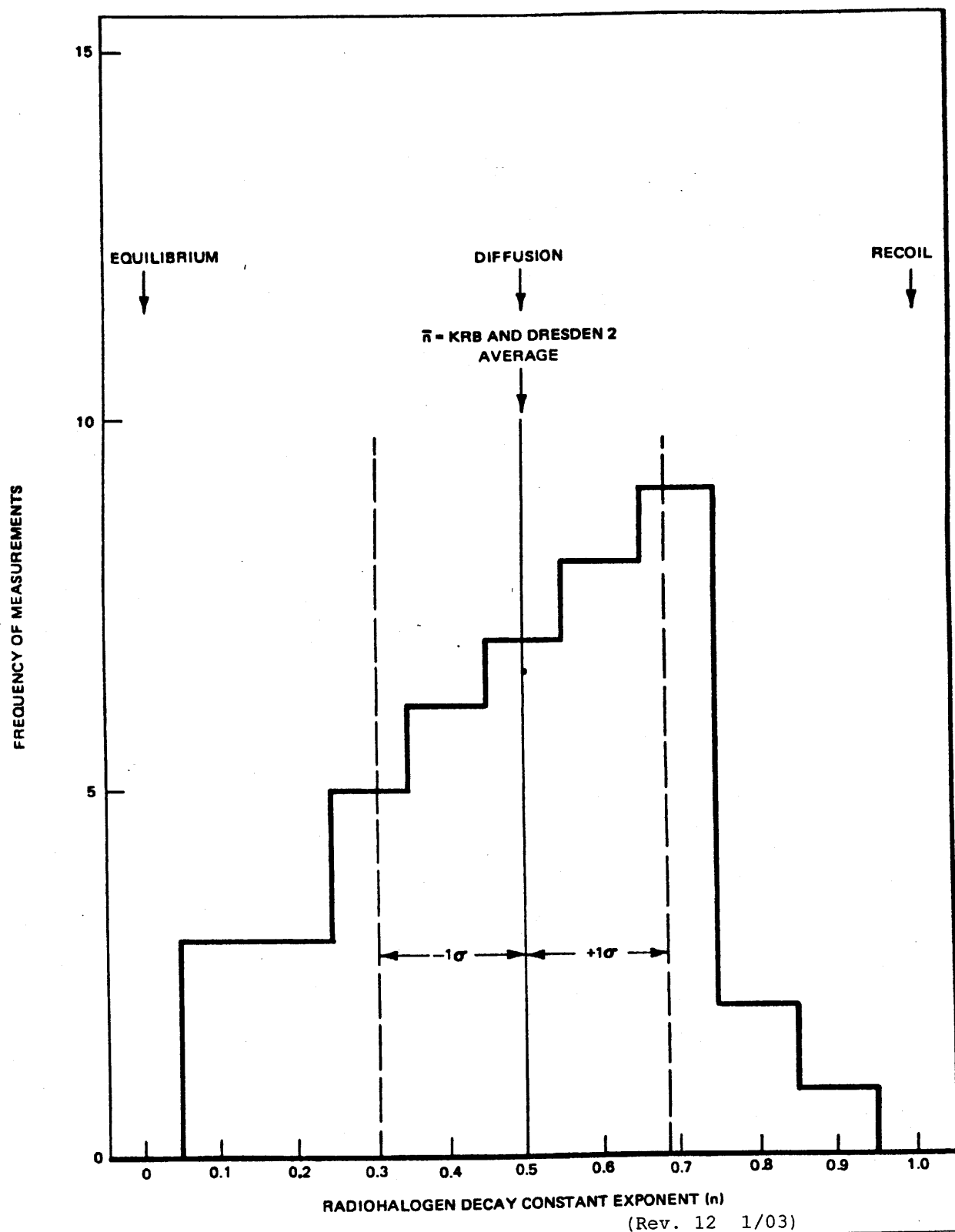


PERRY NUCLEAR POWER PLANT

Noble Radiogas Decay Constant
Exponent Frequency Histogram

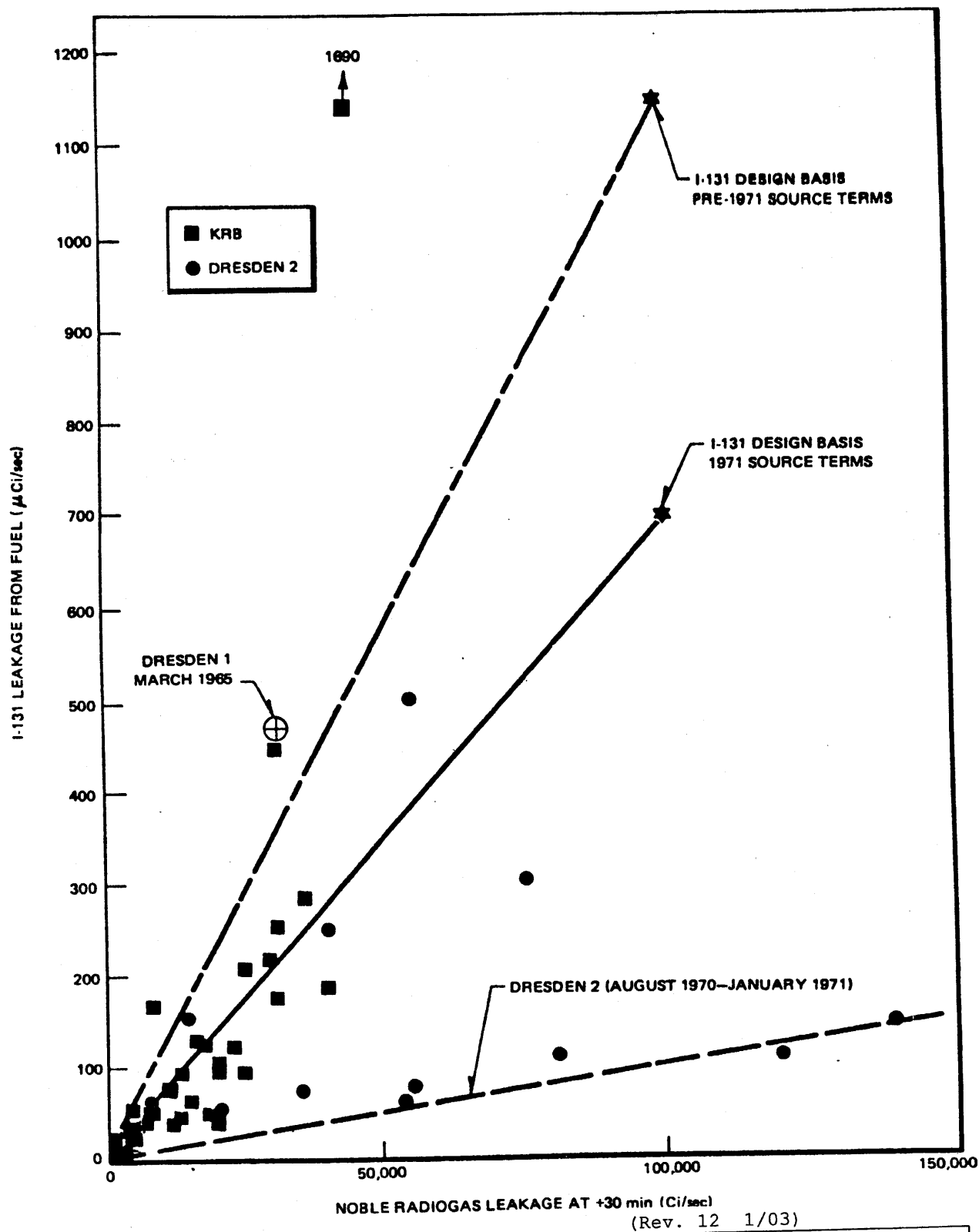
Figure 11.1-1



PERRY NUCLEAR POWER PLANT

Radiohalogen Decay Constant
Exponent Frequency Histogram

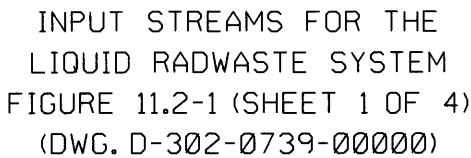
Figure 11.1-2

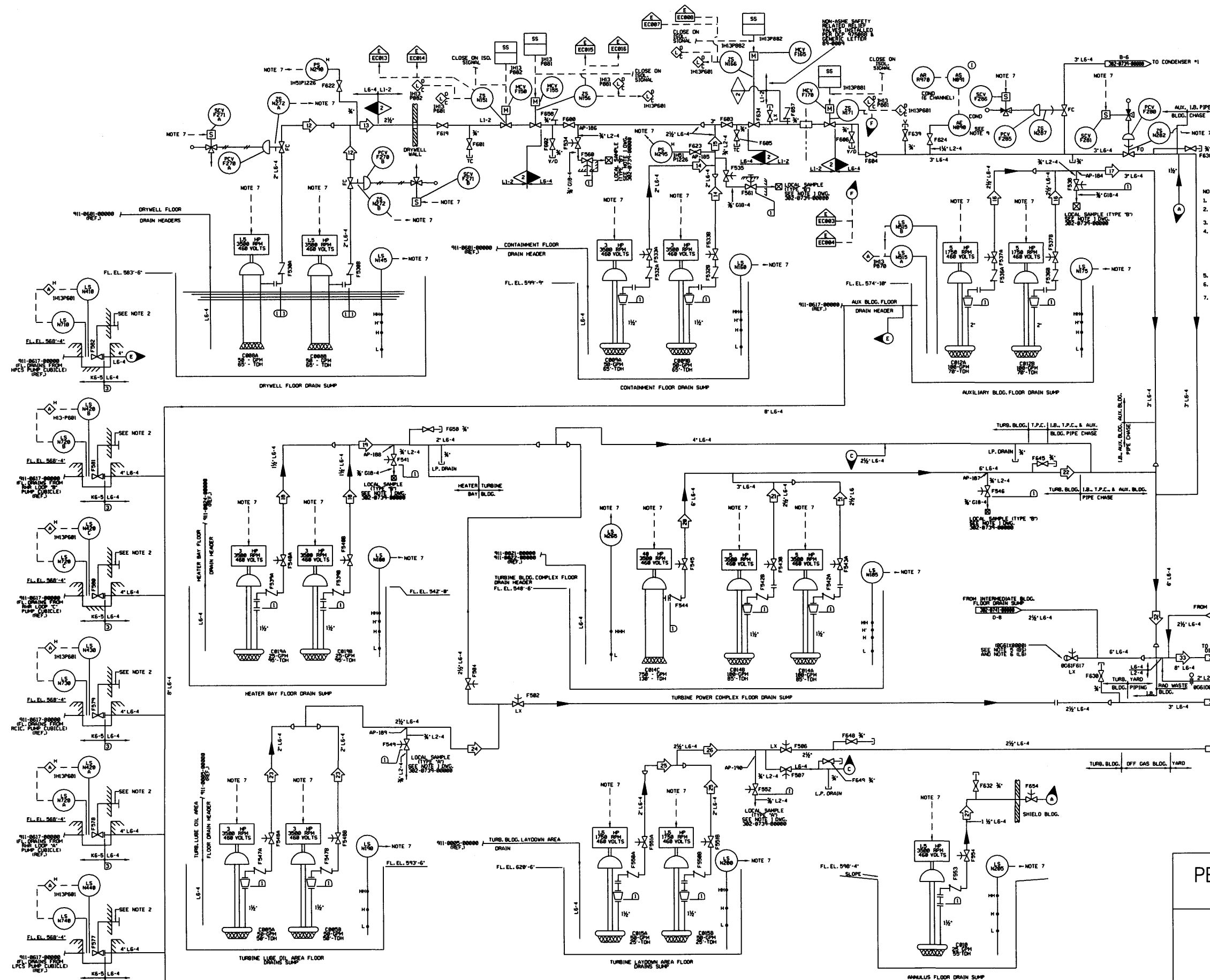


PERRY NUCLEAR POWER PLANT

Noble Radiogas Leakage
vs.
I-131 Leakage

Figure 11.1-3





OPERATING DATA						
SEE NOTE 4						
	PSIG	GPM	F	BY	REMARKS	REV
12	28	50	100	CWE		
13	28	50-100	100	CWE		
14	28	50	100	CWE		
15	28	50-100	100	CWE		
16	30	100	70	CWE		
17	30	100-200	70	CWE		
18	40	25	70	CWE		
19	40	25-50	70	CWE		
20	55	750	70	CWE		
21	37	100	70	CWE		
22	37-55	100-750	70	CWE		
23	22	50	70	CWE		
24	22	50-100	70	CWE		
25	10	50	70	CWE		
26	10	50-100	70	CWE		
27	24	25	70	CWE		
32	5	25-1000	100 TO 70	CWE		
33	5	25-1000	100 TO 70	CWE		

- NOTES:
1. FOR OTHER NOTES & REFERENCES, SEE DWG. 302-8738-00000
 2. VALVE STEM PENETRATIONS THROUGH WALL SHALL BE LEAK TIGHT.
 3. DELETED
 4. PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM ORIGINALLY USED IN CONNECTION WITH THE DESIGN OF THE SYSTEM. THE OPERATING DATA TABLE IS A SUMMARY OF THE DESIGN DATA AND IS NOT A SUBSTITUTE FOR THE DESIGN DATA. THE DESIGN DATA IS THE BASIS FOR THE DESIGN OF THE SYSTEM AND IS THE RESPONSIBILITY OF THE DESIGNER. THE OPERATING DATA TABLE IS THE RESPONSIBILITY OF THE OPERATOR.
 5. BS UNIT 1/2 BOUNDARY SEPARATION FOR DETAILS SEE TAF 81053.
 6. LUBRICANT REPLENISHMENT LEAKAGE BOUNDARY FOR ABANDONED, RETIRED-IN-PLACE SSCs FOR DETAILS SEE ECP 14-0374.
 7. DRAIN/OUTLET TO/ FROM THE LIQUID RADWASTE DISTRIBUTION SYSTEM.

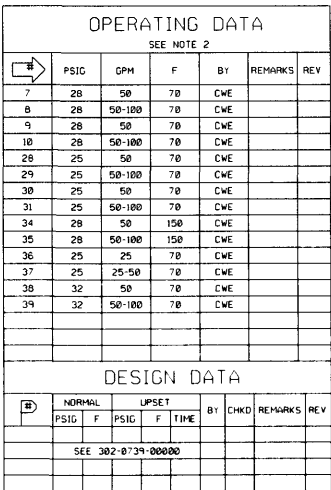
- REFERENCES:
- 302-8371-00000 PLANT INDUSTRIAL WASTE P&ID
 - 302-8735-00000 LIQUID RADWASTE SUMP SYSTEM - EQUIPMENT DRAIN SUMP AND OIL SEPARATORS C&I
 - 302-8741-00000 LIQUID RADWASTE SUMP SYSTEM - LAUNDRY, CHEMICAL, AND COMMON FLOOR AND EQUIPMENT DRAIN SUMP C&I
 - 911-0617-00000 AUXILIARY BUILDING DRAIN SUMP
 - 911-0601-00000 REACTOR BUILDING DRAIN SUMP
 - 911-0605-00000 LUBE OIL AREA, TURBINE LAYDOWN AND WATER TREATMENT BUILDING DRAIN SUMP
 - 911-0624-00000 HEATER BAY BUILDING DRAIN SUMP
 - 911-0621-00000 TURBINE POWER COMPLEX, TURBINE BUILDING HEATER BAY AND OFF-GAS DRAIN SUMP
 - 911-0622-00000 TURBINE POWER COMPLEX, TURBINE BUILDING, AND OFF-GAS DRAIN SUMP

DESIGN DATA						
ID	NORMAL	UPSET	BY	CHKD	REMARKS	REV
	PSIG	F	PSIG	F	T	
	SEE 302-8738-00000					

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PERRY NUCLEAR POWER PLANT
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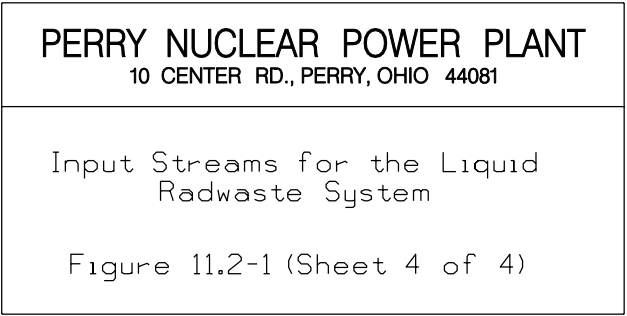
INPUT STREAMS FOR THE
LIQUID RADWASTE SYSTEM
FIGURE 11.2-1 (SHEET 2 OF 4)
(DWG. D-302-0740-00000)

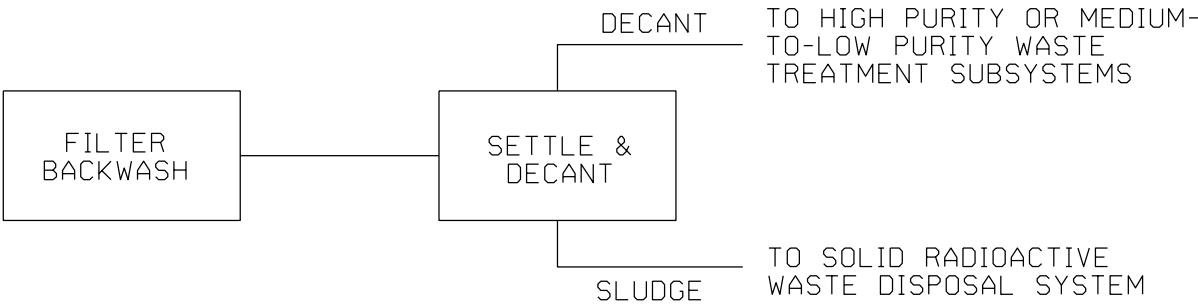
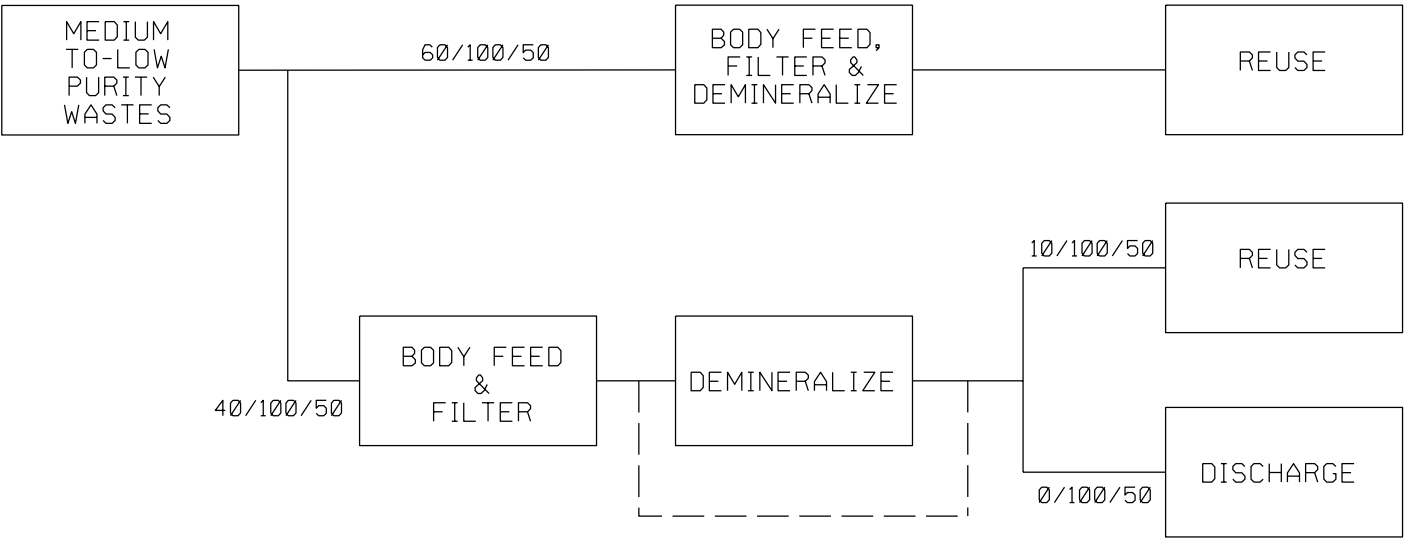
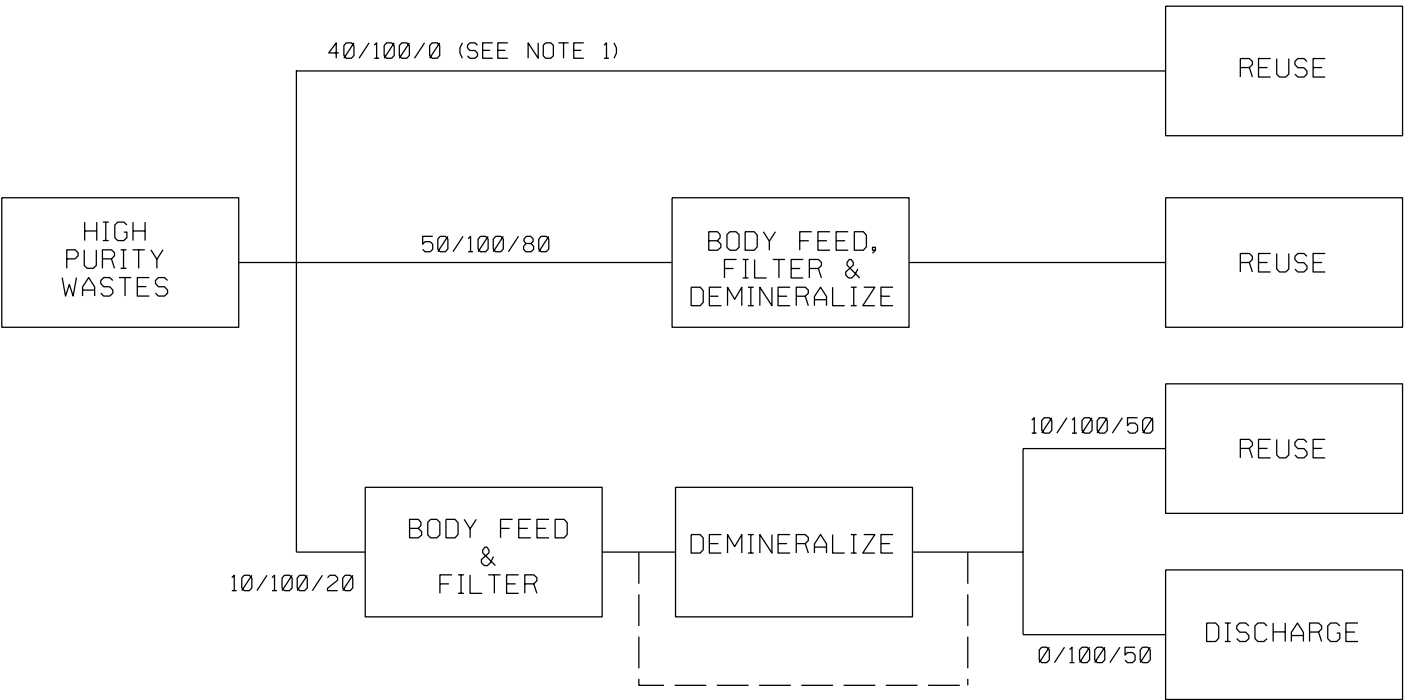


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PERRY NUCLEAR POWER PLANT
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INPUT STREAMS FOR THE
LIQUID RADWASTE SYSTEM
FIGURE 11.2-1 (SHEET 3 OF 4)
(DWG. D-302-0741-00000)





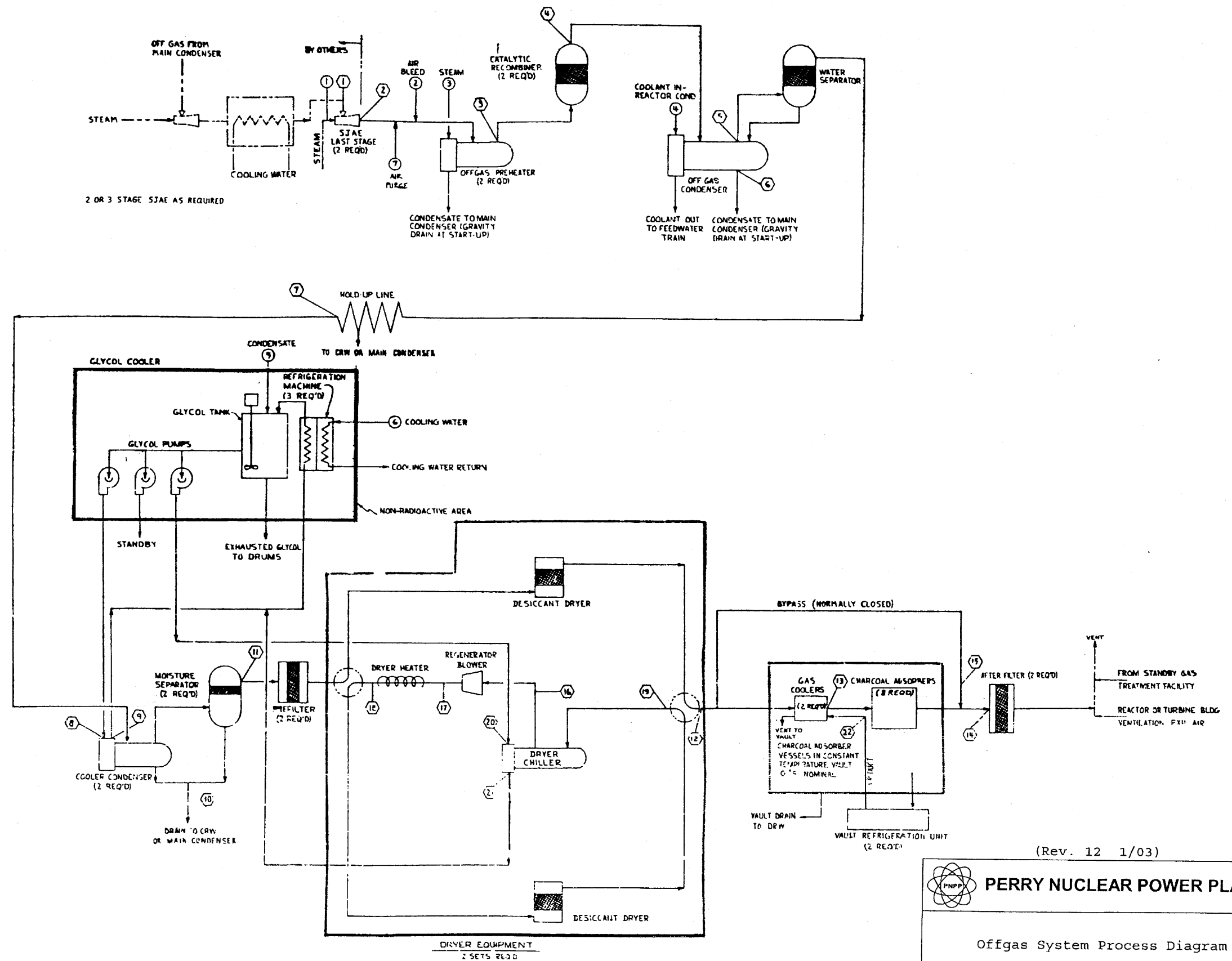
- NOTES:
1. THE THREE PERCENTAGES GIVEN FOR EACH FLOW PATH REPRESENT, IN ORDER, a) THE PERCENTAGE OF THE TOTAL FLOW NORMALLY EXPECTED TO USE THAT FLOW PATH, b) THE PERCENTAGE OF THE TOTAL FLOW USED TO DESIGN AND SIZE EQUIPMENT AND PIPING FOR THAT FLOW PATH, AND c) THE PERCENTAGE OF THE TOTAL FLOW USED TO CALCULATE THE QUANTITY OF RADIOACTIVE ISOTOPES DISCHARGED BY WAY OF THAT FLOW PATH.

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PERRY NUCLEAR POWER PLANT
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Process Flow Paths for the
Liquid Radwaste System

Figure 11.2-2



STREAM NUMBER		①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
STREAM DESCRIPTION		DISCH. FROM INTERMEDIATE STAGE OF SJAE	STEAM DILUTED OFF GAS	PREHEATER DISCHARGE	RECOMBINER DISCHARGE	CONDENSER DISCHARGE	CONDENSER CONDENSATE	HOLD-UP PIPE DISCHARGE (NOTE 8)	GLYCOL SOLUTION INLET	GLYCOL SOLUTION DISCHARGE	COOLER CONDENSATE	MOISTURE SEPARATOR DISCHARGE	DRYER DISCHARGE	CHARCOAL BED FEED	CHARCOAL BED DISCHARGE	BYPASS (NOTE 2)	VAULT REFRIGERATION AIR
NORMAL OPERATION	FLOW RATE, POUNDS PER HOUR	AIR	138	138	138	138	143	---	143	---	---	---	143	143	143	143	18300
		HYDROGEN (RADIOLYTIC ONLY)	45.2	45.2	45.2	0.002	0.002	---	0.002	---	---	---	0.002	0.002	0.002	0.002	---
		OXYGEN (RADIOLYTIC ONLY) (NOTE 13)	361.0	361.0	361.0	0.016	0.016	---	0.016	---	---	---	0.016	0.016	0.016	0.016	---
		WATER (FOR GLYCOL SOLUTION)	~124.0	9,624.0	9,624.0	10,030.2	32.7	7995.5	32.7	33,250	33,250	31.9	0.68	0.003	0.003	0.003	---
		TOTAL	569.2	10,169.2	10,169.2	10,169.2	175.7	7995.5	175.7	33,250	33,250	31.9	143.8	143.8	143.8	143.8	18300
	FLOW RATE, GALLONS/MINUTE		---	---	---	---	20.0	---	65	65	0.064	---	---	---	---	---	40000CFM (TOTAL FOR 1 OPER.)
	RADIOACTIVITY, MC/SEC	RARE GASES, KRYPTON & XENON	~1.27X10 ⁶	~1.27X10 ⁶	~1.27X10 ⁶	~1.27X10 ⁶	~1.27X10 ⁶	NEGL.	1.9X10 ⁶	---	---	---	1.9X10 ⁶	1.9X10 ⁶	1.9X10 ⁶	50	(NOTE 2)
		NITROGEN-13	3.6X10 ³	3.6X10 ³	3.6X10 ³	3.6X10 ³	3.6X10 ³	NEGL.	1.8X10 ³	---	---	---	1.8X10 ³	1.8X10 ³	1.8X10 ³	NEGL.	(NOTE 2)
	TEMPERATURE, DEGREES F		---	~228	350	~830	154	~154	~154	35	36	~45	45	80	~3	90	~7
	PRESSURE, PSIA (NOTE 7)		---	18.8	16.4	15.9	15.6	15.5	65	55	---	15.5	15.4	15.4 (NOTE 8)	14.8	14.8	---
STARTUP OPERATION	FLOW RATE, POUNDS PER HOUR	AIR	1,150	1,150	1,150	1,150	---	1,150	---	---	---	---	1,150	1,150	1,150	1,150	~36600
		HYDROGEN (RADIOLYTIC)	2.3	2.3	2.3	0.02	0.02	---	0.02	---	---	---	0.02	0.02	0.02	0.02	---
		OXYGEN	18.1	18.1	18.1	0.16	0.16	---	0.16	---	---	---	0.16	0.16	0.16	0.16	---
		WATER	~133	9,633	9,633	9,633.2	90.9	9,562.3	90.9	33,250	33,250	85.3	5.6	0.021	0.021	0.021	---
		TOTAL	1,303.4	10,803.4	10,803.4	10,803.4	1,241.1	9,562.3	1,241.1	33,250	33,250	85.3	1155.8	1,150.2	1,150.2	1,150.2	~36600
	TEMPERATURE, DEGREES F		---	~228	350	374	130	~130	~130	35	40	45	45	90	3	90	~7
	PRESSURE, PSIA (NOTE 7)		---	20.8	20.6	20.1	19.7	19.7	19.2	65	55	---	18.9	18.3 (NOTE 8)	18.0	18.0	---

STREAM NUMBER		⑮	⑰	⑱	⑲	⑳	㉑
STREAM DESCRIPTION		DRYER CHILLER DISCHARGE	REGENERATION BLOWER DISCHARGE	DRYER HEATER DISCHARGE	DRYER DISCHARGE	GLYCOL INLET	GLYCOL DISCHARGE
REGEN-ERATION OPERATION	FLOW RATE, POUNDS PER HOUR	AIR	962/1220 *	962/1220 *	962/1220 *	962/1220 *	---
		HYDROGEN (RADIOLYTIC ONLY)	0.05	0.05	0.05	0.05	---
		OXYGEN (RADIOLYTIC ONLY)	0.41	0.41	0.41	0.41	---
		WATER (FOR GLYCOL SOLUTION)	~3.2	~3.2	~3.2	<60 (NOTE 8)	33,250
		TOTAL	966/1225 *	966/1225 *	966/1225 *	33,250	33,250
	FLOW RATE, GALLONS/MINUTE		---	---	---	65	65
	TEMPERATURE, DEGREES F		45	75	495	70-125/125-90	35
PRESSURE, PSIA (NOTE 7)		15.5/18.9 *	17.2/18.6 *	17.1/20.5 *	16.2/19.8 *	---	---

* HEATING/COOLING MODE

UTILITY STREAM NUMBER		①	②	③	④	⑤	⑥	⑦
STREAM DESCRIPTION		DILUTION STEAM (NOTE 4)	AIR BLEED (NOTE 1)	PREHEATER STEAM (NOTE 4)	REACTOR CONDENSATE	DILUTION CONDENSATE (NOTE 10)	COOLING WATER	AIR PURGE (NOTE 1)
NORMAL OPERATION	FLOW RATE, POUNDS PER HOUR	AIR	---	28	---	---	---	5
		HYDROGEN (RADIOLYTIC ONLY)	---	---	---	---	---	---
		OXYGEN (RADIOLYTIC ONLY)	---	---	---	---	---	---
		WATER (FOR GLYCOL SOLUTION)	9,500	---	832	1.09X10 ⁷	---	40,000
		TOTAL	9,500	28	832	1.09X10 ⁷	---	5
	FLOW RATE, GALLONS/MINUTE		---	---	---	2.19X10 ⁴	---	---
	RADIOACTIVITY, MC/SEC	RARE GASES, KRYPTON & XENON	---	---	---	---	---	---
		NITROGEN-13	---	---	---	---	---	---
	TEMPERATURE, DEGREES F		338	70	406	134MAX	---	70
	PRESSURE, PSIA (NOTE 7)		114.7	50 (NOTE 12)	265	140 (NOTE 3)	---	80 (NOTE 12)
STARTUP OPERATION	FLOW RATE, POUNDS PER HOUR	AIR	---	278	---	---	---	5
		HYDROGEN (RADIOLYTIC)	---	---	---	---	---	---
		OXYGEN (RADIOLYTIC)	---	---	---	---	---	---
		WATER	9,500	---	836	3.64X10 ⁶	25,000	---
		TOTAL	9,500	278	836	3.64X10 ⁶	25,000	5
	TEMPERATURE, DEGREES F		338	70	406	110MAX	~ 85	70
	PRESSURE, PSIA (NOTE 7)		114.7	25	265	140	~ 85	25

NOTES:

- COMPRESSED AIR USED FOR PRE-STARTUP AND SYSTEM PURGING ONLY. SUPPLY AIR TO BE OIL FREE, DERIVED FROM A NON-OIL LUBRICATED COMPRESSOR.
- USE BYPASS ONLY FOR INITIAL PLANT STARTUP AND DURING PERIOD OF LOW FUEL LEAKAGE.
- FOR W-CYCLE FORWARD PUMPED PLANT, CONDENSATE SHUTOFF PRESSURE ~176 PSIG; DESIGN PRESSURE 250 PSIG.
- NUCLEAR STEAM USED FOR NORMAL OPERATION AND STARTUP. SIZE PREHEATER AND CONDENSER FOR 10% STEAM FLOW.
- DELETED
- CHARCOAL ADSORBER BED SYSTEM DIFFERENTIAL PRESSURE AT NORMAL AND STARTUP BASED ON 2 PARALLEL ADSORBER TRAINS EACH WITH 4 ADSORBERS, AND EACH ADSORBER 4.0' DIAMETER X 19' PACKED BED WITH 8 - 14 MESH CHARCOAL.
- EJECTOR TO BE PROVIDED TO PERFORM AGAINST 6.7 PSIG. BACK PRESSURE AT CITED STARTUP AIR RATE TO ASSURE PROCESS FLEXIBILITY. SUB-SYSTEM DIFFERENTIAL PRESSURE TO BE MAINTAINED AS SHOWN IN DATA SHEETS.
- HOLDUP PIPE TO BE DESIGNED FOR TURBULENT FLOW WITH 10 MINUTE DELAY OF BULK GAS AT DESIGN BASIS NORMAL FLOW RATE.
- SUPPORTING DOCUMENT NO. 1 SHALL BE USED WITH 8 FORM A PART OF THIS PROCESS DATA. IF THERE ARE ANY CONFLICTS BETWEEN THE PROCESS DIAGRAM AND THIS PROCESS DATA, THE PROCESS DATA SHALL GOVERN.
- A TOTAL OF 2,100 GALLONS REQUIRED FOR MAKING NEW SOLUTION. NEW SOLUTION REQUIRED LESS THAN ONCE EVERY 5 YEARS. AT THAT TIME THE REQUIRED DELIVERY CAPACITY FOR REFILLING THE GLYCOL TANK IS THE CITED STARTUP FLOW RATE.
- WATER TO BE REMOVED IS ABOUT 60 POUNDS AND THE REACTIVATION TIME IS ABOUT 12 HOURS.
- MINIMUM SUPPLY PRESSURE ON UPSTREAM SIDE OF RESTRICTING ORIFICE TO ENSURE SONIC FLOW.
- LISTED RADIOLYTIC OXYGEN VALUES ARE BASED ON NORMAL WATER CHEMISTRY. DURING OPERATION OF HYDROGEN WATER CHEMISTRY (HWC) RADIOLYTIC OXYGEN LEVELS ARE SIGNIFICANTLY REDUCED.

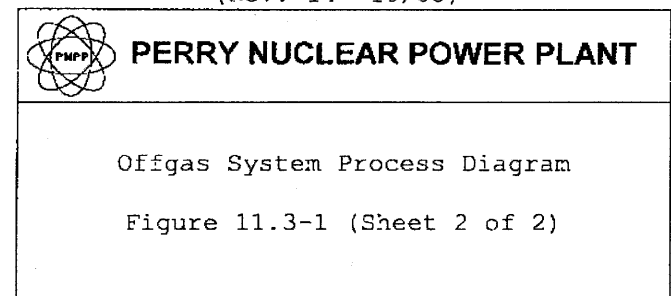
SUPPORTING DOCUMENTS:

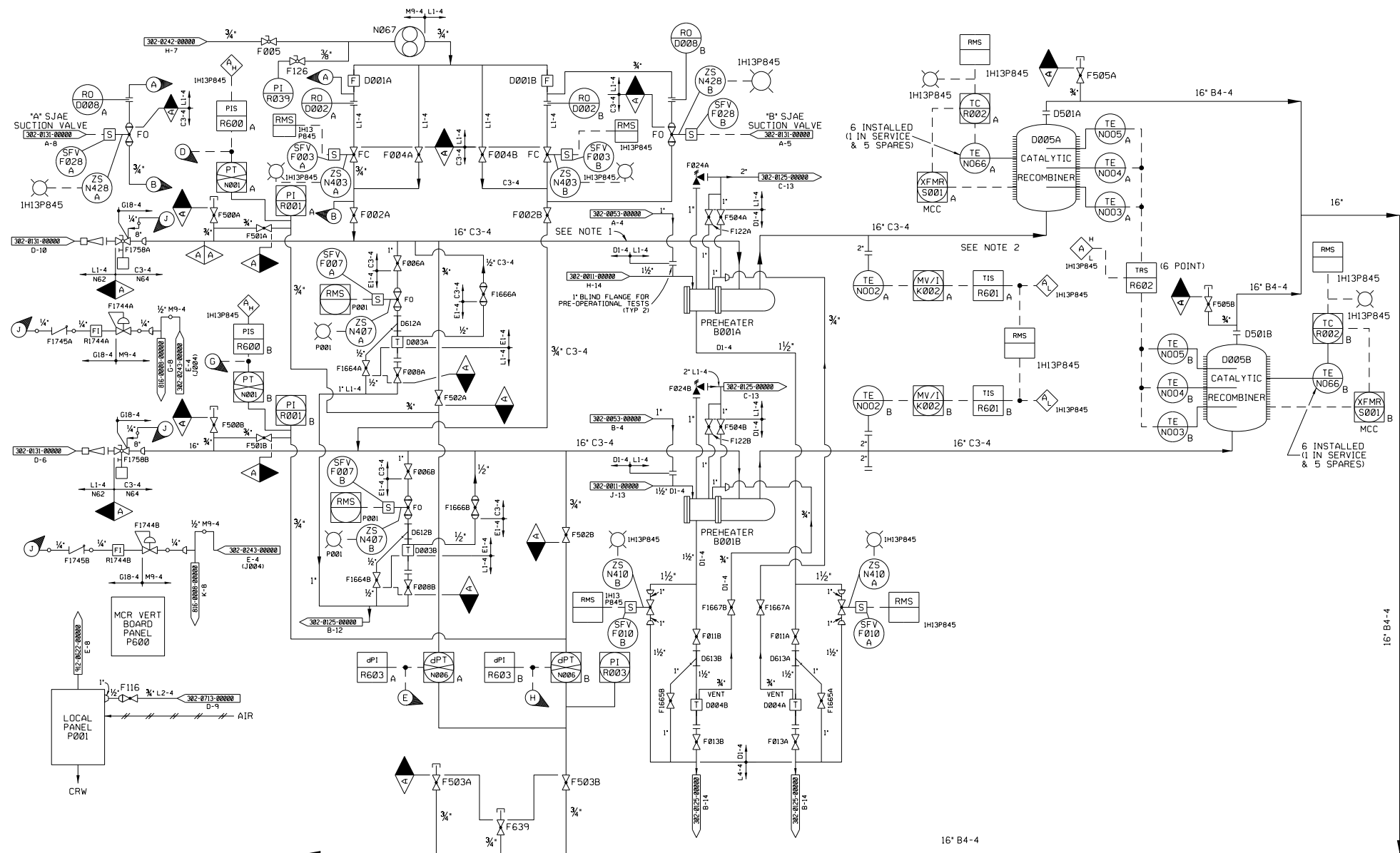
- OFF GAS SYSTEM LOW TEMP. PROCESS DIAGRAM - - - - - 761898

DESIGN BASIS:


100,000 MC/SEC (57) GAS MIXTURE AFTER 30 MINUTES
 0°F. CHARCOAL TEMPERATURE.
 30 STD CU FT (60°F., 1 ATM/MM) AIR FLOW AT NORMAL OPERATION.

(Rev. 14 10/05)





NOTES:

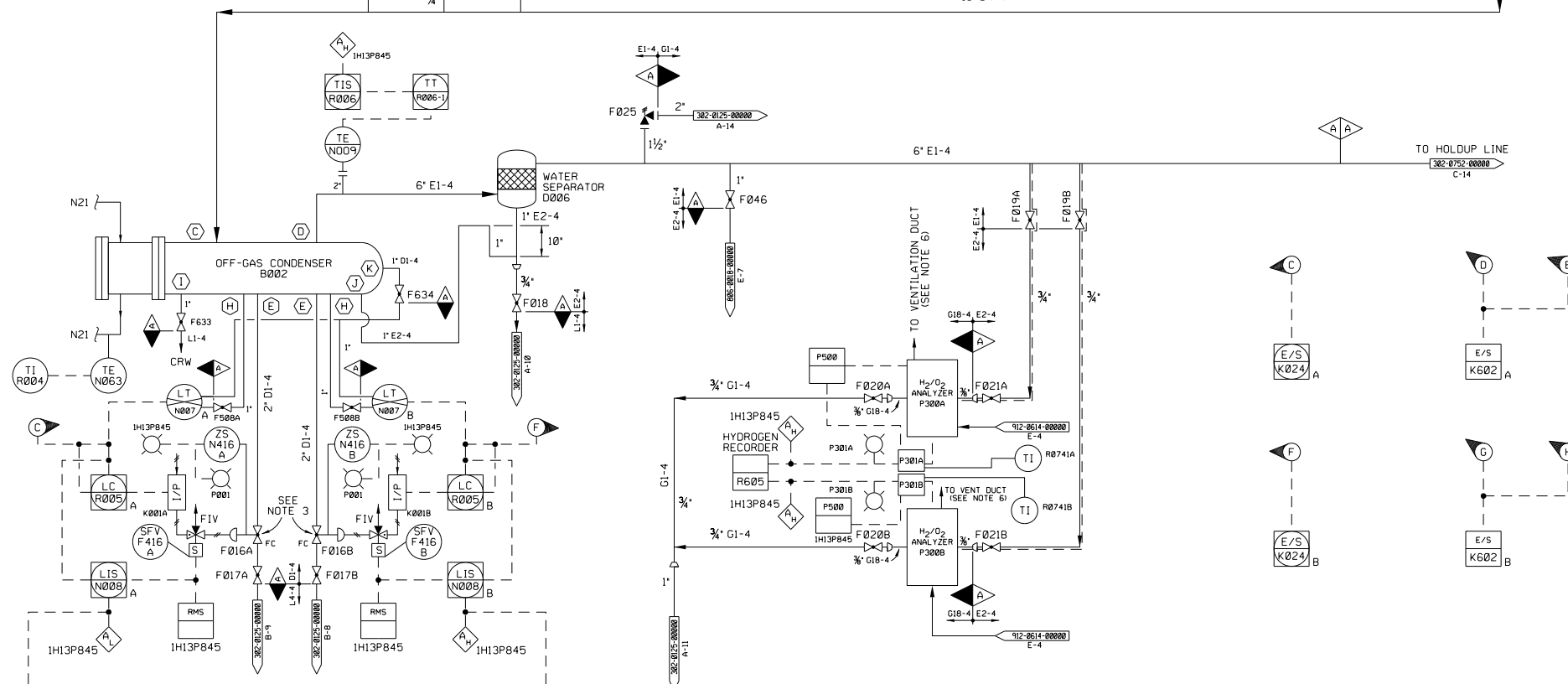
1. INSULATED PIPING FROM STEAM JET AIR EJECTORS UP TO OFF-GAS CONDENSER AND FROM COOLER CONDENSER TO CHARCOAL VAULT.
2. PIPE FROM AIR EJECTOR TO BE SLOPED SO CONDENSATE CAN BE DRAINED AND NOT ENTER RECOMBINER.
3. THESE VALVES TO BE LOCATED PHYSICALLY CLOSE TO THE MAIN CONDENSER TO MINIMIZE THE EFFECT OF FLASHING.
4. THIS SYSTEM DIAGRAM IS A PHOTOGRAPHIC REPRODUCTION OF G.E. DWG. NO. 76E908, SHEET 1, THIS DWG. WAS SUBSEQUENTLY REPLACED BY G.E. DWG. 796E375.
5. FOR CONTROL ROOM, LOCAL OR REMOTE PANEL AND RACK I.D. NUMBERS FOR INSTRUMENTS, SEE THE INSTRUMENT INDEX.
6. ANALYZER EXHAUST PROVIDED BY M36 SYSTEM.
7. THE SYMBOL  DESIGNATES THOSE NON-SAFETY AREAS OF THE SYSTEM WHERE THE AUGMENTED QUALITY OF ASSURANCE PROGRAM REQUIREMENTS DEFINED IN SP-45 APPLY. THE INTERFACING INSTRUMENT AIRLINES AND INSTRUMENTATION ARE NOT PART OF THE DEFINED Q.A. PROGRAM.
8. NO IMPACT TESTS ARE REQUIRED FOR PIPING (C3-4) BETWEEN SJAES AND RECOMBINERS.

REFERENCES:

- 302-0011-00000 MAIN STEAM SYSTEM N11
- 302-0053-00000 AUXILIARY STEAM SYSTEM P61
- 302-0101-00000 CONDENSATE SYSTEM N21
- 302-0131-00000 CONDENSER AIR REMOVAL SYSTEM N62
- 302-0125-00000 MAIN, REHEAT, EXTRACTION, AND MISCELLANEOUS DRAINS SYSTEM N22
- 302-0242-00000 SERVICE AIR DISTRIBUTION SYSTEM P51
- 302-0713-00000 MIXED BED DEMINERALIZER AND DISTRIBUTION SYSTEM MIXED BED EXCHANGER, STORAGE, AND NORTH ZONE DISTRIBUTION SYSTEM P22
- 302-0752-00000 OFF-GAS SYSTEM N64
- 006-0018-00000 PLANT RADIATION MONITORING SYSTEM D17
- 912-0614-00000 TURBINE BUILDING VENTILATION M35
- 912-0622-00000 OFF-GAS BUILDING EXHAUST M36

SUPPORTING DOCUMENTS:

- MPL. NO.
- A42-1010 PIPING AND INSTRUMENT SYMBOLS
- A62-4030 PRESSURE INTEGRITY OF PIPING EQUIPMENT PRESSURE RATING

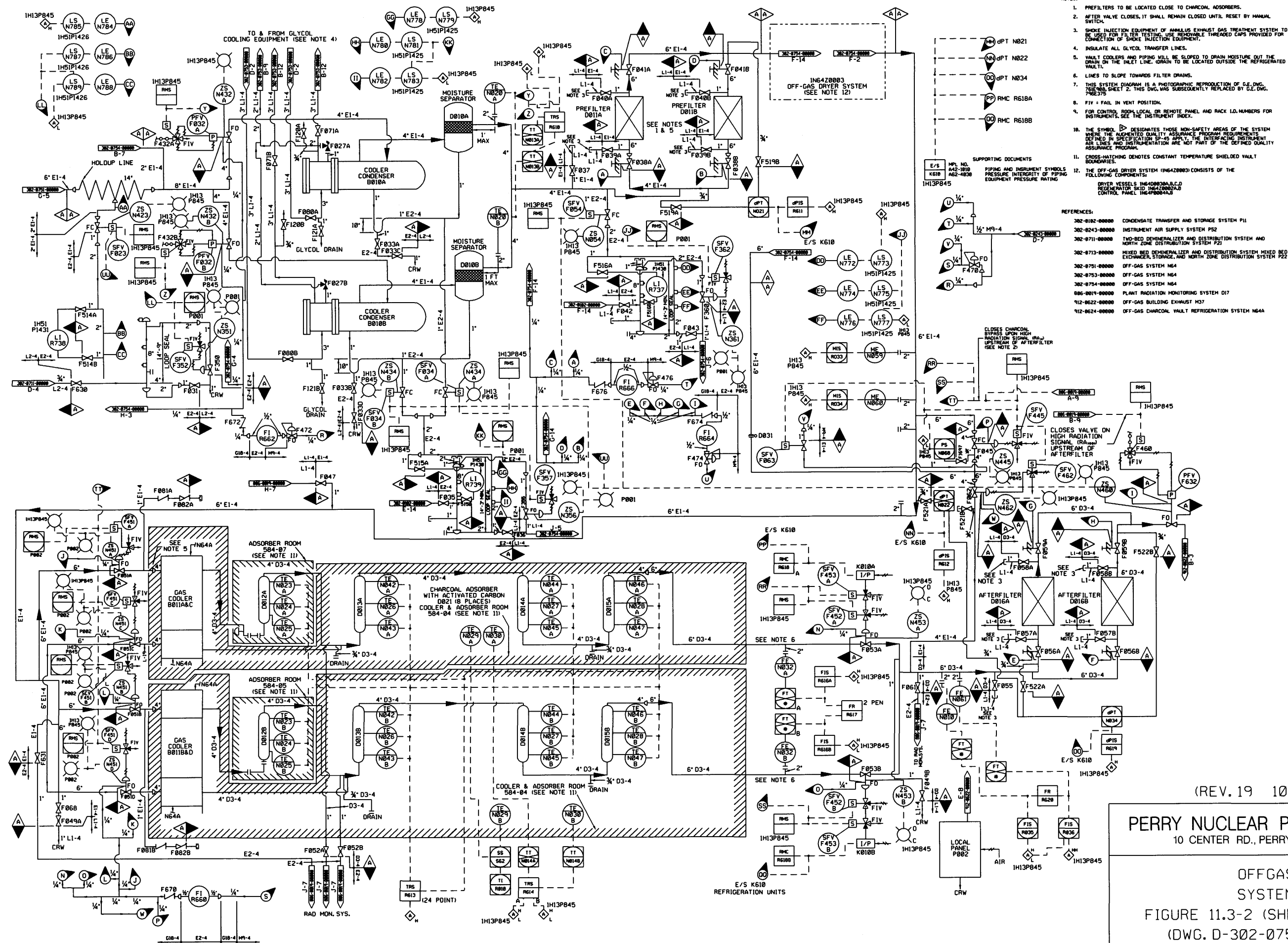



(REV. 20 10/2017)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

OFFGAS
SYSTEM

FIGURE 11.3-2 (SHEET 1 OF 4)
(DWG. D-302-0751-00000)

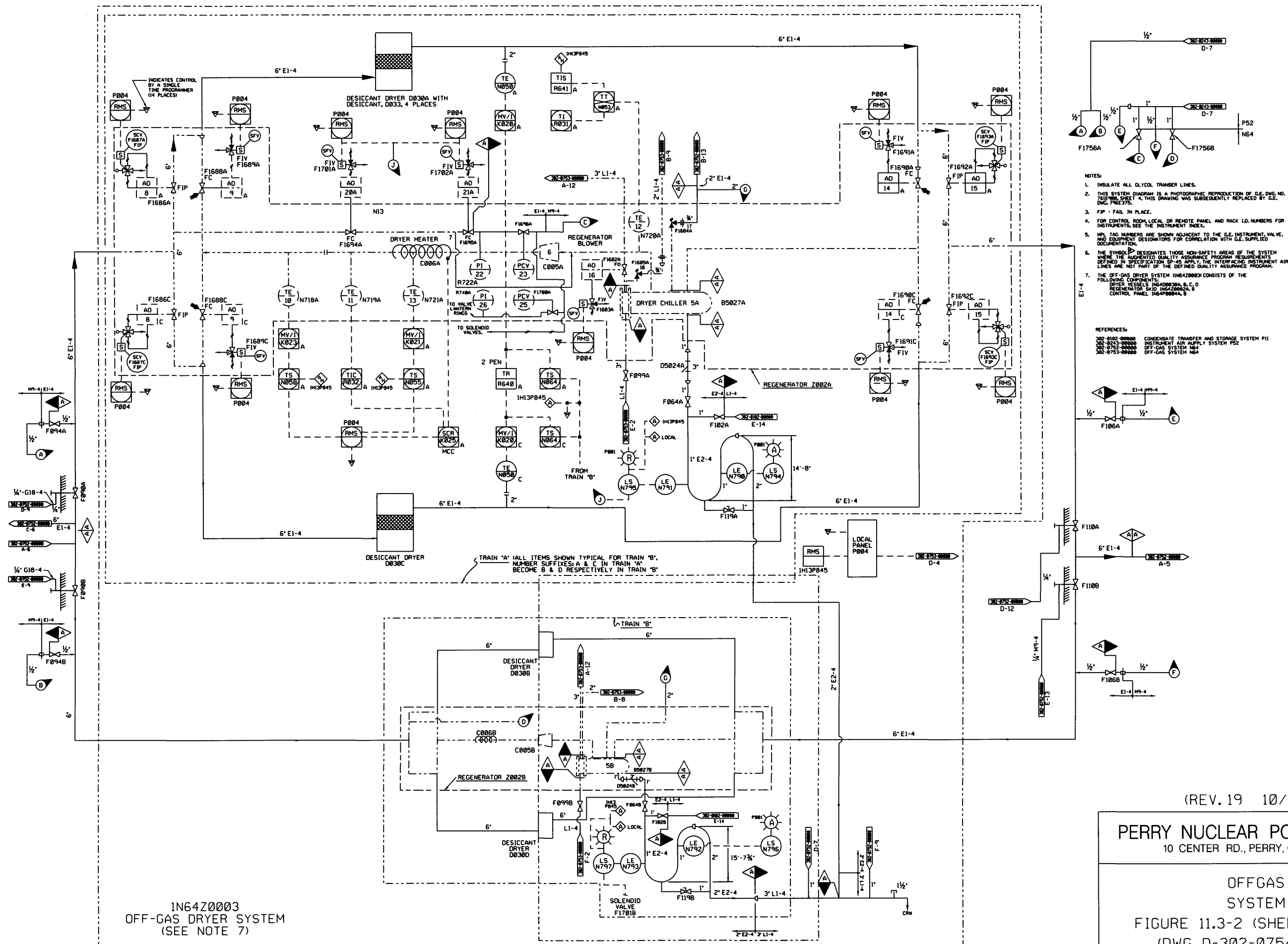


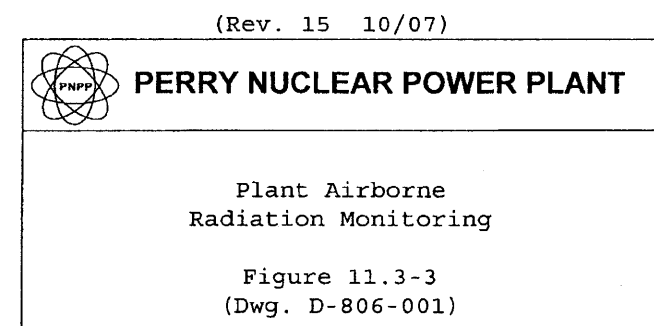
- NOTES:
1. PREFILTERS TO BE LOCATED CLOSE TO CHARCOAL ADSORBERS.
 2. AFTER VALVE CLOSURES, IT SHALL REMAIN CLOSED UNTIL RESET BY MANUAL SWITCH.
 3. SMOKE INJECTION EQUIPMENT OF ANNULAR EXHAUST GAS TREATMENT SYSTEM TO BE USED FOR FILTER TESTING. USE REMOVABLE THREADED CAPS PROVIDED FOR CONNECTION OF SMOKE INJECTION EQUIPMENT.
 4. INSULATE ALL GLYCOL TRANSFER LINES.
 5. VAULT COOLERS AND PIPING WILL BE SLOPED TO DRAIN MOISTURE OUT THE DRAIN ON THE INLET LINE. DRAIN TO BE LOCATED OUTSIDE THE REFRIGERATED VAULT.
 6. LINES TO SLOPE TOWARDS FILTER DRAINS.
 7. THIS SYSTEM DIAGRAM IS A PHOTOGRAPHIC REPRODUCTION OF G.E. DWG. 786296, SHEET 2. THIS DWG. WAS SUBSEQUENTLY REPLACED BY G.E. DWG. 786297.
 8. FIV = FAIL IN VENT POSITION.
 9. FOR CONTROL ROOM, LOCAL OR REMOTE PANEL AND RACK I.D. NUMBERS FOR INSTRUMENTS, SEE THE INSTRUMENT INDEX.
 10. THE SYMBOL  DESIGNATES THOSE NON-SAFETY AREAS OF THE SYSTEM WHERE THE AUGMENTED QUALITY ASSURANCE PROGRAM REQUIREMENTS DEFINED IN SPECIFICATION 3P-45 APPLY. THE INTERFACING INSTRUMENT AIR LINES AND INSTRUMENTATION ARE NOT PART OF THE DEFINED QUALITY ASSURANCE PROGRAM.
 11. CROSS-HATCHING DENOTES CONSTANT TEMPERATURE SHIELDED VAULT BOUNDARIES.
 12. THE OFF-GAS DRYER SYSTEM (IN6420003) CONSISTS OF THE FOLLOWING COMPONENTS:
DRYER VESSELS IN640003A,B,C,D
REGENERATOR AND IN6420003A,B
CONTROL PANEL IN640004A,B
- SUPPORTING DOCUMENTS
- | REF. | DESCRIPTION |
|----------------|--|
| 302-0102-00000 | CONDENSATE TRANSFER AND STORAGE SYSTEM P11 |
| 302-0243-00000 | INSTRUMENT AIR SUPPLY SYSTEM P52 |
| 302-0711-00000 | TWO-BED DEMINERALIZER AND DISTRIBUTION SYSTEM AND NORTH ZONE DISTRIBUTION SYSTEM P21 |
| 302-0713-00000 | MIXED BED DEMINERALIZER AND DISTRIBUTION SYSTEM MIXED BED EXCHANGER, STORAGE, AND NORTH ZONE DISTRIBUTION SYSTEM P22 |
| 302-0751-00000 | OFF-GAS SYSTEM M64 |
| 302-0753-00000 | OFF-GAS SYSTEM M64 |
| 302-0754-00000 | OFF-GAS SYSTEM M64 |
| 006-0019-00000 | PLANT RADIATION MONITORING SYSTEM D17 |
| 912-0622-00000 | OFF-GAS BUILDING EXHAUST M37 |
| 912-0624-00000 | OFF-GAS CHARCOAL VAULT REFRIGERATION SYSTEM M64A |
- REFERENCES:
- 302-0102-00000 CONDENSATE TRANSFER AND STORAGE SYSTEM P11
- 302-0243-00000 INSTRUMENT AIR SUPPLY SYSTEM P52
- 302-0711-00000 TWO-BED DEMINERALIZER AND DISTRIBUTION SYSTEM AND NORTH ZONE DISTRIBUTION SYSTEM P21
- 302-0713-00000 MIXED BED DEMINERALIZER AND DISTRIBUTION SYSTEM MIXED BED EXCHANGER, STORAGE, AND NORTH ZONE DISTRIBUTION SYSTEM P22
- 302-0751-00000 OFF-GAS SYSTEM M64
- 302-0753-00000 OFF-GAS SYSTEM M64
- 302-0754-00000 OFF-GAS SYSTEM M64
- 006-0019-00000 PLANT RADIATION MONITORING SYSTEM D17
- 912-0622-00000 OFF-GAS BUILDING EXHAUST M37
- 912-0624-00000 OFF-GAS CHARCOAL VAULT REFRIGERATION SYSTEM M64A

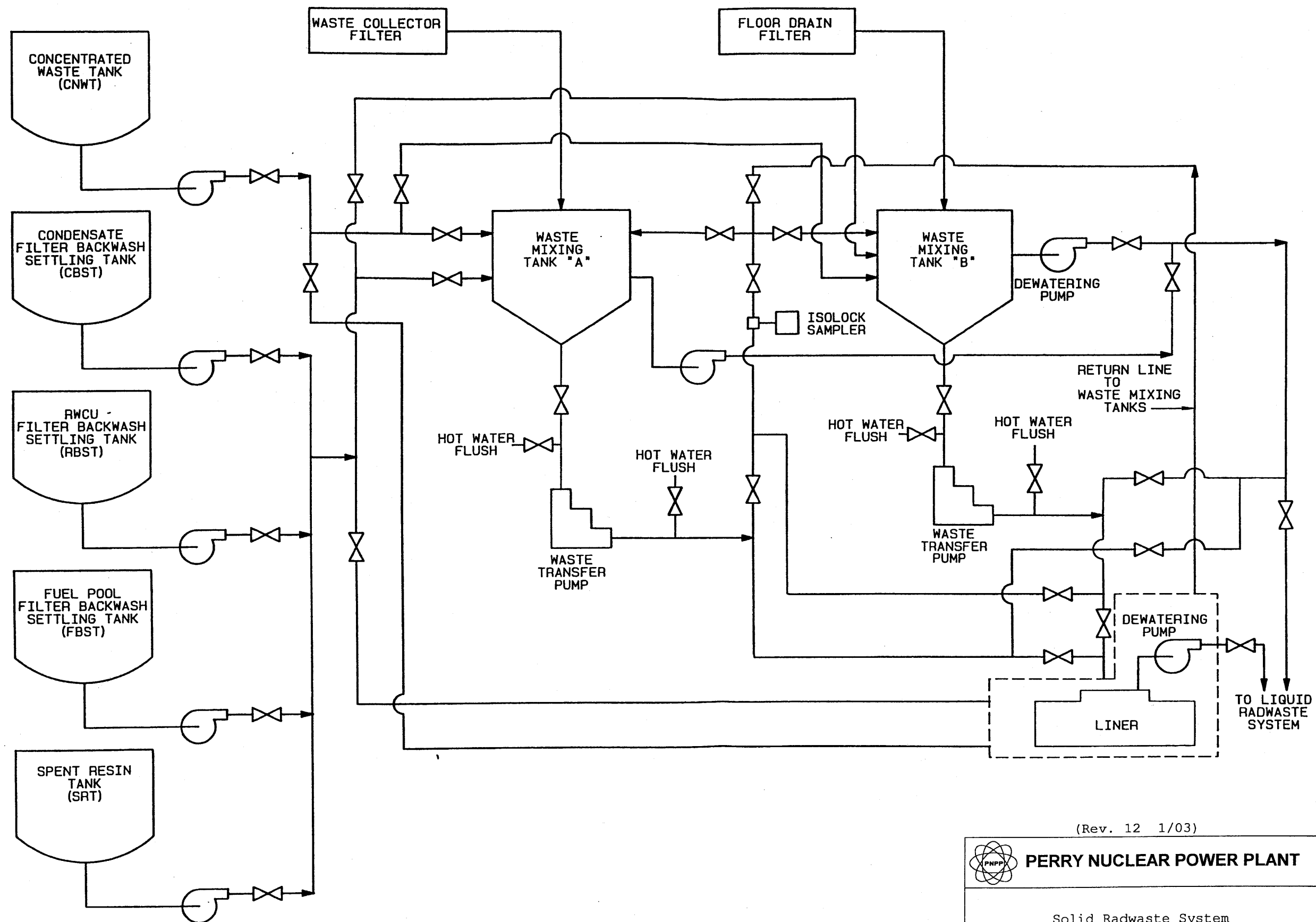
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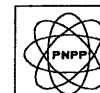
OFFGAS
SYSTEM
FIGURE 11.3-2 (SHEET 2 OF 4)
(DWG. D-302-0752-00000)







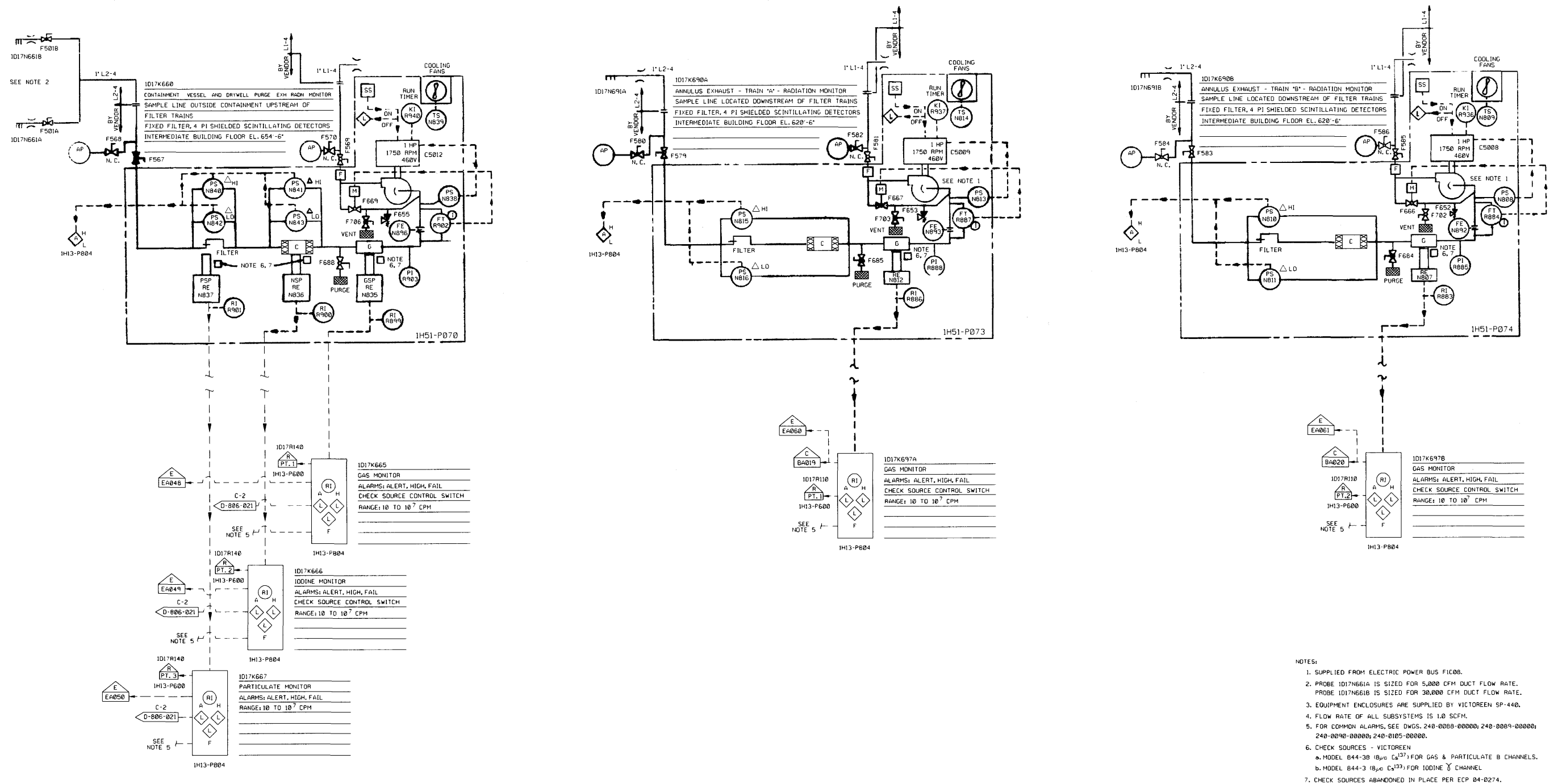
(Rev. 12 1/03)



PERRY NUCLEAR POWER PLANT

Solid Radwaste System

Figure 11.4-1



(REV. 19 10/2015)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

PLANT RADIATION MONITORING

FIGURE 11.5-1 (SHEET 1 OF 12)
(DWG. D-806-0006-00000)



1. SUPPLIED FROM ELECTRIC POWER BUS FIC08
2. ANY HIGH ALARM FROM 1D17K680 CONTAINMENT ATMOSPHERE RADIATION MONITOR WILL ALARM THE DRYWELL/CONTAINMENT EVACUATION ALARM SYSTEM.
3. EQUIPMENT ENCLOSURES ARE SUPPLIED BY VICTOREEN SP-440.
4. FLOW RATE OF ALL SUBSYSTEMS IS 1.0 SCFM.
5. FOR COMMON ALARMS, SEE DWGS. 240-0088-00000; 240-0089-00000; 240-0090-00000; 240-0105-00000.
6. REMOVABLE SPOOL PIECE FOR LEAK TEST.
7. LEAVE OPEN AFTER LEAK TEST.
8. DELETED.
9. CHECK SOURCES ABANDONED IN PLACE PER ECP 04-0274.
10. DELETED.

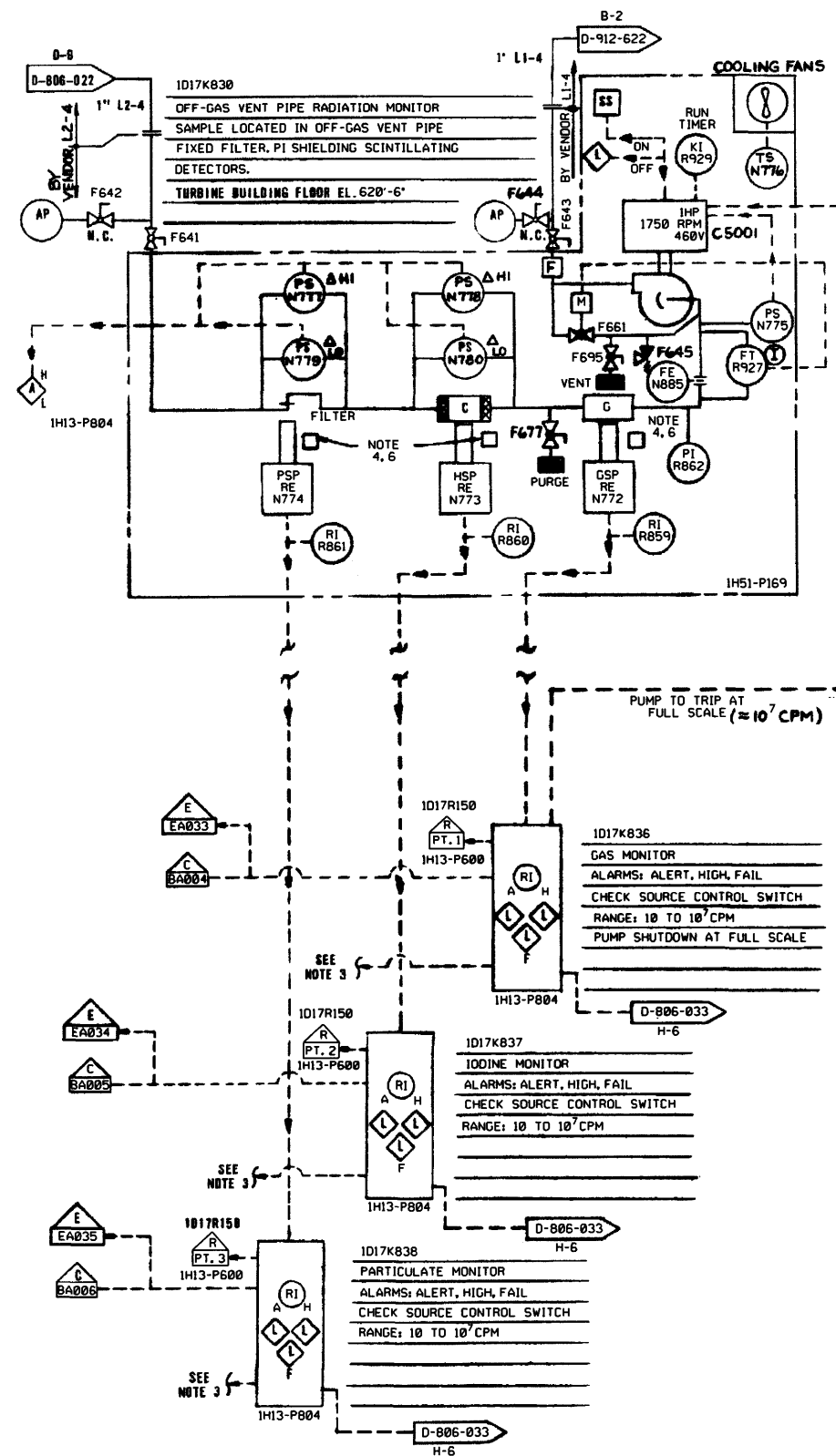
REFERENCES:

912-0613-00000	INTERMEDIATE BUILDING VENTILATION SYSTEM
302-0001-00000	SYSTEM DIAGRAM SYMBOLS
806-0021-00000	PLANT RADIATION MONITORING (EVACUATION ALARM)
806-0023-00000	PLANT RADIATION MONITORING AUTOMATIC ISOKINETIC SAMPLING SYSTEM
806-0033-00000	POST ACCIDENT RAD MONITORING SYSTEM

(REV. 19 10/2015)

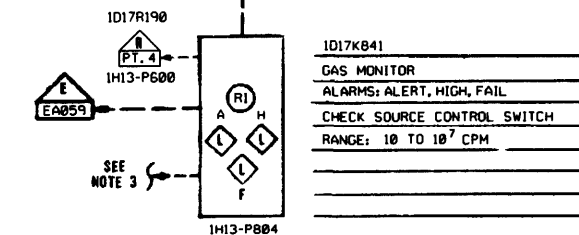
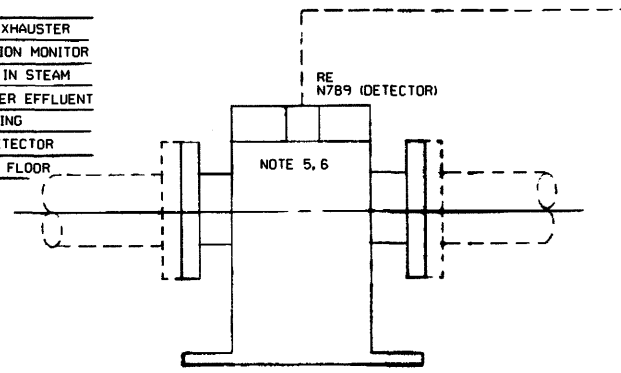
PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

PLANT
RADIATION MONITORING
FIGURE 11.5-1 (SHEET 2 OF 12)
(DWG. D-806-0007-00000-PARTIAL)



ID17K840
STEAM PACKING EXHAUSTER
EFFLUENT RADIATION MONITOR
SAMPLE LOCATED IN STEAM PACKING EXHAUSTER EFFLUENT
LINE: 4 PI SHIELDING SCINTILLATING DETECTOR
TURBINE BUILDING FLOOR EL. 624'-6"

SEE D-302-141
F-7



NOTES:

- EQUIPMENT ENCLOSURES ARE SUPPLIED BY VICTOREEN SP-440.
- FLOW RATE OF AIRBORNE SAMPLING SYSTEMS ARE 1.0 SCFM.
- FOR COMMON ALARMS, SEE DWGS. 240-0088-00000; 240-0089-00000; 240-0090-00000; 240-0105-00000.
- CHECK SOURCES-VICTOREEN
a. MODEL 844-38 (8 μ C, Cs137) FOR GAS & PARTICULATE (B) CHANNELS.
b. MODEL 844-3 (8 μ C, Ba133) FOR IODINE (Y) CHANNEL.
5. MODEL 844-3 (8 μ C, Ba133) FOR IN LINE STEAM CHANNEL BY VICTOREEN.
- CHECK SOURCES ABANDONED IN PLACE PER ECP 04-0274.

REFERENCES:

- D-912-622 OFF-GAS BUILDING EXHAUST VENTILATION SYSTEM
D-302-141 STEAM SEAL SYSTEM
D-302-001 SYSTEM DIAGRAM SYMBOLS

NOTE:

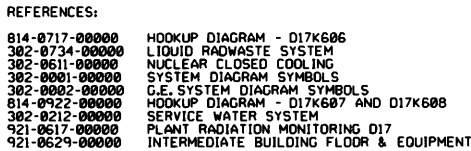
- SUPPLIED FROM ELECTRIC POWER BUS FIC08
- ANY HIGH ALARM FROM ID17K680 CONTAINMENT ATMOSPHERE RADIATION MONITOR WILL ALARM THE DRYWELL/CONTAINMENT EVACUATION ALARM SYSTEM.
- EQUIPMENT ENCLOSURES ARE SUPPLIED BY VICTOREEN SP-440.
- FLOW RATE OF ALL SUBSYSTEMS IS 1.0 SCFM.
- FOR COMMON ALARMS, SEE DWGS. 240-0088-00000; 240-0089-00000; 240-0090-00000; 240-0105-00000.
- REMOVABLE SPOOL PIECE FOR LEAK TEST.
- LEAVE OPEN AFTER LEAK TEST.
- CHECK SOURCES - VICTOREEN
a. MODEL 844-38 (8 μ C, Cs137) FOR GAS & PARTICULATE (B) CHANNELS.
b. MODEL 844-3 (8 μ C, Ba133) FOR IODINE (Y) CHANNEL.
- CHECK SOURCES ABANDONED IN PLACE PER ECP 04-0274.
- DELETED.

(REV. 19 10/2015)

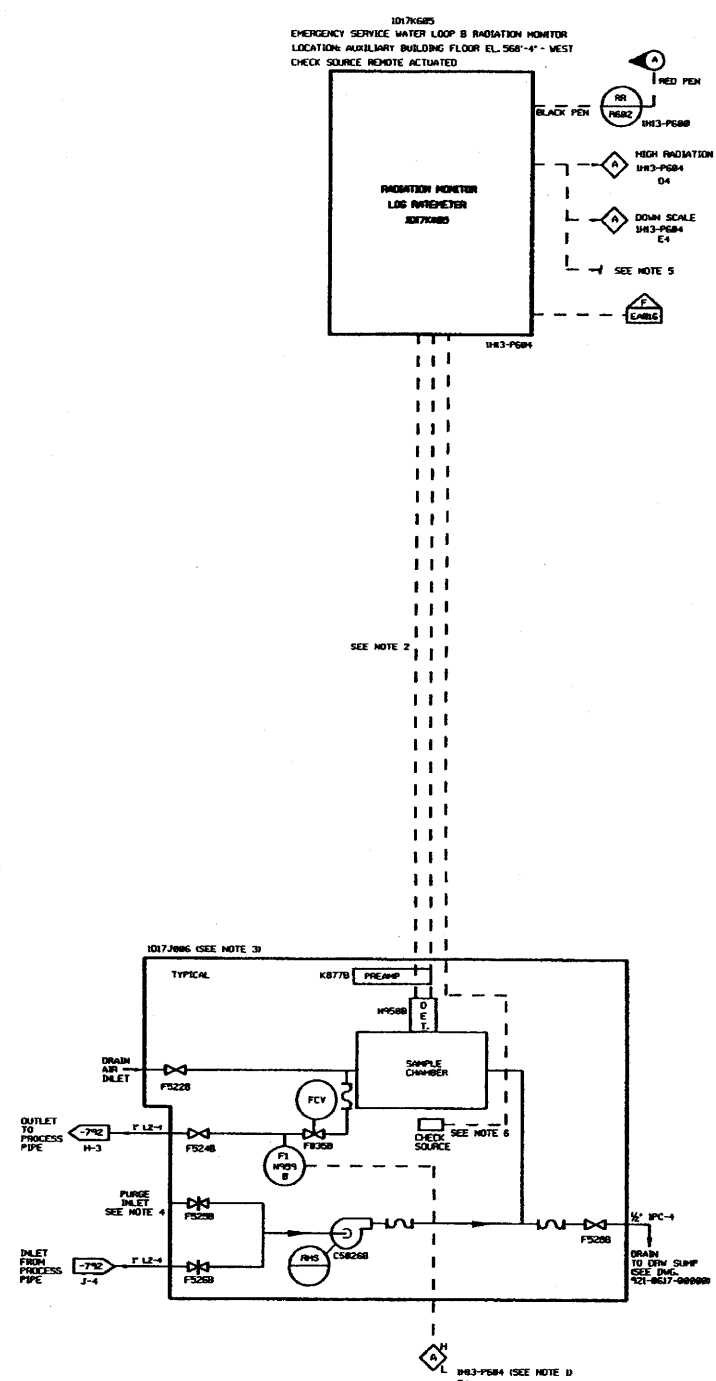
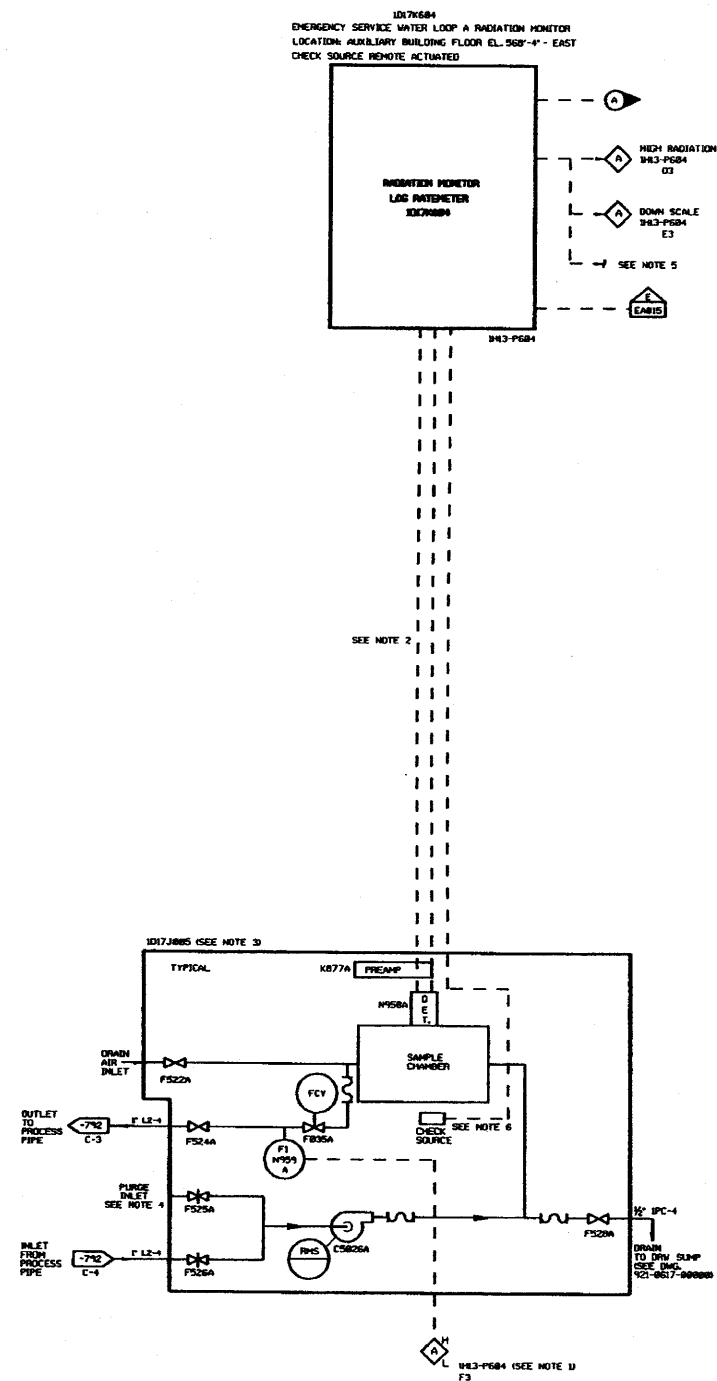
PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

PLANT RADIATION MONITORING

FIGURE 11.5-1 (SHEET 3 OF 12)
(DWG. D-806-0008-00000)



PLANT
RADIATION MONITORING
FIGURE 11.5-1 (SHEET 4 OF 12)
(DWG. D-806-0009-00000)



NOTES:

1. ALARMS ARE ACTUATED BY RELAYS IN TRIP AUXILIARY UNIT.
2. ALL CABLES SHALL COMPLY WITH G.E. SPECIFICATION A62-4010.
3. EQUIPMENT ENCLOSURES SUPPLIED BY GENERAL ELECTRIC SP-301.
4. FLUSH WATER PROVISIONS ARE AVAILABLE FROM VALVE P21-F882 (SEE DWG. 302-0711-00000, H-12) USING TEMPORARY HOSE HOOKUP.
5. FOR COMMON ALARMS, SEE DWG. 806-0014-00000.
6. CHECK SOURCE ASSEMBLY SUPPLIED BY G.E.

814-0721-00000 HOOKUP DIAGRAM - 1017K604
814-0722-00000 HOOKUP DIAGRAM - 1017K605
302-0792-00000 EMERGENCY SERVICE WATER SYSTEM
302-0001-00000 P & ID SYMBOLS
302-0002-00000 P & ID SYMBOLS

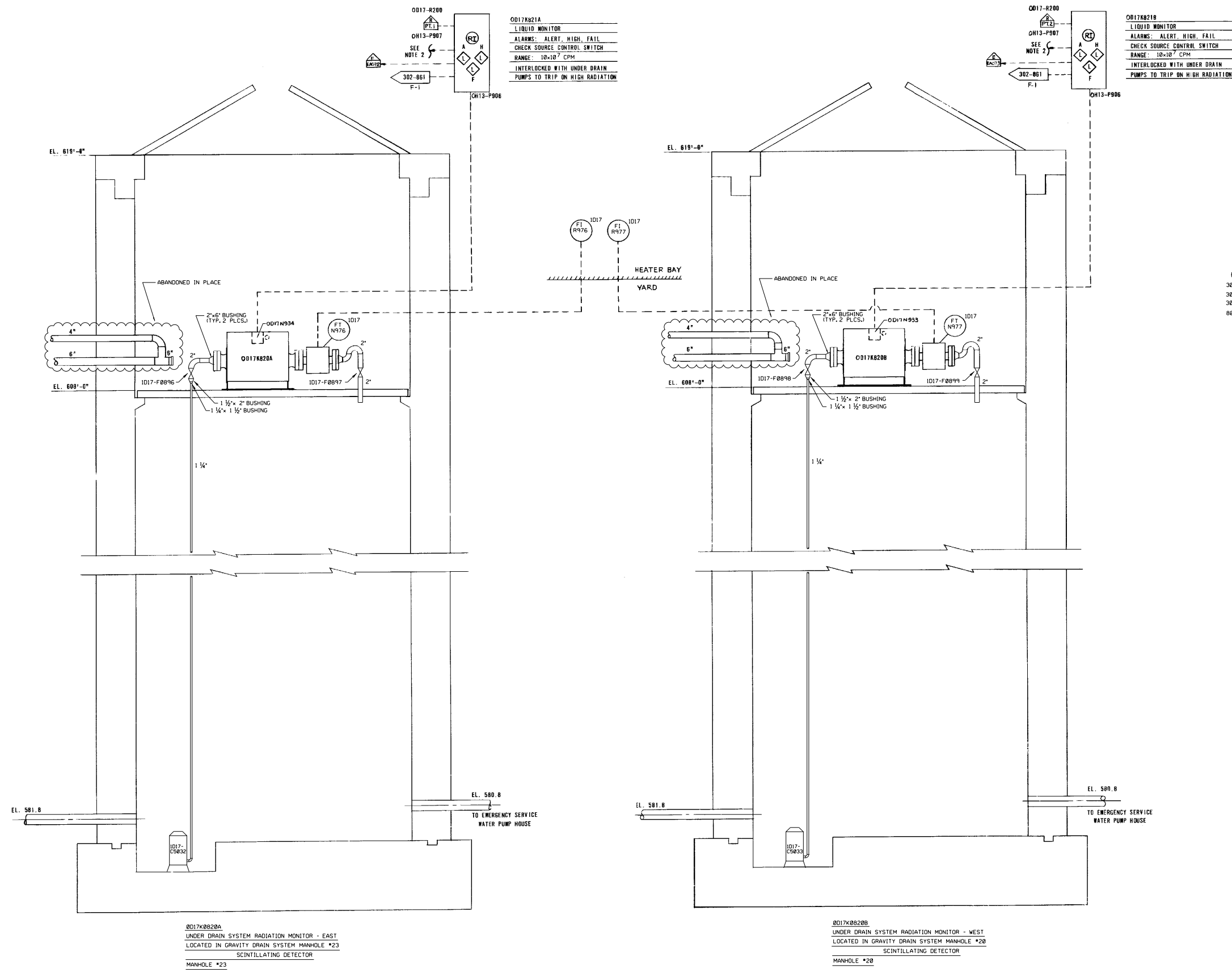
(Rev. 12 1/03)

PERRY NUCLEAR POWER PLANT

Plant Radiation Monitoring

Figure 11.5-1 (Sheet 5 of 12)

(Dwg. D-806-010)

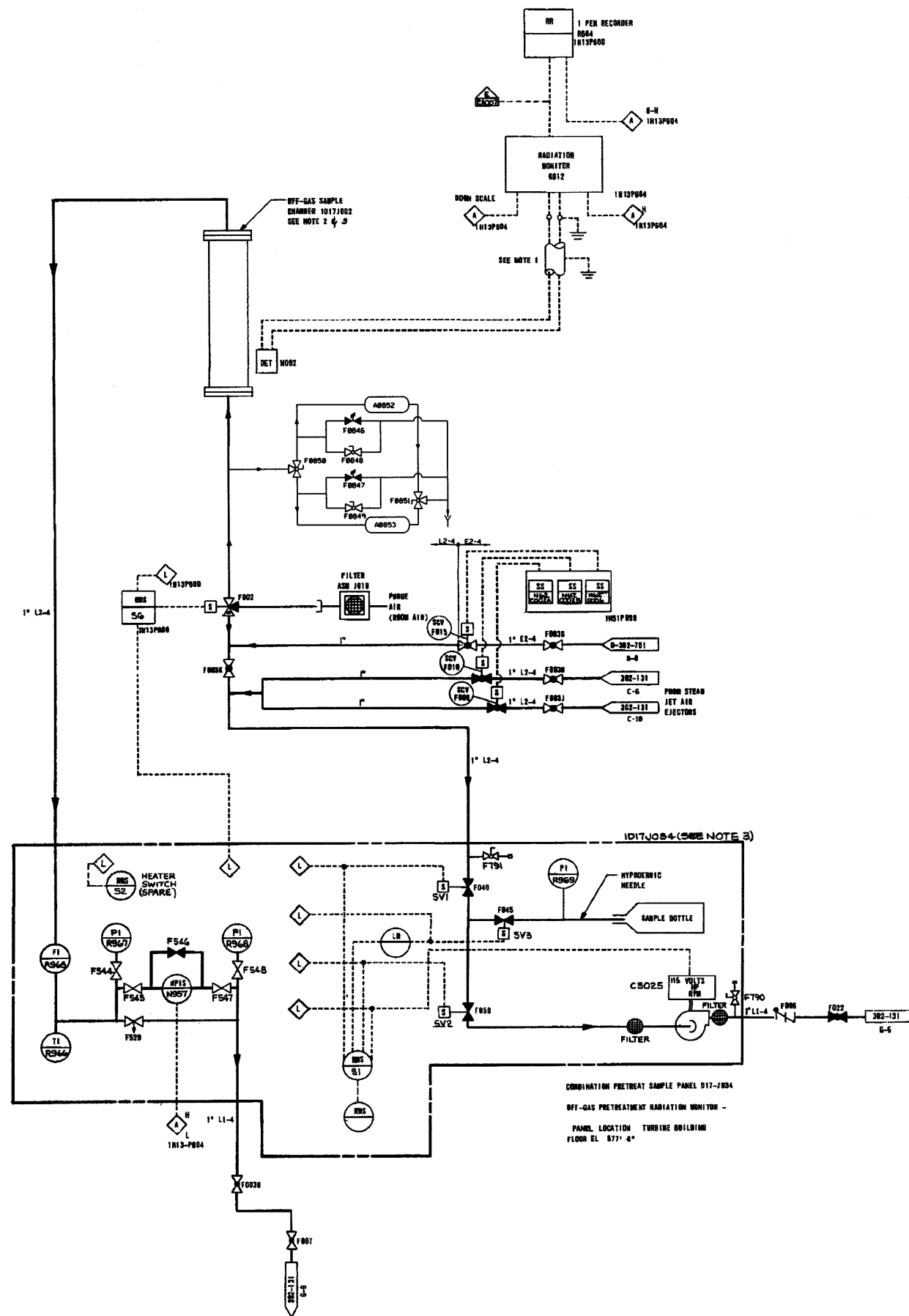


(REV. 20 10/2017)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

PLANT RADIATION MONITORING

FIGURE 11.5-1 (SHEET 6 OF 12)
(DWG. D-806-0017-00000)



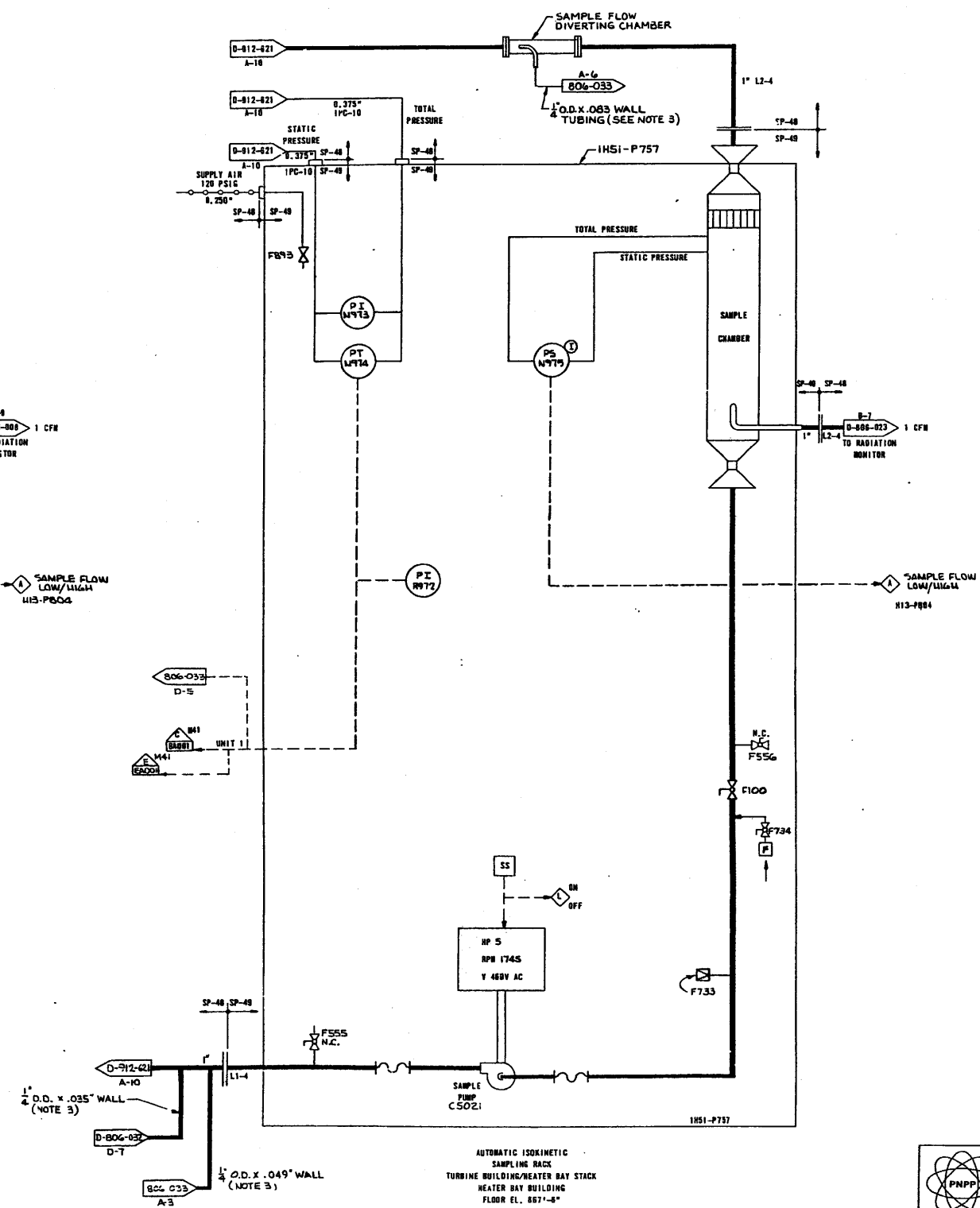
- NOTES
- 1 ALL CABLES SHALL COMPLY WITH G.E. ENGINEERING SPECIFICATION 403-4010
 - 2 THE OFF-GAS SAMPLE CHAMBER SHALL BE MOUNTED VERTICALLY, AND THE TUBING SHALL SLOPE AWAY FROM THE CHAMBER SO THAT THE CONDENSATE WILL RETURN TO THE PROCESS
 - 3 SAMPLE PANEL 1017J004 AND CHAMBER 1017J002 SUPPLIED BY GENERAL ELECTRIC SP-301

- REFERENCES:
- 014-0010-00000 HOOKUP DIAGRAM - 1017K012
 - 302-0131-00000 CONDENSER AIR REMOVAL SYSTEM
 - 302-0751-00000 OFF-GAS SYSTEM
 - 302-0001-00000 SYSTEM DIAGRAM SYMBOLS
 - 302-0002-00000 G.E. SYSTEM DIAGRAM SYMBOLS
 - 304-0751-00113 PIPING ISOMETRIC

(REV. 19 10/2015)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

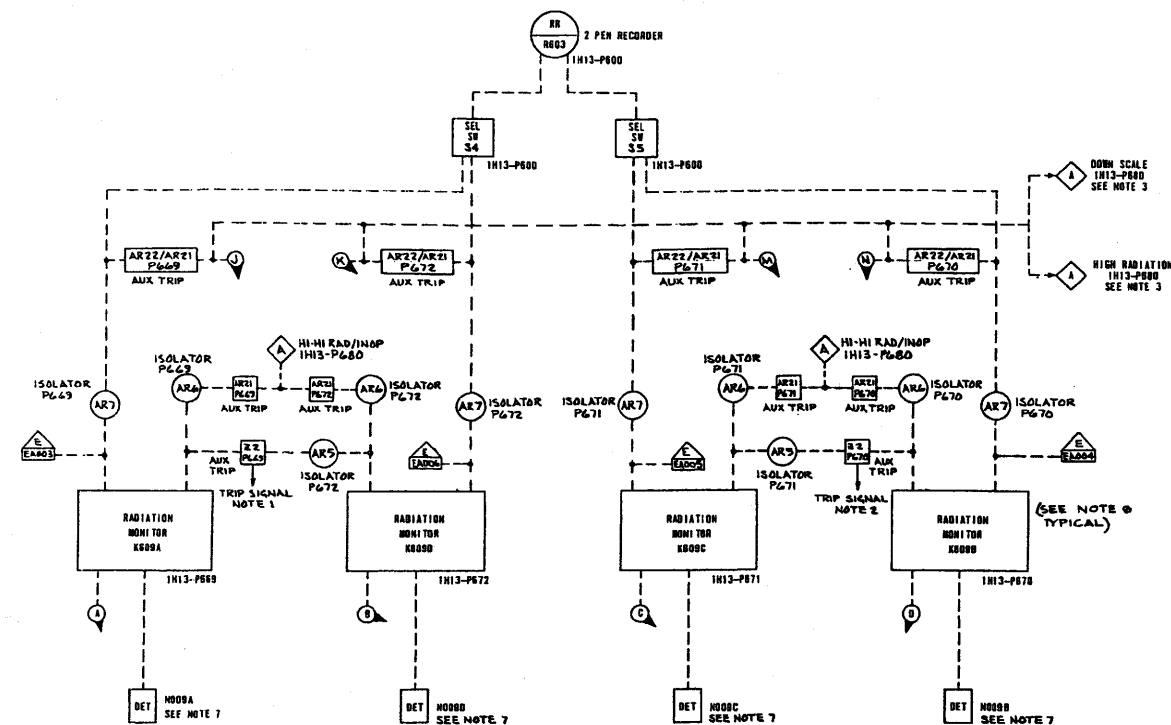
PLANT RADIATION
MONITORING
FIGURE 11.5-1 (SHEET 7 OF 12)
(DWG. D-806-0018-00000)



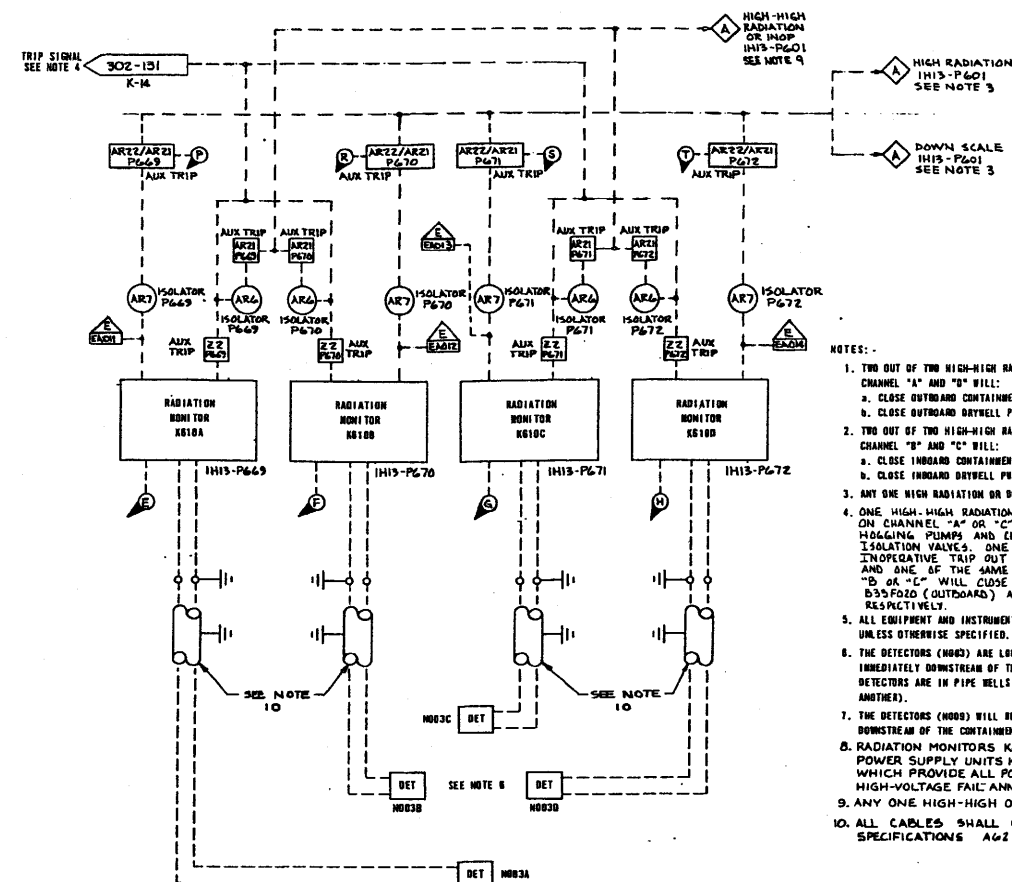
REFERENCES: -

- D-812-821 HEATER BAY VENTILATION SYSTEMS
- D-812-822 OFF-GAS BUILDING EXHAUST VENTILATION SYSTEM
- D-302-001 SYSTEM DIAGRAM SYMBOLS

(Dwg. D-806-022)

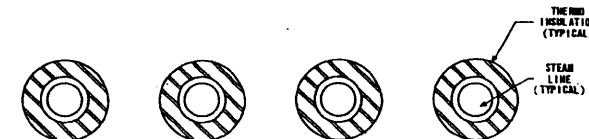


CONTAINMENT VENTILATION EXHAUST RADIATION MONITORING SUBSYSTEM
SEE REFERENCE 3
1017K808A, B, C, & D

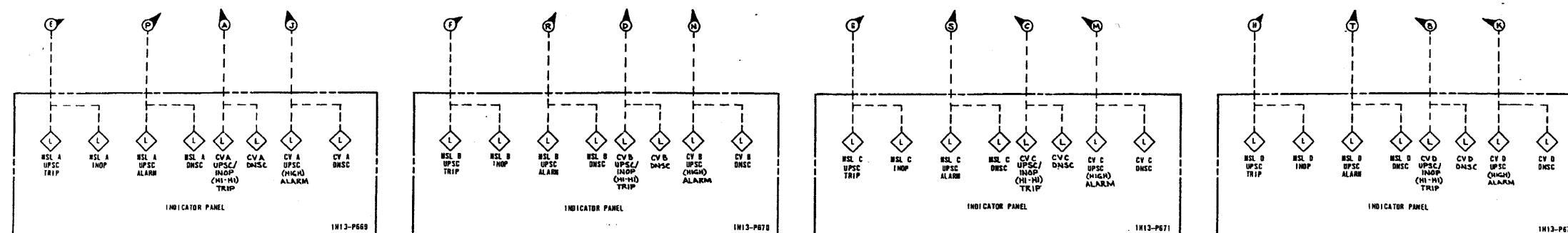


- NOTES:**
1. TWO OUT OF TWO HIGH-HIGH RADIATION OR INOPERATIVE TRIPS ON CHANNEL "A" AND "B" WILL:
 2. CLOSE OUTBOARD CONTAINMENT PURGE VENTILATION SYSTEM VALVES
 3. CLOSE OUTBOARD DAYWELL PURGE VENTILATION SYSTEM VALVES
 4. TWO OUT OF TWO HIGH-HIGH RADIATION OR INOPERATIVE TRIPS ON CHANNEL "B" AND "C" WILL:
 5. CLOSE INBOARD CONTAINMENT PURGE VENTILATION SYSTEM VALVES
 6. CLOSE INBOARD DAYWELL PURGE VENTILATION SYSTEM VALVES
 7. ANY ONE HIGH RADIATION OR DOWN SCALE TRIP WILL ALARM.
 8. ONE HIGH-HIGH RADIATION OR INOPERATIVE TRIP OUT OF TWO ON CHANNEL "A" OR "C" WILL TURN OFF CONDENSER HODGING PUMPS AND CLOSE CONDENSER HODGING PUMP ISOLATION VALVES. ONE HIGH-HIGH RADIATION OR INOPERATIVE TRIP OUT OF TWO ON CHANNEL "A" OR "C" AND ONE OF THE SAME SIGNALS OUT OF TWO ON CHANNEL "B" OR "E" WILL CLOSE THE REACTOR WATER SAMPLE VALVES B55FD02 (OUTBOARD) AND B55FD019 (INBOARD) RESPECTIVELY.
 9. ALL EQUIPMENT AND INSTRUMENTS ARE PREFIXED BY SYSTEM NO. 017 UNLESS OTHERWISE SPECIFIED.
 10. THE DETECTORS (H800) ARE LOCATED WITHIN THE STEAM LINE TUNNEL IMMEDIATELY DOWNSTREAM OF THE OUTER ISOLATION VALVE. THE DETECTORS ARE IN PIPE WELLS (PHYSICALLY SEPARATED FROM ONE ANOTHER).
 11. THE DETECTORS (H800) WILL BE MOUNTED ON THE VENTILATION DUCT DOWNSTREAM OF THE CONTAINMENT ISOLATION VALVE B14F800.
 12. RADIATION MONITORS K808A-D HAVE ASSOCIATED POWER SUPPLY UNITS K414A-D, RESPECTIVELY, WHICH PROVIDE ALL POWER AND GENERATE A HIGH-VOLTAGE FAIL ANNUNCIATOR ON IH13-P604.
 13. ANY ONE HIGH-HIGH OR INOP WILL ALARM.
 14. ALL CABLES SHALL COMPLY WITH G.E. SPECIFICATIONS A62-4010.

- REFERENCES:**
- 017-0010 PROCESS RADIATION MONITORING SYSTEM DESIGN SPECIFICATION (DOCUMENT NO. 22A5787)
 - 017-1010 PROCESS RADIATION MONITORING SYSTEM IER
 - 0-812-004 CONTAINMENT VESSEL AND DAYWELL PURGE VENTILATION SYSTEM
 - 0-302-131 CONDENSER AIR REMOVAL
 - 0-302-001 SYSTEM DIAGRAM SYMBOLS
 - 0-302-002 G.E. SYSTEM DIAGRAM SYMBOLS



MAIN STEAM LINE RADIATION MONITORING SUBSYSTEM
1017K810A, B, C, & D

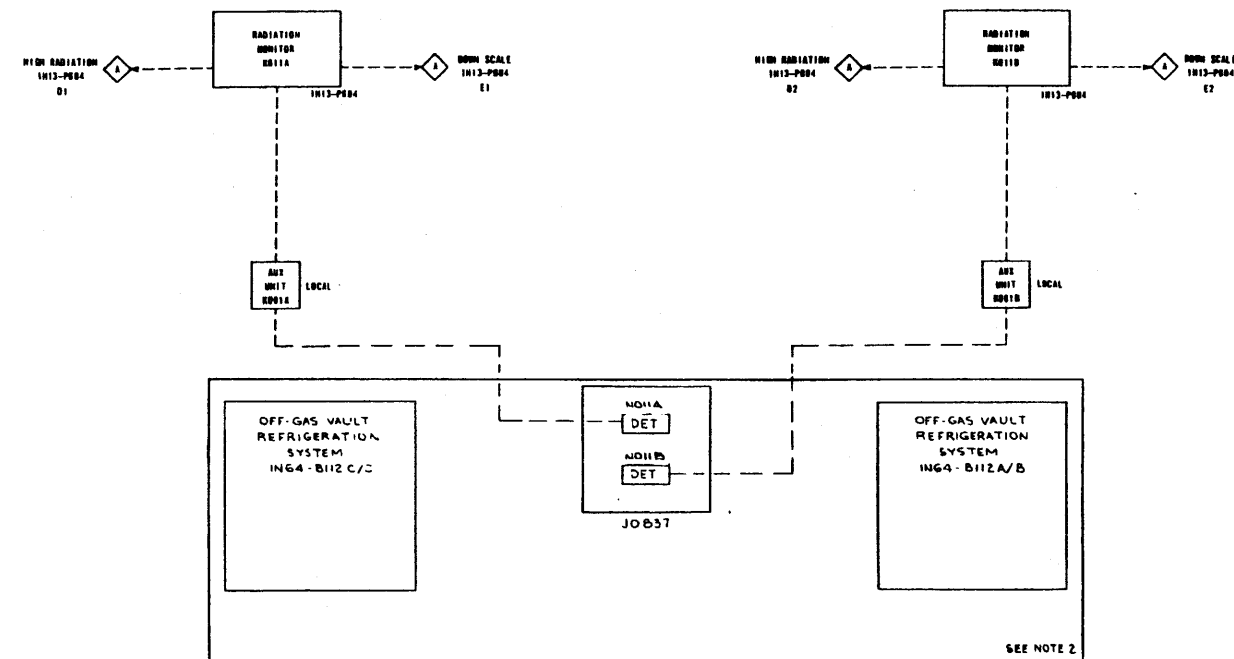


NUCLEAR SAFETY RELATED

(Rev. 12 1/03)

PERRY NUCLEAR POWER PLANT

Plant Radiation Monitoring
 Figure 11.5-1 (Sheet 11 of 12)
 (Dwg. D-806-024)



NOTES:-
 1. ALL EQUIPMENT AND INSTRUMENT ARE PROVIDED BY SYSTEM NO. 017, UNLESS OTHERWISE SPECIFIED.
 2. DETECTORS ARE LOCATED IN THE REFRIGERATION ROOM ADJACENT TO THE CARBON BED VAULTS.

REFERENCES:-
 D-011-001 OFF-GAS BUILDING
 D-302-001 SYSTEM DIAGRAM SYMBOLS
 D-302-002 G.E. SYSTEM DIAGRAM SYMBOLS
 R-21A-704 GAT ELEM. C.A.

CARBON BED VAULT RADIATION MONITORING SUBSYSTEM
 1017M011A & B

(Rev. 12 1/03)

PERRY NUCLEAR POWER PLANT

Plant Radiation Monitoring

Figure 11.5-1 (Sheet 12 of 12)

(Dwg. D-806-025)