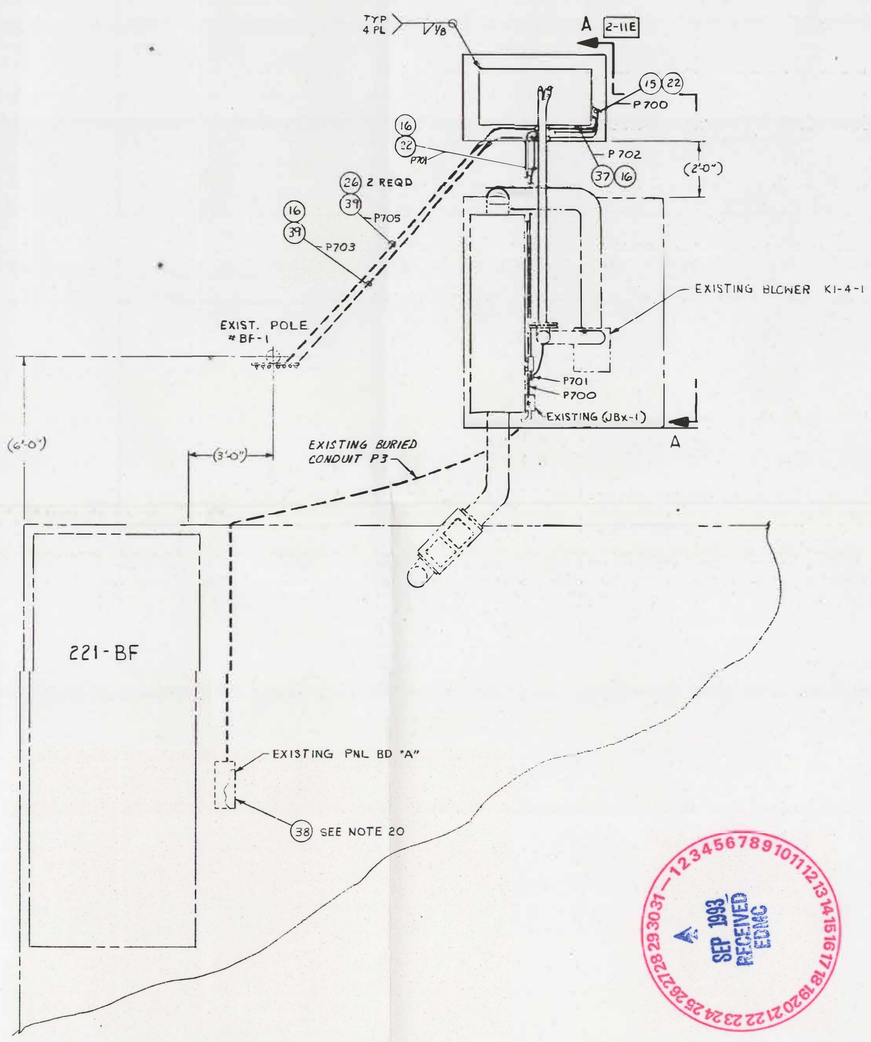

1 INSTALLATION

SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. ELECTRICAL INSTALLATION SHALL CONFORM TO THE 1981 EDITION OF THE NATIONAL ELECTRICAL CODE.
2. FIELD LOCATE CONDUIT AND EQUIPMENT APPROXIMATELY AS SHOWN.
3. GROUND CABINET, PART NO. 2, TO EXISTING GROUNDING SYSTEM USING WIRE, PART NO. 14 PER HPS E-12-1.
4. PART NO.'S 3, 4, AND 5 SHALL BE U.L. OR F.M. LISTED.
5. REPLACED MONITORING EQUIPMENT, HOT AIR IN-BLEED SYSTEM, ASSOCIATED CONDUIT, WIRING, ETC SHALL BE REMOVED FROM SITE.
6. ACCEPTANCE TEST PROCEDURE PER ATP-G-199-00010.
7. ALL PARTS SHALL BE PROCURED AS Q.A. LEVEL III EXCEPT PART NO. 2.
8. MOUNT PRESSURE SWITCH PART NO. 5 VERTICALLY. LOCATE APPROXIMATELY AS SHOWN. WIRE N.O. CONTACTS AS SHOWN ON INTERCONNECTION DIAGRAM.
9. CONDUCTORS SHALL BE IDENTIFIED WITH PLANT WIRE NO.'S, USING IMPRINTED TUBULAR WIRE MARKERS AT ALL TERMINATIONS.
10. IDENTIFY INSTALLATION PART NO. 1 PER HS-BS-0015, TYPE B, WITH DRAWING NO., PART NO. AND DRAWING REVISION NO. IN LOCATION INDICATED, USING .50 MIN HIGH BLACK CHARACTERS.
11. MARK CONDUIT NO.'S USING METAL TAGS WITH .25 MIN HIGH CHARACTERS.
12. PART NO.'S 3 THRU 6, 10, 21, 27 & 28 SHALL BE PROCURED AS SPECIFIED: NO SUBSTITUTION PERMITTED.
13. INSTALL HEAT TRACE, PART NO. 3, AND CONNECTOR KIT, PART NO. 4, PER VENDOR'S INSTRUCTIONS. SEE CVI 20758. CONNECT TO POWER CABLE EXTENDING THRU TOP OF CABINET. LOCATE THERMOSTAT BULB ON TUBING 180° FROM HEAT TRACE. INSULATE USING PART NO. 7.
14. DRILL .38 HOLE AND INSTALL AIR FLOW PROBE, PART NO. 6, WITH OPENING FACING INTO AIR FLOW. FIELD LOCATE APPROXIMATELY AS SHOWN. CONNECT FLOW LINE TO HIGH PRESSURE SIDE OF SWITCH.
15. SAMPLE TUBING PART NO.'S 8 & 9 SHALL BE INSTALLED WITH A MINIMUM NUMBER OF BENDS USING A BEND RADIUS OF 10 TIMES THE DIA. OF THE TUBING.
16. PERMANENTLY MARK STACK NO. "296-B-13" USING MIN. .50 HIGH BLACK CHARACTERS PER HS-BS-0015, TYPE B. LOCATE APPROXIMATELY AS SHOWN.
17. SEAL PENETRATIONS IN TOP OF CABINET USING PART NO. 17.
18. PAINT ALL EXPOSED CARBON STEEL SURFACES WITH AMERCOAT #86 PRIMER AND WITH TWO COATS AMERCOAT #33, FINAL COAT GRAY PER MANUFACTURERS INSTRUCTIONS.
19. PART NO.'S 31, 35, AND 36 SHALL BE INSTALLED BY THE UTILITIES DEPARTMENT.
20. INSTALL PT. NO. 38 IN BLDG 221-BF, EXISTING CIRCUIT PANELBOARD "A" SLOTS 13 AND 15.
21. EXTEND EXISTING 120 VAC INSTRUMENTATION POWER CIRCUIT TO PROVIDE NECESSARY RECEPTACLES.

△ THIS DRAWING IS MODIFIED BY H-2-77278 SH. 1

QTY	PT. NO.	REF. DES.	DESCRIPTION	MAT/REF
X	1		INSTALLATION	
1	2		GENERIC STACK BETA-RECORD CAB. ASSY	H-2-74854-1
AR	3		HEAT TRACE, 120 VAC, 10 W/FT	CHEMELEX #10PTV-1
1	4		CONNECTOR KIT FOR PT. NO. 3	CHEMELEX PVK
1	5		SWITCH, PRESSURE SENSING, IN NEMA 4 ENCL.	CLEVELAND CONTROLS INC. #AFS-951-1
1	6		PROBE, AIR FLOW	CLEVELAND CONTROLS INC. # 21121
AR	7		INSULATION, PIPE, 1½" THK, TYPE B, CLASS I	HPS 114 M
AR	8		TUBING, 3/4" O.D. x .065 WALL	300 SERIES SS
AR	9		TUBING, 1/4" O.D. x .035 WALL	300 SERIES SS
1	10		RECORDER, STRIP CHART, 10-INCH CPM (BETA-GAMMA)	PART OF H-2-92488-5
3	11		UNION, 1/4" TUBE TO TUBE	SWAGELOK SS-400-6
AR	12		TUBING, 1/4" O.D. x .030 WALL	COPPER
1	13		CONCRETE PAD	H-2-92517
AR	14		WIRE, BARE, #2 AWG, GROUNDING	COPPER
AR	15		WIRE, #10 AWG, THHN	COPPER
AR	16		WIRE, #14 AWG, THHN	COPPER
1	17		GASKET, 1½" O.D. x 3/8" I.D. x 1/8" THK, 40±5 DURO	COML NEOPRENE
1	18		PROBE ASSEMBLY	H-2-74856
AR	19		SEALING COMPOUND	G.E. RTV 7403 OR EQUAL
1	20		ELBOW, STREET, 90°, 1/4 NPT	COML BRASS
1	21		METER, PANEL, 6" EDGEWISE, 4-20MA, DC MOVEMENT, SCALE 0 TO 80 IN MINOR INCREMENTS OF 5. MAJOR DIVISIONS OF 10, 20, 30, 40, 50, 60, 70 & 80. TAG: CFM x 10	CROMPTON INSTRUMENTS PART #128-DAA-HGSX
AR	22		CONDUIT, 3/4" RIGID, W/MISC. FITTINGS	COML
1	23		COUNTER, EIGHT DIGIT, NON-RESETTABLE, 24 V DC	ROCHESTER INSTRUMENTS SYSTEMS 6008-503
~~AR~~	~~24~~		~~CONDUIT, 1/2" EMT, W/MISC. FITTINGS~~	~~COML~~
AR	25		WIRE, 18 AWG, 600 V INSULATION	COPPER
AR	26		CABLE, #16 AWG, 2 TWISTED SHIELDED PAIRS	ALPHA #56208/602 OR EQUIVALENT
1	27		LINEAR INTEGRATOR, 4-20 MA, DC INPUT. 24 VDC PULSE OUTPUT, ADJUSTABLE COUNT RATE 0-60 TO 0-60,000 COUNTS/HOUR. 115 VAC, 60 HZ INPUT	ROCHESTER INSTRUMENTS SYSTEMS PART # SC-1356-C
1	28		SQUARE ROOT EXTRACTOR, 4-20 MA DC INPUT. 4-20 MA, DC OUTPUT, 115 VAC, 60 HZ INPUT POWER WITH 24 VDC CURRENT LIMITED POWER SUPPLY FOR AUXILIARY 2-WIRE TRANSMITTER	ROCHESTER INSTRUMENTS SYSTEMS PART # SC-1330-C
AR	29		CHANNEL	UNISTRUT #P1000
6	30		ENCLOSURE, 6" x 6" x 4", TYPE NEMA 3R	COML
2	31		CONNECTOR, 1", SERVICE ENTRANCE, LIQUID TIGHT,	COML
4	32		BOLT, HEX HEAD, 1/4" UNC-2A x 3/4" LG	COML CS
4	33		NUT, HEX, 1/4 UNC-2B	COML CS
4	34		WASHER, SPLIT, 1/4"	COML CS
AR	35		CABLE, MESSENGER, #6 (SEE NOTE 19)	COML STEEL
2	36		SERVICE ENTRANCE CAP, 1" THREADED	COML
AR	37		CONDUIT, 1" RIGID, W/MISC. FITTINGS	COML
1	38		CIRCUIT BREAKER, 2-POLE, 30 AMP, 240 VAC	SQUARE "D" QO 230
AR	39		CONDUIT, 1", PVC COATED W/MISC. FITTINGS	COML
AR	40		CABLE, 3 C #14 AWG, 600 V.	COPPER
2	41		UNION REDUCING 3/4" TUBE TO 1/2" TUBE	SWAGELOK SS-1210-6-8
~~1~~	~~42~~		~~ANNUNCIATOR, SURFACE MOUNT CABINET ENCLOSURE, 8 EA. X3SM-1000, GEN PURPOSE 115 VAC MODULES WITH FLASHER MODEL X3-5021-115 VAC~~	~~ROMAN 2.4X3SM 1000, NEMA 12~~
1	43		GASKET, 10" DIA. x 1/8" THK	COML NEOPRENE
2	44		REDUCING UNION, FRACT TUBE TO FRACT TUBE, ½ TO ¼	SWAGELOK SS-810-6-4

H-2-92488	GENERIC STK SAMPLER/MON
H-2-92517	STACK MONITOR CONCRETE PAD
HS-BS-0013	SPECIFICATION
H-2-74856	296-B-13 STK. MON. PROBE ASSY
H-2-90951	ELEC./INSTM CAM WIRE RUN LIST
H-2-37876	INSTR. PNL. ARR. WIRING & DET.
H-2-37880	INSTR BLDG. EXH. STACK RAD MON
H-2-37866	ELECT. SITE PLANS & MISC. DET.
H-2-37868	ELECTRICAL DIAGRAMS
H-2-37867	ELECT PLANS/DET ("B" PLANT)
CVI-20758	
HS-BS-0015	IDENTIFICATION
HPS-E-12-1	GROUNDING
ATP G199-00010	ACCEPTANCE TEST
H-2-74854	GENERIC STACK MON. CAB.
H-2-37858	DRAWING INDEX

REFERENCE DRAWINGS

NEXT USED ON H-2-37858

REV. NO.	DESCRIPTION	CHECK PRT. ISSUE NO. 1	DATE
2	REVISION PER ECN 01562		10/18/83
1	ED. 14167, CHANGE Q.A. TO IMPACT INCORP. ED. 9859 AND		11/7/83

REVISION APPROVALS — QUALITY ASSURANCE — RESPONSIBLE ENGINEER — CHIEF ENGINEER

REVISIONS

COMMENT PRT. ISSUE NO. 1 10/18/83 — CHECK PRT. ISSUE NO. 1 11/7/83

DT-E 485

CAUTION
NOT COMPLETE WITHOUT
CURRENT STATUS OF OUTSTANDING
ECNS FROM DATA BASE

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REVIEW NUMBER 2-2-2-2
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REVISION NO. 0
CHAIRMAN DATE 11/30/83

IMPACT LEVEL I

DRAWING APPROVALS — DATE

R. L. STANTON

U. S. Department of Energy
Richland Operations Office
Rockwell International
Richland, Washington 99352

296-B-13
STACK MONITOR
INSTALLATION

SCALE 1/2 & NOTED — CLASS NO. 221-BF — PAGE NO. 5901

NONE — NOT REQD — H-2-74855 — SHEET NO. 1 — REV. 6

0031027

START

0031027

			80. TAG: CFM x 10	
AR	22		CONDUIT, 3/4" RIGID, W/MISC. FITTINGS	COML
1	23		COUNTER, EIGHT DIGIT, NON-RESETTABLE, 24 V DC	ROCHESTER INSTRUMENTS SYSTEMS 6008-503
~~AR~~	~~24~~		~~CONDUIT, 1/2" EMT, W/MISC. FITTINGS~~	~~COML~~
AR	25		WIRE, 18 AWG, 600 V INSULATION	COPPER
AR	26		CABLE, #16 AWG, 2 TWISTED SHIELDED PAIRS	ALPHA #562081602 OR EQUIVALENT
1	27		LINEAR INTEGRATOR, 4-20 MA, DC INPUT. 24 VDC PULSE OUTPUT, ADJUSTABLE COUNT RATE 0-60 TO 0-60,000 COUNTS/HOUR. 115 VAC, 60 HZ INPUT	ROCHESTER INSTRUMENTS SYSTEMS PART # SC-1356-C
1	28		SQUARE ROOT EXTRACTOR, 4-20 MA, DC INPUT. 4-20 MA, DC OUTPUT, 115 VAC, 60 HZ INPUT POWER WITH 24 V DC CURRENT LIMITED POWER SUPPLY FOR AUXILIARY 2-WIRE TRANSMITTER	ROCHESTER INSTRUMENTS SYSTEMS PART # SC-1330-C
AR	29		CHANNEL	UNISTRUT #P1000
6	30		ENCLOSURE, 6"x6"x4", TYPE NEMA 3R	COML
2	31		CONNECTOR, 1", SERVICE ENTRANCE, LIQUID TIGHT,	COML
4	32		BOLT, HEX HEAD, 1/4" UNC-2A x 3/4" LG	COML CS
4	33		NUT, HEX, 1/4 UNC-2B	COML CS
4	34		WASHER, SPLIT, 1/4"	COML CS
AR	35		CABLE, MESSENGER, #6 (SEE NOTE 19)	COML STEEL
2	36		SERVICE ENTRANCE CAP, 1" THREADED	COML
AR	37		CONDUIT, 1" RIGID, W/MISC. FITTINGS	COML
1	38		CIRCUIT BREAKER, 2-POLE, 30 A., 240 VAC	SQUARE "D" QO 230
AR	39		CONDUIT, 1", PVC COATED W/MISC. FITTINGS	COML
AR	40		CABLE, 3/C #14 AWG, 600 V.	COPPER
2	41		UNION REDUCING 3/4" TUBE TO 1/2" TUBE	SWAGELOK SS-1210-6-8
~~1~~	~~42~~		~~ANNUNCIATOR, SURFACE MOUNT CABINET ENCLOSURE, 8 EA. X3SM-1000, GEN PURPOSE, 115 VAC MODULES WITH FLASHER MODEL X3-5021-115 VAC~~	~~RONAN 2.4X3SM-1000, NEMA 12, MODULE ARM~~
1	43		GASKET, 11" DIA. x 1/8" THK	COML NEOPRENE
2	44		REDUCING UNION, FRACT TUBE TO FRACT TUBE, 1/2 TO 1/4	SWAGELOK SS-810-6-4

CAUTION
COMPLETE WITHOUT
STATUS OF OUTSTANDING
FROM DATA BASE

MAR 31 1993

REVIEW NUMBER 23

1	2	3	4

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CHAIRMAN [signature] DATE 11/30/83

IMPACT LEVEL I

7-12-90	MIC	REVISION PER ECN 01562	2	
1/1/86		ED. 14167, CHANGE Q.A. TO FRACT INCORP. ED. 9859 AND	1	
		DESCRIPTION		

REVISIONS
10/18/83 CONCURRENT ISSUE NO. 1 11/7/83

DRAWING STATUS: Y.-E485

DRAWING APPROVALS	DATE
[signature]	11/30/83
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RD Kirk	11/30/83
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PA Byrne	11/30/83
[signature]	11/30/83
[signature]	11/30/83

U. S. Department of Energy
Richland Operations Office
Rockwell Hanford Operations
Richland, Washington 99352

296-B-13
STACK MONITOR
INSTALLATION

SCALE 1/2 & NOTED | CLASS NO. 221-BF | PAGE NO. 5901

2 NONE | NOT REQD | H-2-74855 | 1 | 6

4 3 2 1