START

0032646

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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: April 28, 1993

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

Transmittal No.: WDOE-410

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

NUMBER	REV	DATE	TITLE
SEE TRANSMTITTAL ATTACHMENT	----	----	PIPING AND INSTRUMENTATION DIAGRAMS AND TABLE OF CONTENTS
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-906, FUP-445
R. L. Long: DOE-RL W/O
TWP/AME Corresp Cntrl Cntr, MSIN A5-10
(SYSTEM 20C,21,13,17,23,71,14,41 & 20B), w/0
Environmental Data Management Center
(MSIN H4-22)w/1 #31
D. Duncan, US EPA, Region X w/0

Very truly yours,

Rosalie Cadenas for/

R. S. Poulter
Project Director

RSP:AJM:ts

DEC 1993
RECEIVED
EDMC

TRANSMITTAL ATTACHMENT

DRAWING NUMBER	SHT NO.	REV.	DATE	TITLE
H-2-123030	3	1	04/26/93	SYSTEM 20C & 21 CDMC EMBED SPARES
H-2-123030	6	1	04/26/93	SYSTEM 13,17 & 20C MELTER CELL EMBED SPARES
H-2-123030	11	1	04/26/93	SYSTEM 20C,17,23 & 71 EMBED SPARES
H-2-123030	12	1	04/26/93	SYSTEM 14,20C & 41 EMBED SPARES
H-2-123060	32	5	04/26/93	SYSTEM 20B WASTE ADJUSTMENT TANK (WAT-B)

9413092.0323

PROCESS PIPING AND INSTRUMENT DIAGRAMS
VOLUME 1A
TABLE OF CONTENTS

NEW ISSUE	DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
** VOLUME NUMBER: 1A					
	H-2-123001	01	4	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
	H-2-123001	02	4	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
	H-2-123001	03	4	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
	H-2-123001	04	4	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
	H-2-123001	05	4	LEGEND OF SYMBOLOGY FOR PROCESS FLOW AND PIPING AND INSTRUMENT DIAGRAMS	3201
	H-2-123030	01	0	P&ID SYSTEMS 12 & 20 CPC EMBED SPARES	6320
	H-2-123030	02	0	P&ID SYSTEMS 11,14, 15, 20 CPC EMBED SPARES	6320
***	H-2-123030	03	1	P&ID SYSTEM 20C & 21 CDMC EMBED SPARES	6320
	H-2-123030	04	0	P&ID SYSTEM 21 REDC EMBED SPARES	6320
	H-2-123030	05	0	P&ID SYSTEM 16 CDC EMBED SPARES	6320
***	H-2-123030	06	1	P&ID SYSTEM 13, 17, & 20C MELTER CELL EMBED SPARES	6320
	H-2-123030	07	0	P&ID SYSTEM 14 HEME CELL EMBED SPARES	6320
	H-2-123030	08	0	P&ID SYSTEM 14 & 15 SBS CELL EMBED SPARES	6320
	H-2-123030	09	0	P&ID SYSTEMS 12, 20 & 22 SEMI FIXED PIPEWAY	6320
	H-2-123030	10	0	P&ID SYSTEMS 12, 20 & 22	6320
***	H-2-123030	11	1	P&ID SYSTEM 20C, 23 & 71 EMBED SPARES	6320
***	H-2-123030	12	1	P&ID SYSTEM 14, 20C & 41 EMBED SPARES	6320
	H-2-123030	13	0	P&ID SYSTEMS 12 & 22 CPC EMBED SPARES	6320
	H-2-123030	14	0	P&ID SYSTEMS 20 CPC EMBED SPARES	6320
	H-2-123040	03	1	P&ID SYSTEM 11 FEED RECEIPT	6370
	H-2-123040	04	1	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

9413092.0324

PROCESS PIPING AND INSTRUMENT DIAGRAMS
VOLUME 1A
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NEW ISSUE	DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
	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	4	SYSTEM 12 SLURRY RECEIPT & ADJUSTMENT TANK (SRAT)	3212
	H-2-123051	02	4	SYSTEM 12 SLURRY RECEIPT & ADJUSTMENT TANK (SRAT)	3212
	H-2-123051	03	4	SYSTEM 12 SLURRY RECEIPT & ADJUSTMENT TANK (SRAT)	3212
	H-2-123051	04	1	SYSTEM 12 SLURRY RECEIPT AND ADJUSTMENT TANK (SRAT)	3212
	H-2-123051	05	1	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
	H-2-123051	06	4	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
	H-2-123051	07	4	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
	H-2-123051	08	4	SYSTEM 12 SLURRY MIX EVAPORATOR (SME)	3212
	H-2-123051	09	1	SYSTEM 12 SPARE FEED PREPARATION TANK (FUTURE)	6320
	H-2-123060	01	4	SYSTEM 20A WASTE ADJUSTMENT TANK (WAT-A)	3213
	H-2-123060	02	4	SYSTEM 20A WASTE ADJUSTMENT TANK (WAT-A)	3213
	H-2-123060	03	4	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3213
	H-2-123060	04	4	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3213
	H-2-123060	05	4	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3213
	H-2-123060	06	4	SYSTEM 20A WASTE HOLD TANK (WHT)	3211
	H-2-123060	07	4	SYSTEM 20A WASTE HOLD TANK (WHT)	3211
	H-2-123060	08	6	SYSTEM 20C REMOTE MAINTAINED SUMP PUMPS/JETS	3214
	H-2-123060	09	6	SYSTEM 20C CONTACT MAINTAINED SUMP JETS	3214
	H-2-123060	10	4	SYSTEM 20C CONTACT MAINTAINED SUMP PUMPS	3214

9413092.0325

PROCESS PIPING AND INSTRUMENT DIAGRAMS
VOLUME 1A
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NEW ISSUE	DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
	H-2-123060	11	1	SYSTEM 20A WASTE HOLD TANK (WHT)	3212
	H-2-123060	12	5	SYSTEM 20C SUMP INSTRUMENT/PIPING SUMMARY	3214
	H-2-123060	13	1	SYSTEM 20A DECON WASTE TREATMENT TANK (DWTT)	3214
	H-2-123060	14	2	SYSTEM 20C CONTACT MAINTAINED SUMP PUMPS	3214
	H-2-123060	15	2	SYSTEM 20C SUMP INSTRUMENT / PIPING SUMMARY	3214
	H-2-123060	17	4	SYSTEM 20A FILTER FEED TANK (FFT)	3213
	H-2-123060	18	4	SYSTEM 20A FILTER FEED TANK (FFT)	3213
	H-2-123060	19	4	SYSTEM 20A SBS FILTER	3213
	H-2-123060	20	4	SYSTEM 20A SBS FILTER	3213
	H-2-123060	21	4	SYSTEM 20A PRECOAT FEED TANK (PFT)	3213
	H-2-123060	22	1	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212
	H-2-123060	23	5	SYSTEM 20C WARM WASTE HEADER	3214
	H-2-123060	24	5	SYSTEM 20C WARM WASTE HEADER	3214
	H-2-123060	25	4	SYSTEM 20C HOT/INTERMEDIATE WASTE HEADERS	3214
	H-2-123060	26	4	SYSTEM 20C JET VENT HEADER	3214
	H-2-123060	27	4	SYSTEM 20A WHT INTRA-AREA LINE LEAK DETECTION	3211
	H-2-123060	28	4	SYSTEM 20D SLURRY MIX EVAPORATOR CONDENSATE TANK (SMECT)	3212
	H-2-123060	29	4	SYSTEM 20D SLURRY MIX EVAPORATOR CONDENSATE TANK (SMECT)	3212
	H-2-123060	30	4	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212
	H-2-123060	31	4	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212
***	H-2-123060	32	5	SYSTEM 20B WASTE ADJUSTMENT TANK (WAT-B)	3213
	H-2-123060	33	4	SYSTEM 20B WASTE ADJUSTMENT TANK (WAT-B)	3212
	H-2-123060	34	4	SYSTEM 20D RECYCLE WASTE COLLECTION TANK (RWCT)	3212
	H-2-123061	01	4	SYSTEM 22 MELTER FEED TANK (MFT)	3212
	H-2-123061	02	4	SYSTEM 22 MELTER FEED TANK (MFT)	3212
	H-2-123061	03	4	SYSTEM 22 MELTER FEED TANK (MFT)	3212
	H-2-123070	01	5	SYSTEM 58 DRY FRIT HANDLING	3210
	H-2-123070	02	4	SYSTEM 58 FRIT SLURRY MAKEUP TANK (FSMT)	3210
	H-2-123070	03	6	SYSTEM 58 PROCESS FRIT SLURRY FEED TANK (PFSFT)	3210

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
VOLUME 1A
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NEW ISSUE	DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
	H-2-123070	04	5	SYSTEM 58 PROCESS FRIT SLURRY PUMP & FILTER	3210
	H-2-123070	05	5	SYSTEM 58 DECON FRIT SLURRY FEED TANK (DFSFT)	3210
	H-2-123070	06	5	SYSTEM 58 DECON FRIT SLURRY PUMP & FILTER	3210
	H-2-123150	01	5	SYSTEM 13 POUR TURNTABLE	3217
	H-2-123150	02	4	SYSTEM 13 POUR TURNTABLE	3217
	H-2-123150	03	5	SYSTEM 13 DRAIN TURNTABLE	3217
	H-2-123150	04	5	SYSTEM 13 MELTER THERMOCOUPLES FOR GLASS TEMPERATURE MEASUREMENT AND ELECTRODE CONTROL	3217
	H-2-123150	05	5	SYSTEM 13 MELTER DRAIN VALVE AND DRAIN BELLOWS	3217
	H-2-123150	06	6	SYSTEM 13 MELTER PRESSURE, LEVEL, AND POUR CONTROLS	3217
	H-2-123150	07	5	SYSTEM 13 MELTER TV CAMERA COOLING AND CLEANING	3217
	H-2-123150	08	5	SYSTEM 13 POWER AND CONTROL FOR MELTER ELECTRODES	3217
	H-2-123150	09	5	SYSTEM 13 POWER AND CONTROL FOR MELTER ELECTRODES	3217
	H-2-123150	10	5	SYSTEM 13 DRAIN VALVE HEATERS	3217
	H-2-123150	11	5	SYSTEM 13 CCTV CAMERA AND DRAIN VALVE HEATER CONTROLS	3217
	H-2-123150	12	5	SYSTEM 13 RISER AND POUR SPOUT HEATER	3217
	H-2-123150	13	5	SYSTEM 13 REFRACTORY COLD-FACE TEMPERATURE MEASUREMENT AND MELTER DOME HEATERS	3217
	H-2-123150	14	5	SYSTEM 13 MELTER DOME HEATERS	3217
	H-2-123150	15	5	SYSTEM 13 MELTER DOME HEATERS	3217
	H-2-123150	16	5	SYSTEM 13 MELTER DOME HEATERS	3217
	H-2-123150	17	5	SYSTEM 13 MELTER COOLING WATER FOR TOP AND BOTTOM HEADS AND SHELL	3217
	H-2-123150	18	5	SYSTEM 13 MELTER COOLING WATER FOR TOP AND BOTTOM HEADS AND SHELL	3217
	H-2-123150	19	5	SYSTEM 13 PROCESS COOLING WATER FOR FEED NOZZLES	3217
	H-2-123150	20	5	SYSTEM 13 MELTER COOLING WATER FOR ELECTRODES, PADS, AND DOME HEATER TRANSFORMERS	3217
	H-2-123150	21	5	SYSTEM 13 MELTER COOLING WATER FOR DOME HEATERS AND BOTTOM PAD	3217

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PROCESS PIPING AND INSTRUMENT DIAGRAMS
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NEW ISSUE	DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
	H-2-123150	22	4	SYSTEM 13 MELTER ARGON SUPPLY	3217
	H-2-123151	01	4	SYSTEM 16A FCDC SERVICE HEADERS	3219
	H-2-123151	02	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #1	3219
	H-2-123151	03	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #2	3219
	H-2-123151	04	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #3	3219
	H-2-123151	05	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #4	3219
	H-2-123151	06	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #5	3219
	H-2-123151	07	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #6	3219
	H-2-123151	08	4	SYSTEM 16A FCDC NOZZLE FEED PUMP #7	3219
	H-2-123151	09	4	SYSTEM 16A FCDC RIBBON NOZZLE FEED PUMP	3219
	H-2-123151	10	4	SYSTEM 16A FCDC #1 SPRAY NOZZLES	3219
	H-2-123151	11	4	SYSTEM 16A FCDC #1 GRAPPLE AND RINSE CYCLE	3219
	H-2-123151	12	4	SYSTEM 16A FCDC #1 SPENT FRIT HANDLING AND CCTV	3219
	H-2-123151	13	4	SYSTEM 16B FCDC #2 SPRAY NOZZLES	3219
	H-2-123151	14	4	SYSTEM 16B FCDC #2 GRAPPLE AND RINSE CYCLE	3219
	H-2-123151	15	4	SYSTEM 16B FCDC #2 SPENT FRIT HANDLING AND CCTV	3219
	H-2-123151	16	4	SYSTEM 16A PRELIMINARY DECON WATER WASH	3219
	H-2-123151	17	0	SYSTEM 16A FCDC #1 SPRAY NOZZLES	3219
	H-2-123151	18	0	SYSTEM 16B FCDC #2 SPRAY NOZZLES	3219
	H-2-123152	01	4	SYSTEM 17 INNER CANISTER CLOSURE AND TEMPERATURE SURVEY STATION	3219
	H-2-123152	02	4	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	1	SYSTEM 17 ICC PRESS AND CANISTER TROLLEY	6320
	H-2-123152	05	1	SYSTEM 17 PLUG WELDER	6320
	H-2-123152	06	1	SYSTEM 17 POWER PACK CLG & WELDER NITROGEN SUPPLY	6320
	H-2-123152	07	1	SYSTEM 17 FUTURE OVERPACK WELDER WALL PENETRATIONS	6320
	H-2-123152	08	0	P&ID SYSTEM 17 PLUG WELDER	
	H-2-123160	01	4	SYSTEM 21 CRANE DECON FEED TANK (ACID)	3220
	H-2-123160	02	4	SYSTEM 21 CRANE DECON FEED TANK (CAUSTIC)	3220
	H-2-123160	03	4	SYSTEM 21 REDC UTILITIES	3220

9413092.0328

PROCESS PIPING AND INSTRUMENT DIAGRAMS
VOLUME 1A
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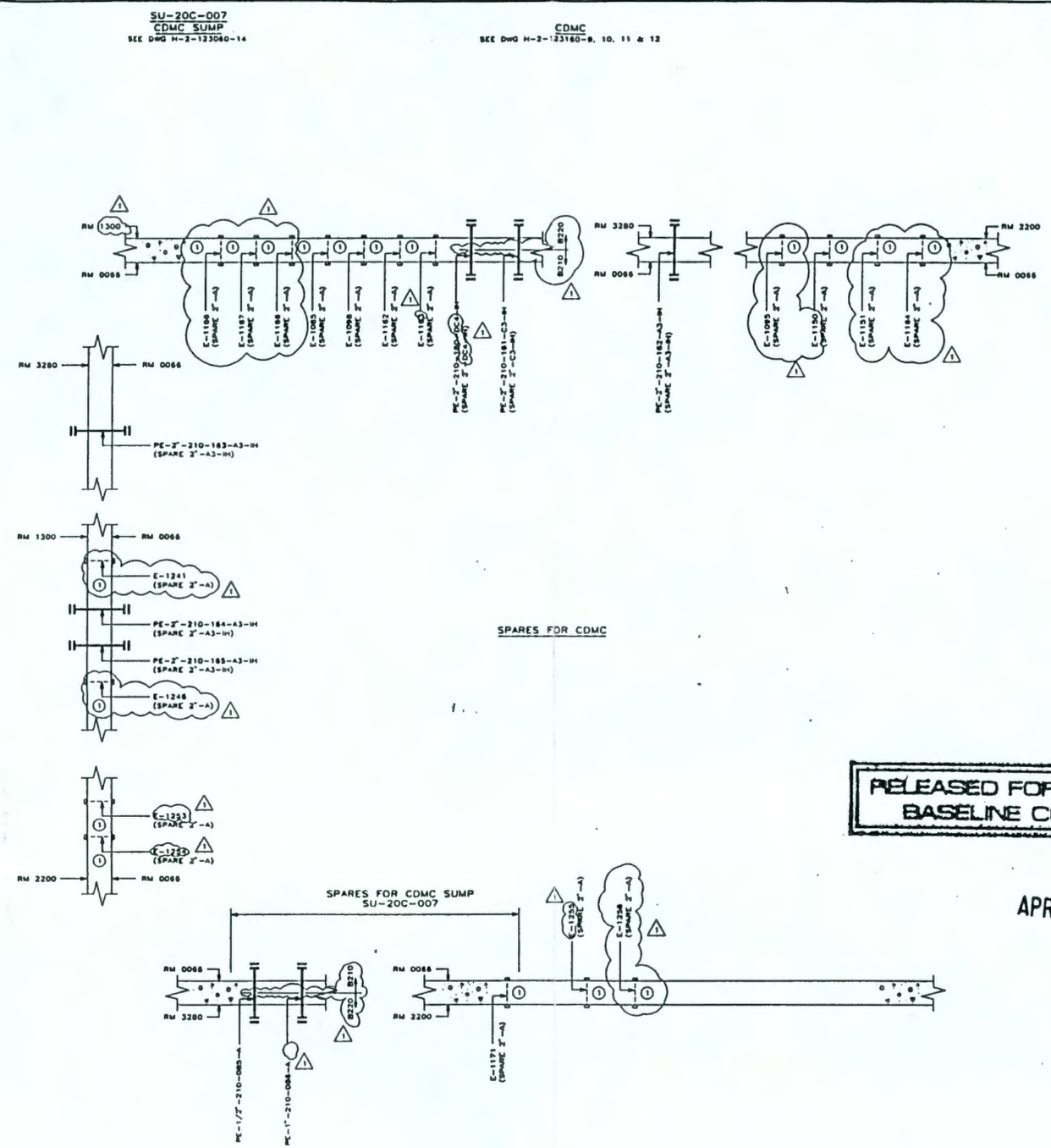
NEW ISSUE	DRAWING NO.	SH NO	REV	DRAWING TITLE	CWBS NO
	H-2-123160	04	4	SYSTEM 21 REDC UTILITIES	3220
	H-2-123160	05	4	SYSTEM 21 REDC UTILITIES	3220
	H-2-123160	06	4	SYSTEM 21 REDC UTILITIES	3220
	H-2-123160	07	5	SYSTEM 21 REDC UTILITIES	3220
	H-2-123160	08	4	SYSTEM 21 CDMC UTILITIES	3220
	H-2-123160	09	4	SYSTEM 21 CDMC UTILITIES	3220
	H-2-123160	10	5	SYSTEM 21 CDMC UTILITIES	3220
	H-2-123160	11	5	SYSTEM 21 CDMC UTILITIES	3220
	H-2-123160	12	4	SYSTEM 21 CDMC UTILITIES	3220
	H-2-123160	13	4	SYSTEM 21 CELL DECON	3220
	H-2-123160	14	4	SYSTEM 21 CPC AND ANALYTICAL FACILITY DECON	3220
	H-2-123160	15	3	SYSTEM 21 MSM DECON GLOVE BOX	3220
	H-2-123160	16	0	SYSTEM 21 SHIELD DOORS	6320
	H-2-123160	17	0	SYSTEM 21 SHIELD DOORS	

9413092.1329



RELEASED FOR PROJECT BASELINE CONTROL

APR 2 7 1993

GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123030-1.

NOTES:

1. SPARE ELECTRICAL PENETRATION (CONDUIT ONLY)

QUALITY LEVEL II
SAFETY CLASS 3

REV NO.	DATE	REVISED DESCRIPTION	APPROVAL INITIALS			
1	4/30/93	ADDED CWBS PACKAGE BREAKS. ADDED ELECTRICAL SPARES. REVISED ROOM AND LINE NUMBERS.	TL / BW	JPF / AKY	AM / JK	JHP / LLP
0	12/10/92	RELEASED FOR PROJECT BASELINE CONTROL, PER CN-672.	ER / BGJ	AM / AKY	CW / JGK	JJP / RSP
01	8/30/92	ADDED SPARE EMBEDS FOR CDMC SUMP, PER CR-0728	ER / BGJ	AM	CW	VWG
00	7/22/92	RELEASED FOR FLUOR DANIEL CONFIGURATION CONTROL	ER / BGJ	AM	CW	

SAMPLE: B123030C — CAMERA: 2B IBM ACD2:12 C1:55

ENGINEERING RELEASE
REV. ____ DATE ____
ERO ____

U.S.DEPARTMENT OF ENERGY
Richland Field Office
DE - AC06-00RL10830

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

	DATE
R. POULTER	12/9/92
J. KELLY	12/9/92
A. YEE	12/9/92
B. JOHNSON	12/7/92
V. GRANGER	12/8/92
C. WATTS	12/8/92
A. McAFEE	12/7/92
E. ROBLES	12/7/92

P & I D
SYSTEM 20C & 21
CDMC EMBED SPARES

HANFORD WASTE VITRIFICATION PLANT

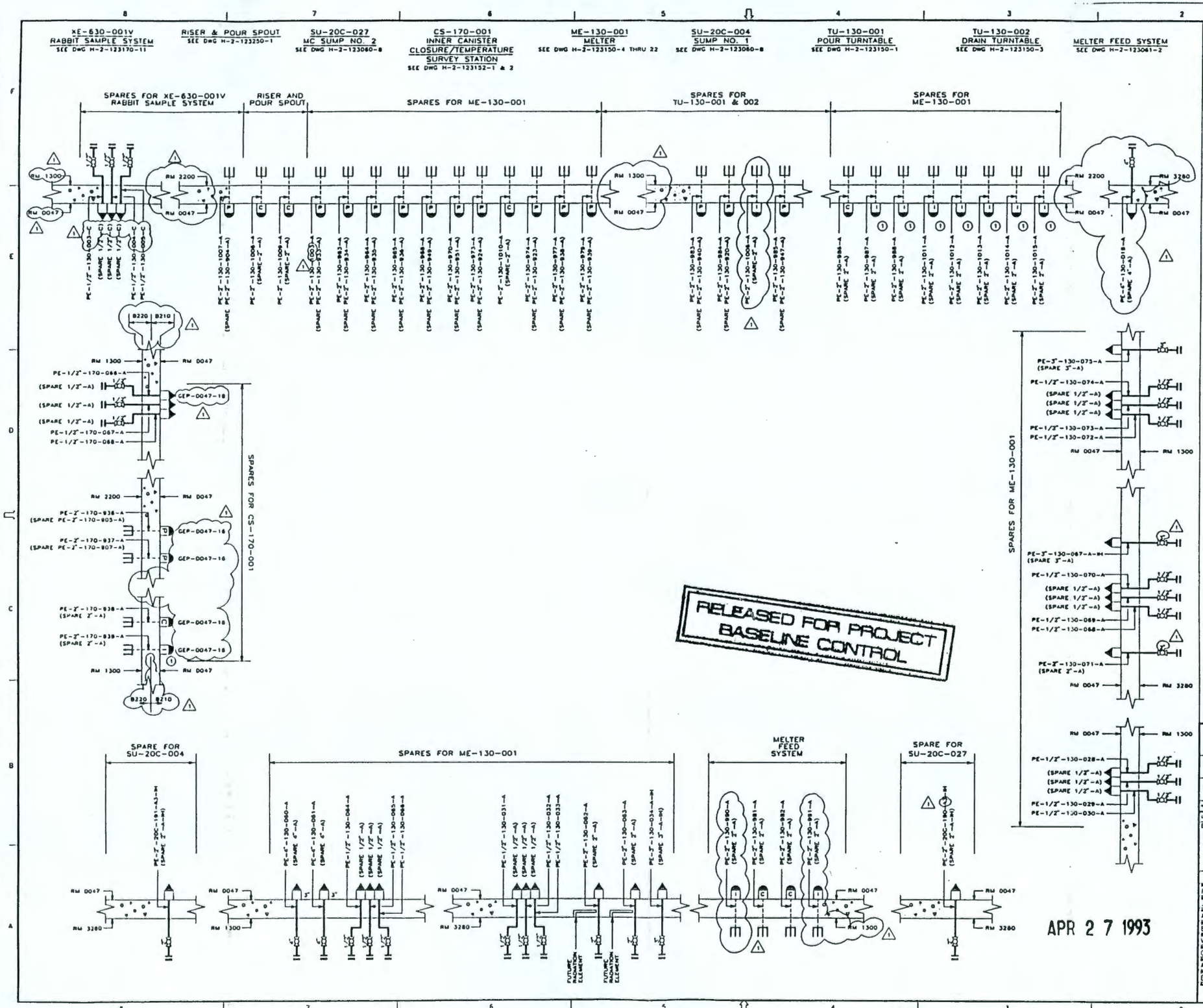
PROJECT	CLIENT CONTRACT NO.	DWG NO.
B-595	8457	6320

SCALE: NONE — SHEET NO. 1

NONE — NOT REQ'D — DRAWING NUMBER: H-2-123030 — SHEET 3 OF 14 — REV 1

DISTRIBUTION CODE: ACAD — INITIALS: ER — DATE: 12 APRIL 93

9413092.0330



GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123030-1.

NOTES:

1. SPARE FOR MELTER THERMOCOUPLE.

QUALITY LEVEL II
SAFETY CLASS 3

REV	DATE	REVISION DESCRIPTION	APPROVAL CIRCLE
1	4/24/93	ADDED CWBS PACKAGE BREAKS GEP NUMBERS. REVISED ROOM NUMBERS. ADDED A 4" SPARE PENETRATION AND TWO INSTRUMENT SPARES. CORRECTED VALVE SIZES AND LINE CLASS.	
0	12/10/92	RELEASED FOR PROJECT BASELINE CONTROL, PER CN-672.	ER AM CW JJP BGJ AKY JGK RSP
00	7/22/92	RELEASED FOR FLUOR DANIEL CONFIGURATION CONTROL	ER AM CW BGJ

SAMPLE: B123030F — LANGUAGE: 2B-BM ACD2:12 C1:SS

ENGINEERING RELEASE
REV ____ DATE ____
ERO ____

U.S.DEPARTMENT OF ENERGY
Richland Field Office
DE - ACDS-DAN.10530

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

R. POULTER	12/9/92
J. KELLY	12/9/92
A. YEE	12/9/92
B. JOHNSON	12/8/92
V. GRANGER	12/8/92
C. WATTS	12/8/92
A. McAFEE	12/7/92
E. ROBLES	12/7/92

P & I D
SYSTEM 13, 17 & 20C
MELTER CELL EMBED SPARES

HANFORD WASTE VITRIFICATION PLANT

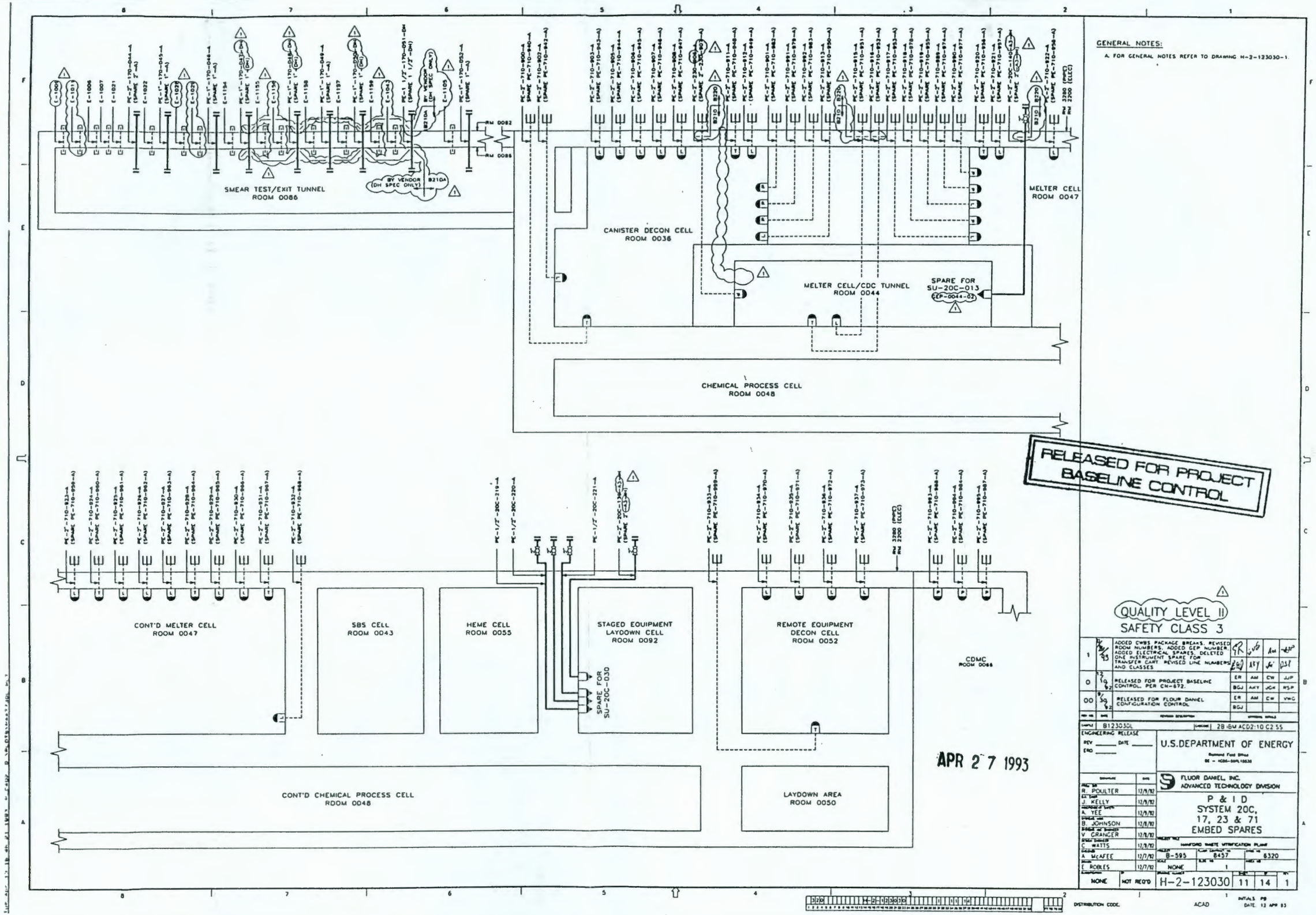
PROJECT	FLUOR CONTRACT NO.	DWG NO.
B-595	8457	6320

SCALE: NONE — SIZE: 1 — SHEET NO.: 1

NONE — NOT REQ'D — DRAWING NUMBER: H-2-123030 — SHEET 6 — OF 14 — REV 1

DISTRIBUTION CODE: ACAD — INITIALS: ER — DATE: 14 APRIL 93

9413092.0331



GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123030-1.

QUALITY LEVEL II
SAFETY CLASS 3

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS
1	4/26/93	ADDED CWBS PACKAGE BREAKS, REVISED ROOM NUMBERS, ADDED GEP NUMBER, ADDED ELECTRICAL SPARES, DELETED ONE INSTRUMENT SPARE FOR TRANSFER CART, REVISED LINE NUMBERS AND CLASSES	GR, JVB, AM, [illegible] / ERD, AKY, JK, DSP
0	12/10/92	RELEASED FOR PROJECT BASELINE CONTROL, PER CN-672.	ER, AM, CW, JJP / BGJ, AKY, JGK, RSP
00	9/30/92	RELEASED FOR FLOUR DANIEL CONFIGURATION CONTROL	ER, AM, CW, VWG / BGJ

SAMPLE: B123030L — CHECKED: 2B IBM ACD2:10 C2 SS

ENGINEERING RELEASE
REV ____ DATE ____
ERO ____

U.S.DEPARTMENT OF ENERGY
Richland Field Office
DE - AC06-00RL10830

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

	DATE
PROJ. ENG. R. POULTER	12/9/92
CAT. ENGR. J. KELLY	12/9/92
INDEPENDENT SAFETY A. YEE	12/9/92
DESIGNED BY B. JOHNSON	12/8/92
DESIGN ENGR. V. GRANGER	12/8/92
DESIGN ENGINEER C. WATTS	12/9/92
CHECKED A. McAFEE	12/7/92
DRAWN E. ROBLES	12/7/92

P & I D
SYSTEM 20C,
17, 23 & 71
EMBED SPARES

PROJECT TITLE: HANFORD WASTE VITRIFICATION PLANT

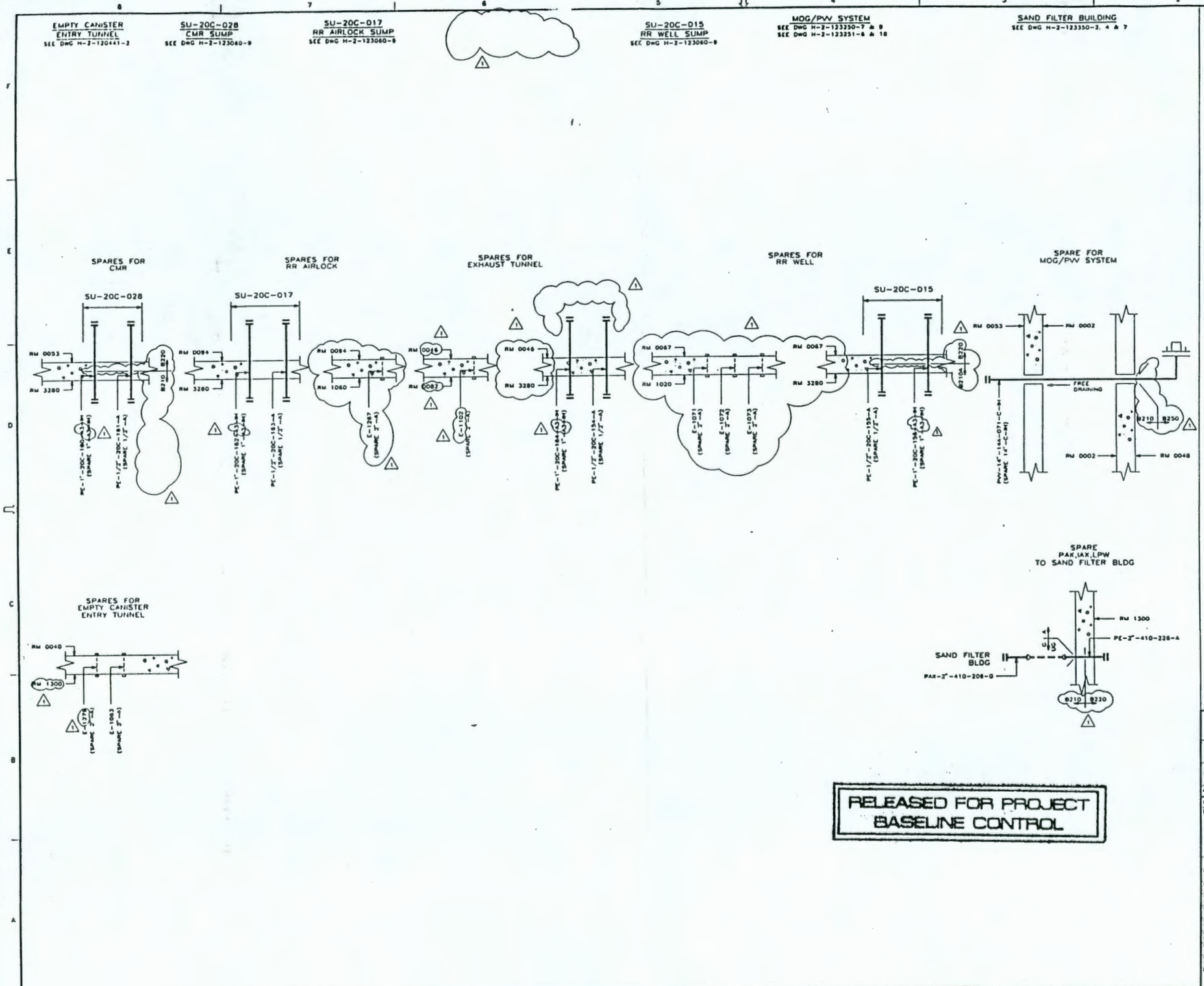
PROJECT	CLIENT CONTRACT NO.	DWG NO.
B-595	8457	6320

SCALE: NONE — SIZE: 1 — SHEET NO.: 1

SUBSTITUTION	BY	DRAWING NUMBER	SHEET	OF	REV
NONE	NOT REQ'D	H-2-123030	11	14	1

DISTRIBUTION CODE: ACAD — INITIALS: PB — DATE: 12 APR 93

9413092.0332



GENERAL NOTES:

A. FOR GENERAL NOTES REFER TO DRAWING H-2-123030-1.

APR 27 1993

QUALITY LEVEL II
SAFETY CLASS 3

REV NO.	DATE	REVISION DESCRIPTION				
1	8/24/93	ADDED CWBS PACKAGE BREAKS. REVISED ROOM NUMBERS AND DELETED EXHAUST TUNNEL SUMP. DELETED FOUR ELECTRICAL PENETRATIONS. REVISED STEAM LINE MATERIAL CLASS TO A3	ER / BGJ	AM / AKY	CW / JGH	JJP / RSP
0	12/10/92	RELEASED FOR PROJECT BASELINE CONTROL, PER CN-672.	ER / BGJ	AM / AKY	CW / JGH	JJP / RSP
00	9/30/92	RELEASED FOR FLUOR DANIEL CONFIGURATION CONTROL	ER / BGJ	AM	CW	VWG

SAMPLE: B123030M
CADCODE: 2B IBM ACD2:12 C1:SS

ENGINEERING RELEASE
REV ____ DATE ____
ERO ____

U.S.DEPARTMENT OF ENERGY
Richland Field Office
DE - 4C06-96RL10630

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

PROJ. ENG. R.S. POULTER	12/9/92
CO. ENGR. J. KELLY	12/9/92
MANAGEMENT SUPERV. A. YEE	12/9/92
MANAGER APPR. B. JOHNSON	12/8/92
DESIGN AGENT V. GRANGER	12/8/92
DESIGN DRAFTER C. WATTS	12/8/92
DRAWN A. McAFEE	12/7/92
DRAWN E. ROBLES	12/7/92

P & I D
SYSTEM 14, 20C & 41
EMBED SPARES

PROJECT TITLE: HANFORD WASTE VITRIFICATION PLANT

PROJECT	FLOOR DISPLACEMENT NO.	DWG NO.
B-595	8457	8320

SCALE: NONE
SCALE NO.: 1
SHEET NO.: 1

DRAWING NUMBER: H-2-123030 | SHEET 12 | OF 14 | REV 1

NONE | NOT REQ'D

DISTRIBUTION CODE: ACAD
INITIALS: ER
DATE: 12 APRIL 93

9413092.0333

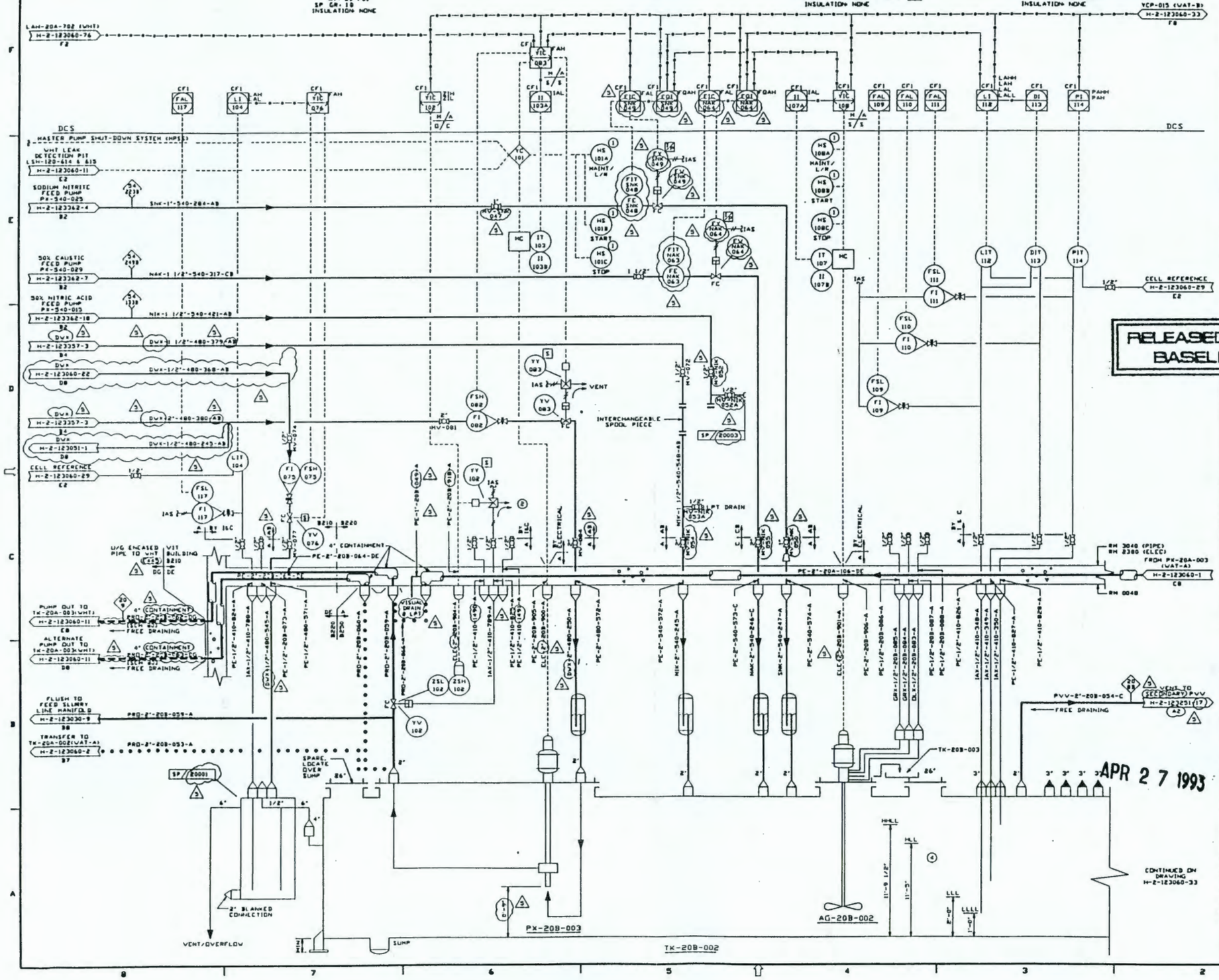
9413092.0334

PX-20B-003
VAT-B TRANSFER PUMP
DESIGN 100 GPM
ΔP= 89 PSI
SP GR= 1.0
INSULATION= NONE

AG-20B-002
WAT-B AGITATOR
20 HP

TK-20B-002
WASTE ADJUSTMENT TANK B (WAT-B)
12'-0" ID X (2'-0" T/T)
DESIGN= -10/15 PSIG @ 300°F
INSULATION= NONE

TK-20B-003
WAT-B OIL DRAIN CATCH TANK
1'-0" X 2'-0" X 4'-0" HIGH
DESIGN= ATM @ 300°F
INSULATION= NONE



RELEASED FOR PROJECT BASELINE CONTROL

GENERAL NOTES:

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

NOTES:

1. HANDSWITCH LOCATED AT MCC.
2. TO SOLENOID VALVE AIR VENT HEADER, SEE DRAWING H-2-123364-2
3. DELETED
4. LEVELS ARE SPECIFIED FROM BOTTOM CENTER OF TANK

QUALITY LEVEL II
SAFETY CLASS 3

REV	DATE	REVISION DESCRIPTION	DRAWN	CHK	APPR	APPROVAL DETAILS
5	4/26/93	CHANGED LPV LINES TO DVX PER CR-0623 AND CR-0624 REVISED INSTRUMENT AND VALVE NUMBERS PER CR-0702 CHANGED FLOW INSTRUMENTS TO INTEGRAL TYPE REVISED OR ADDED LINE NUMBER, LINE CLASS AND PACKAGE BREAKS REVISED LAYOUT FOR DVX LINES				
4	10/16/92	ADDED AGITATOR LUBE SYSTEM PER CR-0663 ADDED INSTRUMENT ROOT VALVES PER CR-0544 REVISED MINIMUM 1" PUREX TO 2" INCLUDING INCREASING THE JUMPER AND PENETRATION SIZE FROM 1" TO 2" PER CR-0676 REVISED LPV TAG NUMBERS PER CR-0702 ADDED CWSS PACKAGE BREAKS REVISED VENT/OVERFLOW POT. SHOWED SPARE 25" NOZZLE OVER SUMP ADDED TANK LEVELS REVISED OR ADDED LINE AND DWG NOS. REVISED WAT-B DESIGN PRESSURE REVISED TRANSFER PUMP ΔP. REVISED LEAK DETECTION PIPE	CR	SDS	AM	VVC
			BGJ	AKY	JGK	BSP
3	3/24/91	ADDED LOCAL HANDSWITCHES TO MOTORS PER CR-0480 CHANGED PIPING SPECS. AND ADDED FLUSH AND DRAIN VALVES. ADDED NOTE 2. ADDED SIZE TO VENT/OVERFLOW LINES AND CHANGED TRANSMITTERS TO INDICATING TYPE PER CR-0572	CR	KMC	RPD	HF
			CRP	HJH	DPC	RNG
2	3/29/91	ADDED LINE NOS. CHANGED SPEC ON LINE 246. SHOWED SPARE NOZZLES ADDED ENCASEMENT AND LEAK DETECTION TO EMBEDDED PIPE ADDED MOTOR HANDSWITCH RELEASED FOR PROJECT BASELINE CONTROL PER CR-0480	HF	VP	RGT	HF
			CRP	FGB	DPC	RNG
1	2/6/91	"RELEASED FOR PROJECT BASELINE CONTROL" WITHDRAWN PER CR-465	HF	VP	RGT	HF
			CRP	FGB	DPC	RNG
0	12/31/90	RELEASED FOR PROJECT BASELINE CONTROL PER CR NWVP-044	HF	VP	RGT	HF
			CRP	FGB	DPC	RNG
00	8/8/90	RELEASED FOR DETAILED DESIGN	HF	VP	RGT	HF
			BJR	FB	DMPC	RNG

APR 27 1993

ENGINEERING RELEASE
REV. _____ DATE _____
CRD

	SIGNATURE	DATE
PROJECT ENGINEER	R GIBBONS	8/16/90
SYSTEM ENGINEER	D CHAWLA	8/16/90
DESIGNER	F BROOKS	8/16/90
SYSTEM ENGINEER	B J RECKMAN	8/16/90
CONSTRUCTION	M FELDON	8/14/90
SYSTEM ENGINEER	R TAGNEY	8/14/90
CONSTRUCTION	M FELDON	8/14/90
SAFETY	V PIERCE	8/15/90
DESIGN	L HOLLSTEIN	08/13/90
ENGINEERING	NONE	

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

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

PIPING & INSTRUMENT DIAGRAM
SYSTEM 20B
WASTE ADJUSTMENT TANK
(WAT-B)

HANFORD WASTE VITRIFICATION PLANT

DWG NO	SCALE	SHEET
B-595	8457	3213
NONE		

SIZE	DWG NO	SHEET	REV
NONE	NOT REQ'D	H-2-123060	32 34 5

AA7F0165 / CD
21 APR 93