MOG/PVV EXHAUSTER AFTERCOOLER	3215
H-2-123250	16	0	P&ID SYSTEM 14A HEMF AIR RECEIVER	6470
H-2-123251	01	4	SYSTEM 15A PVV HEADER	3216
H-2-123251	02	4	SYSTEM 15A PVV SUBMERGED BED SCRUBBER	3216
H-2-123251	03	4	SYSTEM 15A PVV SUBMERGED BED SCRUBBER	3216

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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123152	07	0	SYSTEM 17 FUTURE OVERPACK WELDER WALL PENETRATIONS	6320
H-2-123160	01	3	SYSTEM 21 CRANE DECON FEED TANK (ACID)	3220
H-2-123160	02	3	SYSTEM 21 CRANE DECON FEED TANK (CAUSTIC)	3220
H-2-123160	03	3	SYSTEM 21 REDC UTILITIES	3220
H-2-123160	04	3	SYSTEM 21 REDC UTILITIES	3220
H-2-123160	05	3	SYSTEM 21 REDC UTILITIES	3220
H-2-123160	06	3	SYSTEM 21 REDC UTILITIES	3220
H-2-123160	07	3	SYSTEM 21 REDC UTILITIES	3220
H-2-123160	08	3	SYSTEM 21 CDMC UTILITIES	3220
H-2-123160	09	3	SYSTEM 21 CDMC UTILITIES	3220
H-2-123160	10	3	SYSTEM 21 CDMC UTILITIES	3220
H-2-123160	11	3	SYSTEM 21 CDMC UTILITIES	3220
H-2-123160	12	3	SYSTEM 21 CDMC UTILITIES	3220
H-2-123160	13	3	SYSTEM 21 CELL DECON	3220
H-2-123160	14	3	SYSTEM 21 CPC AND ANALYTICAL FACILITY DECON	3220
H-2-123160	15	3	SYSTEM 21 MSM DECON GLOVE BOX	3220

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123251	04	4	SYSTEM 15A PVV SUBMERGED BED SCRUBBER	3216
H-2-123251	05	4	SYSTEM 15A/B PVV REMOTE FILTER PREHEATERS	3216
H-2-123251	06	4	SYSTEM 15A&B PVV REMOTE FILTERS	3216
H-2-123251	07	4	SYSTEM 15A PVV CONTACT PREHEATER AND HEPA FILTER	3216
H-2-123251	08	4	SYSTEM 15A PVV EXHAUSTERS	3216
H-2-123251	09	3	SYSTEM 15C RPVV REMOTE FILTER PREHEATER - VOID PER CR-0584	3216
H-2-123251	10	3	SYSTEM 15C&D RPVV REMOTE FILTERS - VOID PER CR-0584	3216
H-2-123251	11	3	SYSTEM 15C RPVV CONTACT PREHEATER AND HEPA FILTER - VOID PER CR-0584	3216
H-2-123251	12	3	SYSTEM 15C RPVV EXHAUSTERS - VOID PER CR-0584	3216
H-2-123251	17	0	P&ID SYSTEM 15G SECONDARY PVV HEADER	6370
H-2-123251	18	0	P&ID SYSTEM 15G SECONDARY PVV HEMF FILTER	6370
H-2-123251	19	0	P&ID SYSTEM 15G SECONDARY PVV CONTACT HEPA FILTER	6370
H-2-123251	20	0	P&ID SYSTEM 15G SECONDARY PVV EXHAUSTERS	6370
H-2-123350	01	4	SYSTEM 41 INSTRUMENT/PLANT AIR COMPRESSORS	3223
H-2-123350	03	4	SYSTEM 41 PLANT AND INSTRUMENT AIR RECEIVERS	3223
H-2-123350	04	4	SYSTEM 41 PLANT AIR DISTRIBUTION VIT., MECH./ELECT. SERV., FRIT STORAGE/COLD CHEM., MANIP. REPAIR & SAND FILTER BUILDINGS	3223
H-2-123350	05	5	SYSTEM 41 PLANT AIR DISTRIBUTION VITRIFICATION BUILDING 3RD FLOOR	3223
H-2-123350	06	4	SYSTEM 41 BREATHING AIR SYSTEM	3223
H-2-123350	07	6	SYSTEM 41 INSTRUMENT AIR DISTRIBUTION	3223
H-2-123350	08	4	SYSTEM 41 INSTRUMENT/PLANT AIR COMPRESSORS	3223
H-2-123350	09	1	SYSYEM 41 PLANT AIR DIST - VIT BLDG 2ND & 4TH FLOORS	6320
H-2-123351	01	6	SYSTEM 42 MED PRESS STEAM DISTRIBUTION VIT BLDG, SERVICE BLDG, AND MANIPULATOR REPAIR BUILDING	3221
H-2-123352	01	4	SYSTEM 43 PROCESS STEAM GENERATOR AND PROCESS STEAM DISTRIBUTION	3221
H-2-123352	02	4	SYSTEM 43 PROCESS STEAM CONDENSATE SYSTEM	3221

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123150	15	4	SYSTEM 13 MELTER DOME HEATERS	3217
H-2-123150	16	4	SYSTEM 13 MELTER DOME HEATERS	3217
H-2-123150	17	4	SYSTEM 13 MELTER COOLING WATER FOR TOP AND BOTTOM HEADS AND SHELL	3217
H-2-123150	18	4	SYSTEM 13 MELTER COOLING WATER FOR TOP AND BOTTOM HEADS AND SHELL	3217
H-2-123150	19	3	SYSTEM 13 PROCESS COOLING WATER FOR FEED NOZZLES	3217
H-2-123150	20	4	SYSTEM 13 MELTER COOLING WATER FOR ELECTRODES, PADS, AND DOME HEATER TRANSFORMERS	3217
H-2-123150	21	4	SYSTEM 13 MELTER COOLING WATER FOR DOME HEATERS AND BOTTOM PAD	3217
H-2-123150	22	3	SYSTEM 13 MELTER ARGON SUPPLY	3217
H-2-123151	01	3	SYSTEM 16A FCDC SERVICE HEADERS	3219
H-2-123151	02	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #1	3219
H-2-123151	03	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #2	3219
H-2-123151	04	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #3	3219
H-2-123151	05	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #4	3219
H-2-123151	06	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #5	3219
H-2-123151	07	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #6	3219
H-2-123151	08	3	SYSTEM 16A FCDC NOZZLE FEED PUMP #7	3219
H-2-123151	09	3	SYSTEM 16A FCDC RIBBON NOZZLE FEED PUMP	3219
H-2-123151	10	3	SYSTEM 16A FCDC #1 SPRAY NOZZLES	3219
H-2-123151	11	3	SYSTEM 16A FCDC #1 GRAPPLE AND RINSE CYCLE	3219
H-2-123151	12	3	SYSTEM 16A FCDC #1 SPENT FRIT HANDLING AND CCTV	3219
H-2-123151	13	3	SYSTEM 16B FCDC #2 SPRAY NOZZLES	3219
H-2-123151	14	3	SYSTEM 16B FCDC #2 GRAPPLE AND RINSE CYCLE	3219
H-2-123151	15	3	SYSTEM 16B FCDC #2 SPENT FRIT HANDLING AND CCTV	3219
H-2-123151	16	3	SYSTEM 16A PRELIMINARY DECON WATER WASH	3219
H-2-123152	01	3	SYSTEM 17 INNER CANISTER CLOSURE AND TEMPERATURE SURVEY STATION	3219
H-2-123152	02	3	SYSTEM 17 INNER CANISTER CLOSURE LEAK TEST STATION	3219
H-2-123152	03	3	SYSTEM 17 TIG WELDERS AND LEAK CHECK EQUIPMENT DELETED PER CR-634	3219
H-2-123152	04	0	SYSTEM 17 ICC PRESS AND CANISTER TROLLEY	6320
H-2-123152	05	0	SYSTEM 17 PLUG WELDER	6320
H-2-123152	06	0	SYSTEM 17 POWER PACK CLG & WELDER NITROGEN SUPPLY	6320

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123353	01	4	SYSTEM 44 COOLING TOWER	3222
H-2-123353	02	4	SYSTEM 44 COOLING TOWER WATER CONTROL, MAKE-UP, AND BLOWDOWN	3222
H-2-123353	03	4	SYSTEM 44 COOLING TOWER WATER DISTRIBUTION MECH/ELECT. SERVICES BLDG, AND VIT. BLDG.	3222
H-2-123354	01	4	SYSTEM 45 PROCESS COOLING WATER SYSTEM	3222
H-2-123354	02	4	SYSTEM 45 PROCESS COOLING WATER DISTRIBUTION VITRIFICATION BUILDING	3222
H-2-123355	01	4	SYSTEM 46 MELTER COOLING WATER SYSTEM VITRIFICATION BUILDING	3222
H-2-123355	02	4	SYSTEM 46 MELTER COOLING WATER DISTRIBUTION VITRIFICATION BUILDING	3222
H-2-123357	01	4	SYSTEM 48 PROCESS WATER TANK VITRIFICATION BUILDING 3RD FLOOR	3224
H-2-123357	02	4	SYSTEM 48 PROCESS WTR DIST, VIT BLDG, MECH/ELEC. SERV. BLDG, FRIT STRGE/COLD CHEM & SAND FLTR BLDG	3224
H-2-123357	03	4	SYSTEM 48 PROCESS WATER DIST VITRIFICATION BUILDING -- 3RD FLOOR	3224
H-2-123357	04	2	SYSTEM 48 ZONE 1 EXHAUST STACK FLUSH SYSTEM	6380
H-2-123358	01	6	SYSTEM 50 RAW WATER AND FIRE WATER SYSTEMS	3224
H-2-123358	02	6	SYSTEM 50 FIRE AND PROCESS WATER STORAGE	3224
H-2-123358	03	0	SYSTEM 50 RAW WATER AND FIRE WATER SYSTEMS	3224
H-2-123359	01	6	SYSTEM 49 SANITARY WATER SYSTEM	3224
H-2-123359	02	1	SYSTEM 49 SAN WATER DIST - VIT BLDG 1ST & 2ND FLOOR	3219
H-2-123359	03	1	SYSTEM 49 SAN WATER - VIT BLDG 3RD & 4TH FLOORS	6320
H-2-123360	01	4	SYSTEM 52 ACID DRAIN CATCH TANK	3225
H-2-123360	02	4	SYSTEM 52 ORGANIC ACID DRAIN CATCH TANK	3225
H-2-123360	03	4	SYSTEM 52 FLOOR DRAIN CATCH TANK	3225
H-2-123360	04	4	SYSTEM 52 FLOOR DRAIN SAMPLING TANK	3225
H-2-123360	05	4	SYSTEM 52 REGULATED DRAINS CATCH TANK	3225
H-2-123360	06	6	SYSTEM 52 LIQUID WASTE COLLECTION VITRIFICATION BUILDING	3225
H-2-123360	07	4	SYSTEM 52 LIQUID WASTE COLLECTION VIT BLDG, REB AND MANIPULATOR REPAIR BLDG.	3225
H-2-123360	08	0	SYSTEM 52 LIQUID WASTE COLLECTION VIT BLDG 1ST & MEZZ	3225

9312975.1465

PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123060	31	3	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212
H-2-123060	32	4	SYSTEM 20B WASTE ADJUSTMENT TANK (WAT-B)	3213
H-2-123060	33	3	SYSTEM 20B WASTE ADJUSTMENT TANK (WAT-B)	3212
H-2-123060	34	3	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212
H-2-123061	01	3	SYSTEM 22 MELTER FEED TANK (MFT)	3212
H-2-123061	02	3	SYSTEM 22 MELTER FEED TANK (MFT)	3212
H-2-123061	03	3	SYSTEM 22 MELTER FEED TANK (MFT)	3212
H-2-123070	01	4	SYSTEM 58 DRY FRIT HANDLING	3210
H-2-123070	02	4	SYSTEM 58 FRIT SLURRY MAKEUP TANK (FSMT)	3210
H-2-123070	03	4	SYSTEM 58 PROCESS FRIT SLURRY FEED TANK (PFSFT)	3210
H-2-123070	04	4	SYSTEM 58 PROCESS FRIT SLURRY PUMP & FILTER	3210
H-2-123070	05	4	SYSTEM 58 DECON FRIT SLURRY FEED TANK (DFSFT)	3210
H-2-123070	06	4	SYSTEM 58 DECON FRIT SLURRY PUMP & FILTER	3210
H-2-123150	01	3	SYSTEM 13 POUR TURNTABLE	3217
H-2-123150	02	3	SYSTEM 13 POUR TURNTABLE	3217
H-2-123150	03	3	SYSTEM 13 DRAIN TURNTABLE	3217
H-2-123150	04	4	SYSTEM 13 MELTER THERMOCOUPLES FOR GLASS TEMPERATURE MEASUREMENT AND ELECTRODE CONTROL	3217
H-2-123150	05	3	SYSTEM 13 MELTER DRAIN VALVE AND DRAIN BELLOWS	3217
H-2-123150	06	4	SYSTEM 13 MELTER PRESSURE, LEVEL, AND POUR CONTROLS	3217
H-2-123150	07	4	SYSTEM 13 MELTER TV CAMERA COOLING AND CLEANING	3217
H-2-123150	08	4	SYSTEM 13 POWER AND CONTROL FOR MELTER ELECTRODES	3217
H-2-123150	09	4	SYSTEM 13 POWER AND CONTROL FOR MELTER ELECTRODES	3217
H-2-123150	10	4	SYSTEM 13 DRAIN VALVE HEATERS	3217
H-2-123150	11	4	SYSTEM 13 CCTV CAMERA AND DRAIN VALVE HEATER CONTROLS	3217
H-2-123150	12	4	SYSTEM 13 RISER AND POUR SPOUT HEATER	3217
H-2-123150	13	4	SYSTEM 13 REFRACTORY COLD-FACE TEMPERATURE MEASUREMENT AND MELTER DOME HEATERS	3217
H-2-123150	14	4	SYSTEM 13 MELTER DOME HEATERS	3217

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123360	09	0	SYSTEM 52 LIQUID WASTE COLLECTION VIT BLDG SECOND FLOOR	3225
H-2-123360	10	0	SYSTEM 52 LIQUID WASTE COLLECTION VIT BLDG THIRD FLOOR	3225
H-2-123361	01	4	SYSTEM 53 ACID WASTE HOLD TANK	3225
H-2-123361	02	4	SYSTEM 53 ORGANIC ACID WASTE HOLD TANK	3225
H-2-123361	03	4	SYSTEM 53 ORGANIC ACID WASTE NEUTRALIZATION TANK	3225
H-2-123361	04	4	SYSTEM 53 CAUSTIC WASTE HOLD TANK	3225
H-2-123361	05	4	SYSTEM 53 CAUSTIC WASTE NEUTRALIZATION TANK	3225
H-2-123361	06	4	SYSTEM 53 SOLAR EVAPORATION TANK	3225
H-2-123361	07	7	SYSTEM 53 NONHAZARDOUS WASTE WATER DISPOSAL	3225
H-2-123361	08		NOT USED	
H-2-123361	09	4	SYSTEM 53 MECHANICAL/ELECTRICAL SERVICES BUILDING SUMP	3225
H-2-123362	01	4	SYSTEM 54 DECON SOLUTION MAKE-UP TANK	3226
H-2-123362	02	4	SYSTEM 54 OXALIC ACID DECON FEED SYSTEM	3226
H-2-123362	03	4	SYSTEM 54 POTASSIUM PERMANGANATE FEED SYSTEM	3226
H-2-123362	04	4	SYSTEM 54 SODIUM NITRITE FEED SYSTEM	3226
H-2-123362	05	4	SYSTEM 54 50% CAUSTIC STORAGE TANK	3226
H-2-123362	06		NOT USED	
H-2-123362	07	4	SYSTEM 54 50% CAUSTIC FEED TANK	3226
H-2-123362	08	4	SYSTEM 54 SUGAR SOLUTION FEED SYSTEM	3226
H-2-123362	09	4	SYSTEM 54 OFF-GAS TREATMENT CHEMICAL FEED SYSTEM	3226
H-2-123362	10	4	SYSTEM 54 KOH/FRIT MODIFIER FEED SYSTEM	3226
H-2-123362	11	4	SYSTEM 54 DILUTE SODIUM HYDROXIDE FEED SYSTEM	3226
H-2-123362	12	4	SYSTEM 54 FORMIC ACID STORAGE TANK	3226
H-2-123362	13		NOT USED	
H-2-123362	14	4	SYSTEM 54 FORMIC ACID FEED TANK	3226
H-2-123362	15	4	SYSTEM 54 DILUTE FORMIC ACID FEED SYSTEM	3226
H-2-123362	16	4	SYSTEM 54 50% NITRIC ACID STORAGE TANK	3226
H-2-123362	17		NOT USED	
H-2-123362	18	4	SYSTEM 54 50% NITRIC ACID FEED TANK	3226
H-2-123362	19	4	SYSTEM 54 NITRIC ACID DECON FEED SYSTEM	3226
H-2-123362	20	1	SYSTEM 54 ANTIFOAM FEED TANK	6370

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
VOLUME 1A
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123060	01	3	SYSTEM 20A WASTE ADJUSTMENT TANK (WAT-A)	3213
H-2-123060	02	3	SYSTEM 20A WASTE ADJUSTMENT TANK (WAT-A)	3213
H-2-123060	03	3	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3213
H-2-123060	04	3	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3213
H-2-123060	05	3	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3213
H-2-123060	06	5	SYSTEM 20A WASTE HOLD TANK (WHT)	3211
H-2-123060	07	4	SYSTEM 20A WASTE HOLD TANK (WHT)	3211
H-2-123060	08	5	SYSTEM 20C REMOTE MAINTAINED SUMP PUMPS/JETS	3214
H-2-123060	09	5	SYSTEM 20C CONTACT MAINTAINED SUMP JETS	3214
H-2-123060	10	4	SYSTEM 20C CONTACT MAINTAINED SUMP PUMPS	3214
H-2-123060	11	1	SYSTEM 20A WASTE HOLD TANK (WHT)	3212
H-2-123060	12	4	SYSTEM 20C SUMP INSTRUMENT/PIPING SUMMARY	3214
H-2-123060	13	0	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3214
H-2-123060	14	1	SYSTEM 20C CONTACT MAINTAINED SUMP PUMPS	3214
H-2-123060	15	1	SYSTEM 20C SUMP INSTRUMENT / PIPING SUMMARY	3214
H-2-123060	16		NOT USED	
H-2-123060	17	3	SYSTEM 20A FILTER FEED TANK (FFT)	3213
H-2-123060	18	3	SYSTEM 20A FILTER FEED TANK (FFT)	3213
H-2-123060	19	3	SYSTEM 20A SBS FILTER	3213
H-2-123060	20	3	SYSTEM 20A SBS FILTER	3213
H-2-123060	21	3	SYSTEM 20A PRECOAT FEED TANK (PFT)	3213
H-2-123060	22	0	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	
H-2-123060	23	4	SYSTEM 20C WARM WASTE HEADER	3214
H-2-123060	24	4	SYSTEM 20C WARM WASTE HEADER	3214
H-2-123060	25	3	SYSTEM 20C HOT/INTERMEDIATE WASTE HEADERS	3214
H-2-123060	26	3	SYSTEM 20C JET VENT HEADER	3214
H-2-123060	27	4	SYSTEM 20A WHT INTRA-AREA LINE LEAK DETECTION	3211
H-2-123060	28	3	SYSTEM 20D SLURRY MIX EVAPORATOR CONDENSATE TANK (SMECT)	3212
H-2-123060	29	3	SYSTEM 20D SLURRY MIX EVAPORATOR CONDENSATE TANK (SMECT)	3212
H-2-123060	30	3	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
H-2-123362	21	4	SYSTEM 54 DIATOMACEOUS EARTH SLURRY FEED TANK	3226
H-2-123362	22	4	SYSTEM 54 ZEOLITE SLURRY FEED TANK	3226
H-2-123362	23	4	SYSTEM 54 FLUSH WATER FEED TANK	3226
H-2-123363	01	4	SYSTEM 55 FRIT STORAGE/COLD CHEMICAL BLDG VENT SYSTEM	3227
H-2-123364	01	4	SYSTEM 56 COLD FEED VITRIFICATION BUILDING VENT SYSTEM	3227
H-2-123364	02	2	SYSTEM 56 VITRIFICATION BUILDING SOLENOID VALVE AIR VENT	3227
H-2-123365	01	02	SYSTEM 51 SANITARY SEWER	6320
H-2-123365	02	0	SYSTEM 51 SANITARY SEWER	6320
H-2-123370	01	4	SYSTEM 62 HPS VACUUM BLOWERS VITRIFICATION, MRB, OC/REB FRIT ST/COLD CHEM BLDGS.	3227
H-2-123370	02	4	SYSTEM 62 HPS VACUUM COLLECTION VIT BLDG, TUNNEL & MEZZ LEVELS FIRST AND SECOND FLOORS	3227
H-2-123370	03	4	SYSTEM 62 HPS VACUUM COLLECTION VITRIFICATION BUILDING THIRD & FOURTH FLOORS	3227
H-2-123370	04	4	SYSTEM 62 HPS VACUUM COLLECTION MRB, FRIT ST/COLD CHEM, CMR, OC/REB & SHIPPING/RECEIVING BUILDINGS	3227
H-2-123370	05	4	SYSTEM 62 HPS VACUUM SYSTEM CANISTER STORAGE BUILDING	3227
H-2-123370	06	4	SYSTEM 62 HPS VACUUM SYSTEM FAN HOUSE	3227
H-2-123370	07	4	SYSTEM 62 HPS VACUUM SYSTEM WHT BUILDING	3227
H-2-123370	08	2	SYSTEM 62 DECON HOOD, SAMPLE PREPARATION HOOD AND SINK	3227

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
** VOLUME NUMBER: 1A				
H-2-123001	01	3	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
H-2-123001	02	3	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
H-2-123001	03	3	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
H-2-123001	04	3	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
H-2-123001	05	3	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
H-2-123040	03	0	P&ID SYSTEM 11 FEED RECEIPT	6370
H-2-123040	04	0	P&ID SYSTEM 11 FEED RECEIPT	6370
H-2-123050	01	3	SYSTEM 11 RECEIPT AND LAG STORAGE TANK-A VOIDED DWG PER CR-0584	3211
H-2-123050	02	3	SYSTEM 11 RECEIPT AND LAG STORAGE TANK-A VOIDED DWG PER CR-0584	3211
H-2-123050	03	3	SYSTEM 11 RECEIPT AND LAG STORAGE TANK-A VOIDED DWG PER CR-0584	3210
H-2-123050	04	3	SYSTEM 11 RECEIPT AND LAG STORAGE TANK-B VOIDED DWG PER CR-0584	3211
H-2-123050	05	3	SYSTEM 11 RECEIPT AND LAG STORAGE TANK-B VOIDED DWG PER CR-0584	3211
H-2-123050	06	3	SYSTEM 11 RECEIPT AND LAG STORAGE TANK-B VOIDED DWG PER CR-0584	3211
H-2-123050	07	3	RLST INTERFACE WITH CHEMICAL PROCESS CELL SYSTEM 11A/B VOIDED DWG PER CR-0584	3211
H-2-123050	08	3	SYSTEM 11 RLST INTRA-AREA LINE LEAK DETECTION VOIDED DWG PER CR-0584	3211
H-2-123051	01	3	SYSTEM 12 SLURRY RECEIPT & ADJUSTMENT TANK (SRAT)	3212
H-2-123051	02	3	SYSTEM 12 SLURRY RECEIPT & ADJUSTMENT TANK (SRAT)	3212
H-2-123051	03	3	SYSTEM 12 SLURRY RECEIPT & ADJUSTMENT TANK (SRAT)	3212
H-2-123051	04	0	SYSTEM 12 SLURRY RECEIPT AND ADJUSTMENT TANK (SRAT)	3212
H-2-123051	05	0	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
H-2-123051	06	3	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
H-2-123051	07	3	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
H-2-123051	08	3	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
H-2-123051	09	0	SYSTEM 12 SPARE FEED PREPARATION TANK (FUTURE)	6320

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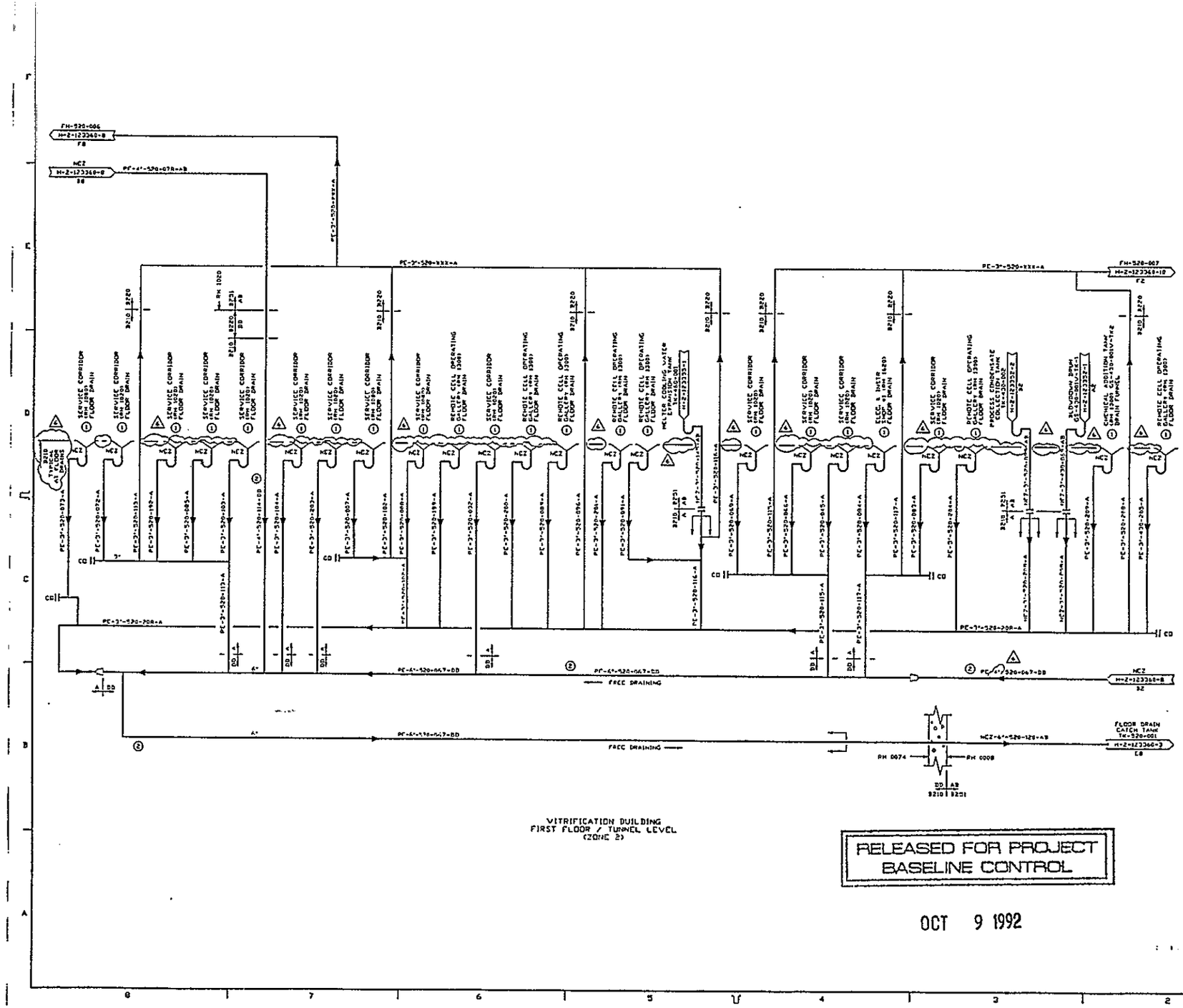
GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123360-1

NOTE:

1. SCREEN IS INCLUDED FOR ALL FLOOR DRAINS.
2. EMBEDDED PIPE IS TO BE ENCASED AND PROVIDED WITH VISUAL LEAK DETECTORS.



VITRIFICATION BUILDING
FIRST FLOOR / TUNNEL LEVEL
(ZONE 2)

RELEASED FOR PROJECT BASELINE CONTROL

OCT 9 1992

SAFETY CLASS 3

REV.	DATE	REVISION DESCRIPTION				
6	7/8/93	MINOR REVISIONS FOR B216A SLAB ONLY DESIGN DEVELOPMENT				
5	03/30/92	REVISED FIRST FLOOR AND TUNNEL DRAIN SYSTEM PER CR-0768	ER	BJF	SSL	JJP
			BGJ	MJM	WFM	RSP
4	03/30/92	DUE TO SPACE LIMITATIONS THE LIQUID WASTE COLLECTION DRAWINGS WERE EXPANDED FROM 2 SHEETS TO 5 SHEETS. ADDED TRAPS, VENT LINES, HEPA FILTERS AND CHANGED LINE SIZES TO COMPLY TO THE UNIFORM PLUMBING CODE. CHANGED LINE NUMBERS. ADDED PACKAGE BREAKS. REVISED LINE LAYOUT, REVISED LINE SPECS. AND ADDED NOTE 2 PER CR-0771	ER	BJF	SSL	VVC
			BGJ	MJM	WFM	MTW
3	02/04/91	CHANGED VARIOUS DRAIN ROUTING. ADDED DRAIN LINE FROM ANTIFOAM TANK PER CR-0289.	FLN	MF	RPD	MF
			ERP	MJM	JGK	RNG
2	7/26/91	ADDED PROCESS WATER TANK TECHN. CHANGED LINE SIZES. RELEASED FOR PROJECT BASELINE CONTROL PER CR-0488	SSL	MJM	RGT	MF
			ERP	FGB	DPC	RNG
1	2/15/91	*RELEASED FOR PROJECT BASELINE	SSL	MJM	RGT	MF
		CONTROL* WITHDRAWN PER CR-465.	ERP	FGB	DPC	RNG
0	10/3/90	RELEASED FOR PROJECT BASELINE CONTROL PER CR-WVP-0443	MJM	VP	RGT	MF
			ERP	FGB	DPC	RNG
00	03/18/90	RELEASED FOR DETAILED DESIGN	SSL	SS	RGT	MM
			BJF	FGB	DHPC	RNG

ENGINEERING RELEASE
REV. ____ DATE ____
CPD ____

DRAWN BY	
CHECKED BY	
DESIGN ENGINEER R GIBBONS	9/16/90
SUPERVISOR D CHAVLA	9/17/90
PROJECT ENGINEER F BROOKS	9/22/90
SYSTEM ENGINEER B J MECKMAN	9/22/90
PROJECT ENGINEER R MEHTA	9/22/90
SYSTEM ENGINEER R BAGNEY	9/22/90
SYSTEM ENGINEER T LEE	9/22/90
DEPT. I STRAUSBERG	9/22/90
DEPT. MANAGER	09/19/90
CONSTRUCTION	NONE

U.S. DEPARTMENT OF ENERGY
Richland Operations Office
DE - AC06-86RL16038

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

PIPING & INSTRUMENT DIAGRAM
SYSTEM 52
LIQUID WASTE COLLECTION
VITRIFICATION BUILDING

HANFORD WASTE VITRIFICATION PLANT

PROJECT	CONTRACT NO.	DRAWING NO.
8-593	8457	3253

SCALE	SHEET NO.
NONE	

CONSTRUCTION	SIZE	DRAWING NO.	REV.
NONE	NOT REQ'D	H-2-123360	6 10 6

ER / A-97D310
23 SEPT 92

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