

NOTES:

1. ALL VALVES, INSTRUMENTS AND SPECIALTIES SHOWN IN COMMON BUILDINGS HAVE THE PREFIX 0P54- UNLESS SHOWN OTHERWISE. ALL VALVES, INSTRUMENTS AND SPECIALTIES SHOWN IN UNIT 1 BUILDINGS HAVE THE PREFIX 0P54- UNLESS SHOWN OTHERWISE. ALL VALVES, INSTRUMENTS AND SPECIALTIES SHOWN IN UNIT 2 BUILDINGS HAVE THE PREFIX 0P54-.
2. THE SYMBOL DESIGNATES THOSE NON-SAFETY AREAS OF THE SYSTEM WHERE THE REQUIRED QUALITY ASSURANCE PROGRAM REQUIREMENTS DEFINED IN SP-45 & SP-58 APPLY. THE INTERFACING INSTRUMENT AIR LINES ARE NOT PART OF THE DEFINED QUALITY ASSURANCE PROGRAM.

NOTES CONTINUED:

3. ALARM SIGNALS FROM VALVES AND FROM PANELS ARE RECEIVED AT THE SECONDARY ALARM STATION.
4. THE HYDRANT NOZZLE ARRANGEMENT AND HYDRANT HOUSE LOCATIONS SHOW THE MINIMUM REQUIREMENTS. HYDRANT BARRELS WITH ADDITIONAL PUMPER CONNECTION OR ADDITIONAL HYDRANT HOUSES MAY BE INSTALLED.
5. PIPE LINE SPEC/MATERIALS PROVIDED PER DCP 940037 IN LIEU OF PIPE LINE SPEC/MATERIALS DEPICTED.

NOTES CONTINUED:

6. ABANDONED IN PLACE PER TECHNICAL ASSIGNMENT FILE 81653.
7. PIPING THIS SIDE OF VALVE IS ABANDONED IN PLACE PER TECHNICAL ASSIGNMENT FILE 81777.
8. ABANDONED IN PLACE PER ECP 07-0057-001.
9. PIPE CAP IS MATERIAL A403 TP316L.

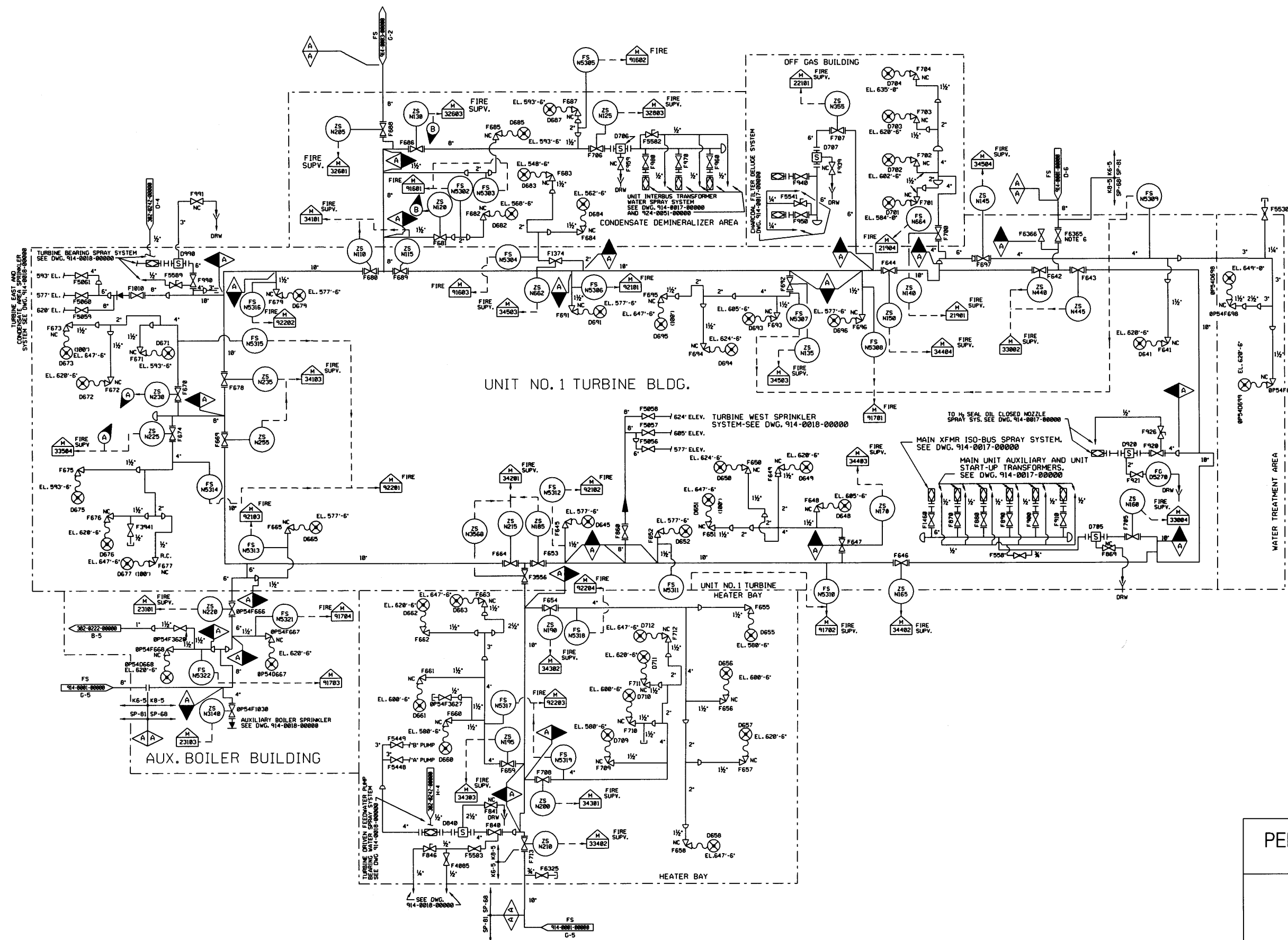
(REV. 19 10/2015)

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

FIRE SERVICE  
WATER YARD AREA  
FIGURE 9.5-1  
(DWG. D-914-0001-00000)

OPERATING DATA						
#	PSIG	GPM	F	BY	REMARKS	REV
	125	2500	70			

DESIGN DATA						
#	NORMAL	UPSET	BY	CHKD	REMARKS	REV
	PSIG	F	PSIG	F	TIME	
	125	70	175	150		



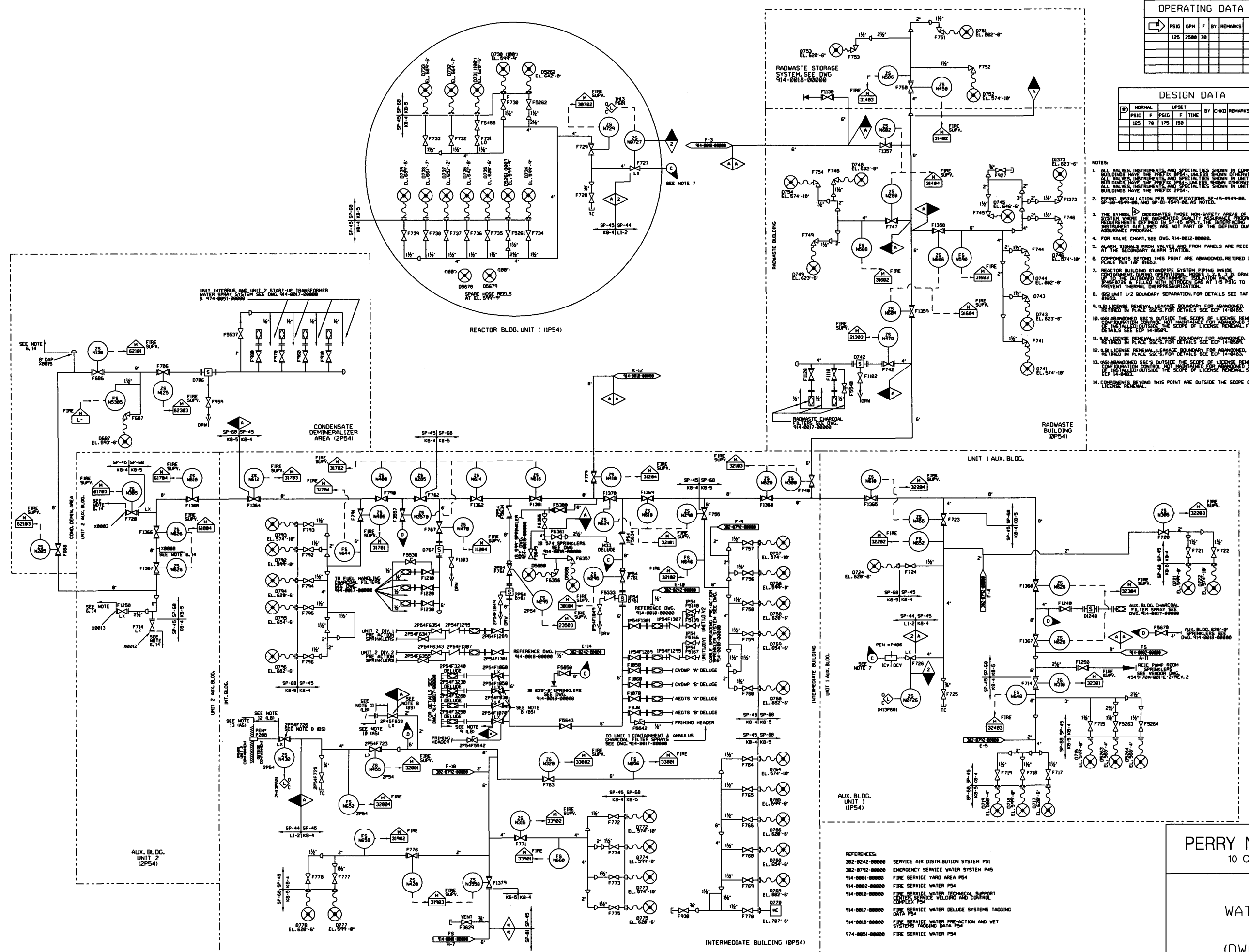
- NOTES:
- ALL ALARM SIGNALS SHOWN ON THIS DRAWING ARE RECEIVED AT THE SECONDARY ALARM STATION.
  - PIPING INSTALLATION PER SPECIFICATIONS SP-68-4549-00 AND SP-81-4549-00 AS NOTED.
  - FOR VALVE CHART, SEE DWG. 914-0012-00000.
  - ALL VALVES, INSTRUMENTS, AND SPECIALTIES SHOWN IN COMMON BUILDINGS HAVE THE PREFIX 0P54-. UNLESS SHOWN OTHERWISE, ALL VALVES, INSTRUMENTS, AND SPECIALTIES SHOWN IN UNIT 1 BUILDING HAVE THE PREFIX 1P54.
  - THE SYMBOL DENOTES THOSE NON-SAFETY PORTIONS OF THE SYSTEM WHERE THE AUGMENTED QUALITY ASSURANCE PROGRAM APPLIES.
  - SECTION OF THE PIPE BETWEEN VALVES 0P54F0578 ON DRAWING 914-0001-00000 & 1P54F0365 INSIDE THE TURBINE BUILDING IS OUT OF SERVICE. REFERENCE: ECP 83-0184.

- REFERENCES:
- 302-0222-00000 TURBINE BUILDING CLOSED COOLING SYSTEM
  - 302-0242-00000 SERVICE AIR DISTRIBUTION SYSTEM
  - 914-0001-00000 FIRE SERVICE YARD AREA
  - 914-0003-00000 FIRE SERVICE WATER (NUCLEAR PLANT)
  - 914-0017-00000 FIRE SERVICE WATER DELUGE SYSTEMS TAGGING DATA
  - 914-0018-00000 FIRE SERVICE WATER-TURBINE POWER COMPLEX PLANS ABOVE EL. 568'-6" AND 593'-6"
  - 924-0051-00000 FIRE SERVICE WATER PRE-ACTION AND WET SYSTEMS TAGGING DATA

(REV. 19 10/2015)

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

FIRE SERVICE WATER  
(UNIT 1, TURBINE AREA)  
FIGURE 9.5-2  
(DWG. D-914-0002-00000)



OPERATING DATA					
PSIG	GPM	F	BY	REMARKS	REV
125	2500	70			

DESIGN DATA					
NORMAL	UPSET	BY	CHKD	REMARKS	REV
PSIG	F	PSIG	F	TIME	
125	70	175	150		

- NOTES:
1. ALL VALVES, INSTRUMENTS AND SPECIALTIES SHOWN IN COMMON BUILDINGS HAVE THE PREFIX 1P54-1. VALVES SHOWN OTHERWISE HAVE THE PREFIX 2P54-1. VALVES SHOWN OTHERWISE HAVE THE PREFIX 1P54-1. VALVES SHOWN OTHERWISE HAVE THE PREFIX 2P54-1.
  2. PIPING INSTALLATION PER SPECIFICATIONS SP-45-4549-00. SP-45-4549-00, AND SP-01-1549-00, AS NOTED.
  3. THE SYMBOL DESIGNATES THOSE NON-SAFETY AREAS OF THE SYSTEM WHERE THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF THE SP-45-4549-00, THE INTERIOR AND INSTRUMENT AIR LINES ARE NOT PART OF THE DEFINED QUALITY ASSURANCE PROGRAM.
  4. FOR VALVE CHART, SEE DWG. 914-0012-00000.
  5. ALARM SIGNALS FROM VALVES AND FROM PANELS ARE RECEIVED AT THE SECONDARY ALARM STATION.
  6. COMPONENTS BEYOND THIS POINT ARE ABANDONED, RETIRED IN PLACE PER TAF 81003.
  7. REACTOR BUILDING STANDPIPE SYSTEM PIPING INSIDE CONTAINMENT DURING OPERATIONS. PIPING INSIDE IS DRAINAGE UP TO THE DRAINAGE CONTAINMENT ISOLATION VALVE. PIPING INSIDE IS DRAINAGE UP TO THE DRAINAGE CONTAINMENT ISOLATION VALVE. PIPING INSIDE IS DRAINAGE UP TO THE DRAINAGE CONTAINMENT ISOLATION VALVE.
  8. (BS) UNIT 1/2 BOUNDARY SEPARATION, FOR DETAILS SEE TAF 81003.
  9. (BS) LICENSE RENEWAL LEAKAGE BOUNDARY, FOR DETAILS SEE ECP 14-9405.
  10. (BS) ABANDONED SEC'S OUTSIDE THE SCOPE OF LICENSE RENEWAL, FOR DETAILS SEE ECP 14-9405.
  11. (BS) ABANDONED SEC'S OUTSIDE THE SCOPE OF LICENSE RENEWAL, FOR DETAILS SEE ECP 14-9405.
  12. (BS) LICENSE RENEWAL LEAKAGE BOUNDARY, FOR DETAILS SEE ECP 14-9405.
  13. (BS) ABANDONED SEC'S OUTSIDE THE SCOPE OF LICENSE RENEWAL, FOR DETAILS SEE ECP 14-9405.
  14. COMPONENTS BEYOND THIS POINT ARE OUTSIDE THE SCOPE OF LICENSE RENEWAL.

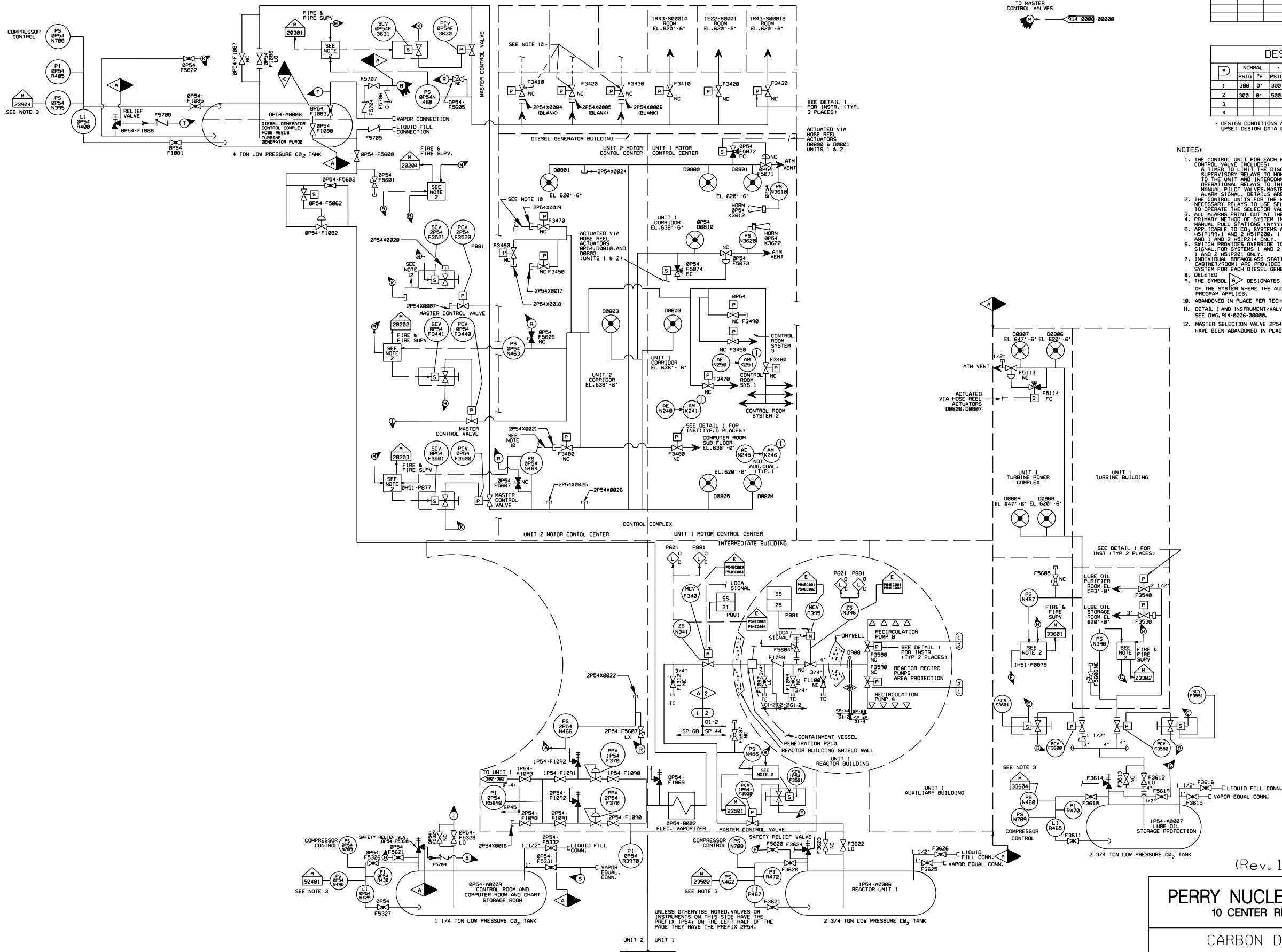
(REV. 19 10/2015)

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

FIRE SERVICE  
WATER (NUCLEAR PLANT)  
FIGURE 9.5-3  
(DWG. D-914-0003-00000)

- REFERENCES:
- 302-0242-00000 SERVICE AIR DISTRIBUTION SYSTEM P51
  - 302-0742-00000 EMERGENCY SERVICE WATER SYSTEM P45
  - 914-0001-00000 FIRE SERVICE YARD AREA P54
  - 914-0002-00000 FIRE SERVICE WATER P54
  - 914-0003-00000 FIRE SERVICE WATER TECHNICAL SUPPORT CENTER SERVICE WELDING AND CONTROL COMPLEX P54
  - 914-0010-00000 FIRE SERVICE WATER DELUGE SYSTEMS TAGGING DATA P54
  - 914-0018-00000 FIRE SERVICE WATER FIRE ACTION AND MET SYSTEMS TAGGING DATA P54
  - 914-0051-00000 FIRE SERVICE WATER P54

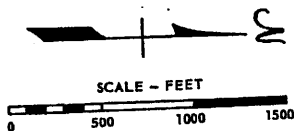
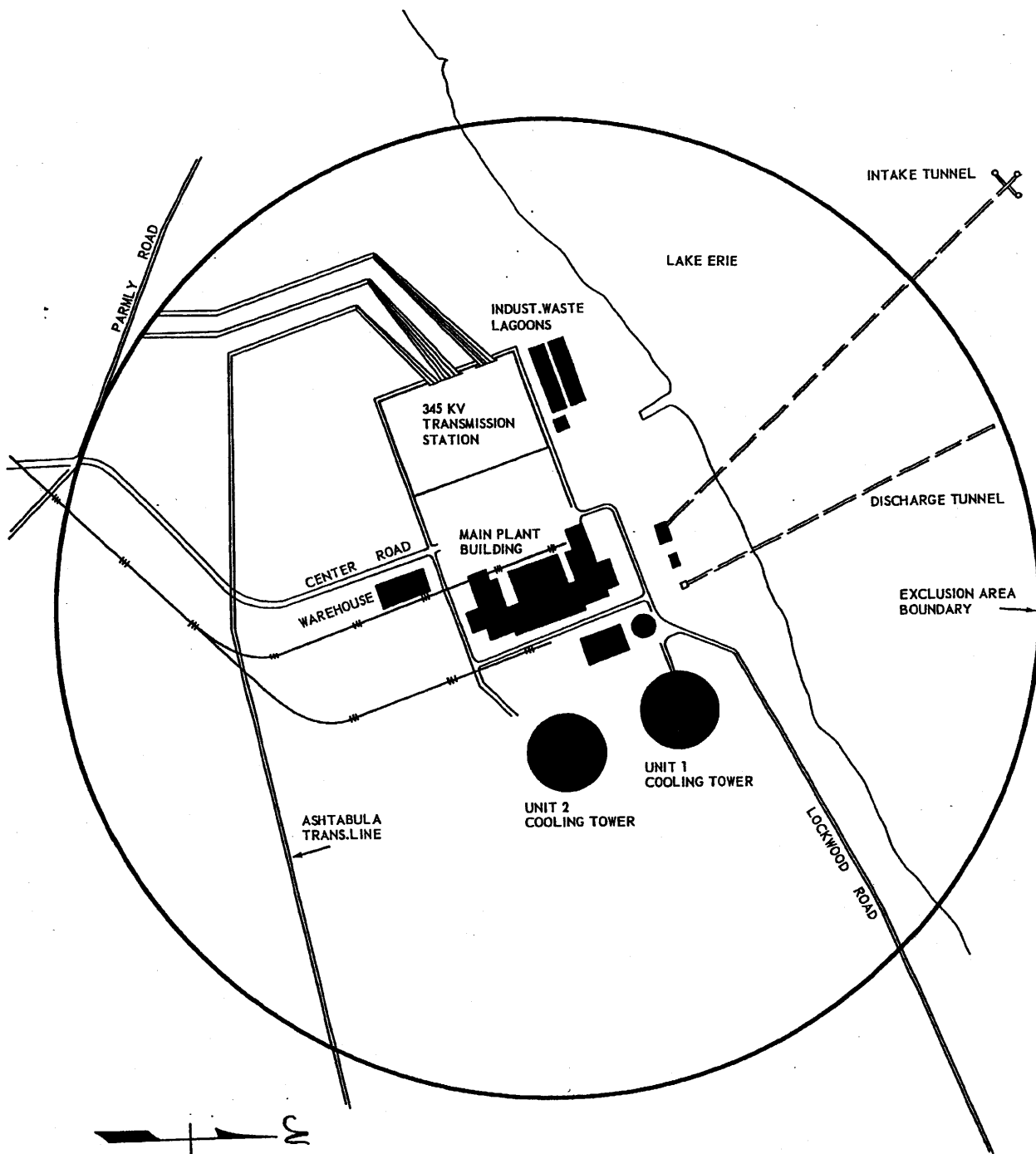




OPERATING DATA						
	PSIG	GPM	"F	BY	REMARKS	REV
1	300		0"			
2	300		0"			
3						
4						

DESIGN DATA						
	NORMAL	UPSET	TIME	BY	CHKD	REV
1	PSIG	"F				
2	300	0"	300			
3	300	0"	500			
4						

- NOTES:
1. THE CONTROL UNIT FOR EACH HAZARD AREA SELECTOR CONTROL VALVE INCLUDES:  
A. TIMERS TO LIMIT THE DISCHARGE PERIOD  
B. SUPERVISORY RELAYS TO MONITOR POWER SUPPLY TO THE UNIT AND INTERCONNECTING CIRCUITRY AND OPERATIONAL RELAYS TO INITIATE OPERATION OF THE ELECTRO-MANUAL PILOT VALVES, MASTER VALVES, AND INITIATE A FIRE ALARM SIGNAL. DETAILS ARE SHOWN ON VENDOR DWG.
  2. THE CONTROL UNITS FOR THE MASTER CONTROL VALVES HAVE NECESSARY RELAYS TO USE SELECTOR VALVE CONTROL UNIT SIGNALS TO OPERATE THE SELECTOR VALVES. DETAILS SHOWN ON VENDOR DWG.
  3. ALL ALARMS PRINT OUT AT THE SECONDARY ALARM STATION. PRIMARY METHOD OF SYSTEM INITIATION SHALL BE BY THE LOCAL MANUAL PULL STATIONS (NITYT-6).
  4. APPLICABLE TO CO<sub>2</sub> SYSTEMS ASSOCIATED WITH PANELS 1 AND 2, H51P19, 1 AND 2 H51P20, 1 AND 2 H51P21, 1 AND 2 H51P22, 1 AND 2 H51P23, 1 AND 2 H51P24, 1 AND 2 H51P25, 1 AND 2 H51P26, 1 AND 2 H51P27, 1 AND 2 H51P28, 1 AND 2 H51P29, 1 AND 2 H51P30, 1 AND 2 H51P31, 1 AND 2 H51P32, 1 AND 2 H51P33, 1 AND 2 H51P34, 1 AND 2 H51P35, 1 AND 2 H51P36, 1 AND 2 H51P37, 1 AND 2 H51P38, 1 AND 2 H51P39, 1 AND 2 H51P40, 1 AND 2 H51P41, 1 AND 2 H51P42, 1 AND 2 H51P43, 1 AND 2 H51P44, 1 AND 2 H51P45, 1 AND 2 H51P46, 1 AND 2 H51P47, 1 AND 2 H51P48, 1 AND 2 H51P49, 1 AND 2 H51P50, 1 AND 2 H51P51, 1 AND 2 H51P52, 1 AND 2 H51P53, 1 AND 2 H51P54, 1 AND 2 H51P55, 1 AND 2 H51P56, 1 AND 2 H51P57, 1 AND 2 H51P58, 1 AND 2 H51P59, 1 AND 2 H51P60, 1 AND 2 H51P61, 1 AND 2 H51P62, 1 AND 2 H51P63, 1 AND 2 H51P64, 1 AND 2 H51P65, 1 AND 2 H51P66, 1 AND 2 H51P67, 1 AND 2 H51P68, 1 AND 2 H51P69, 1 AND 2 H51P70, 1 AND 2 H51P71, 1 AND 2 H51P72, 1 AND 2 H51P73, 1 AND 2 H51P74, 1 AND 2 H51P75, 1 AND 2 H51P76, 1 AND 2 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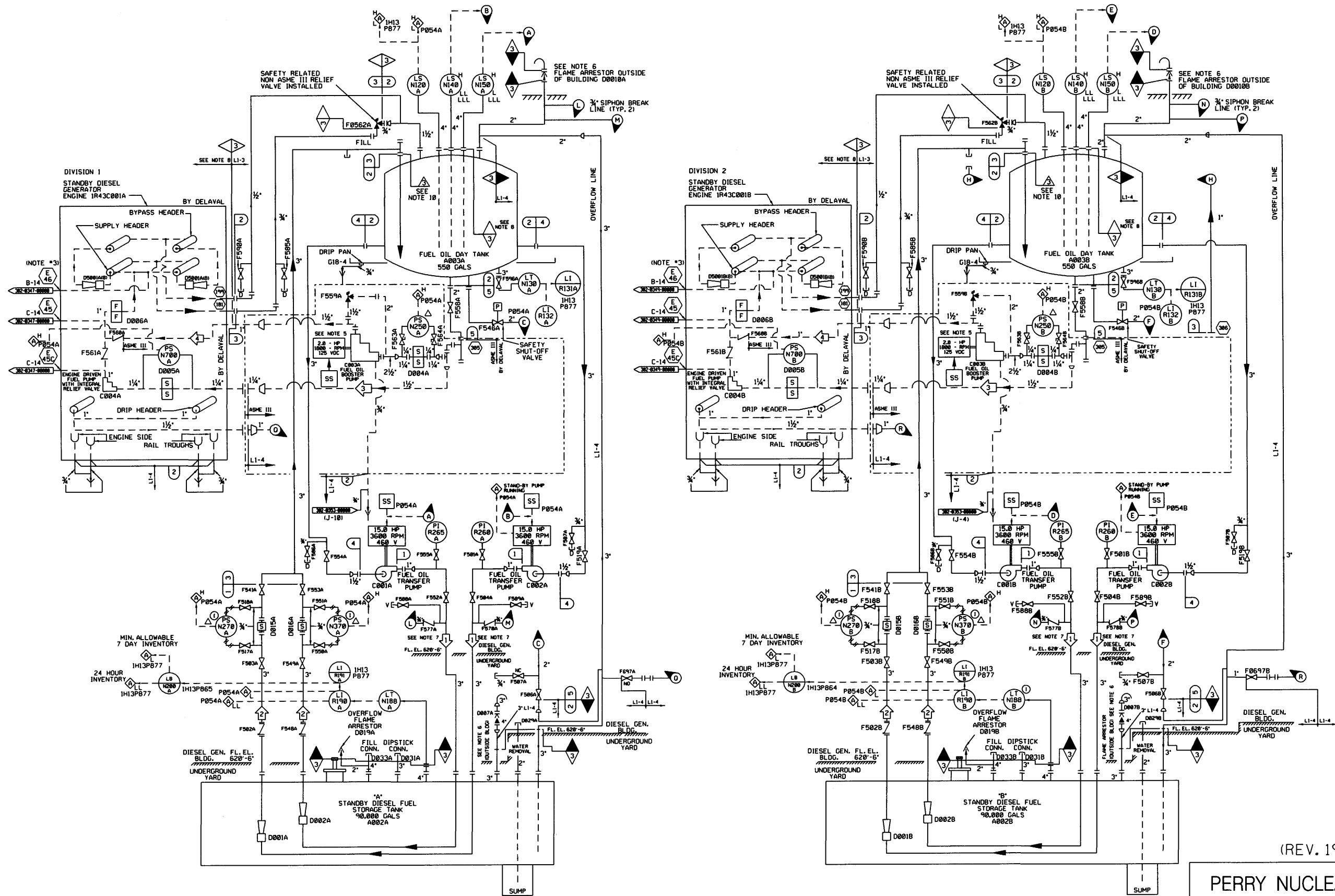
(Rev. 12 1/03)



## PERRY NUCLEAR POWER PLANT

Exclusion Area, Boundary Layout

Figure 9.5-7



OPERATING DATA						
	PSIG	GPM	F	BY	REMARKS	REV
1	75	90	100			
2	15	135	90			
3	10	35	100			
4	40	35	100			

DESIGN DATA						
ID	NORMAL	PSIG	F TIME	BY	CHKD	REMARKS
1	100	110	NA	NA	JAB	JN
2	ATM	110	NA	NA	JAB	JN
3	50	110	NA	NA	JAB	JN
4	5	110	NA	NA	JAB	JN
5	15	110	NA	NA	JAB	JN

- REFERENCES:
- 302-0347-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0353-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0349-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0357-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0358-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0359-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0360-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0361-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0362-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0363-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0364-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0365-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0366-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0367-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0368-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0369-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0370-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0371-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0372-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0373-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0374-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0375-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0376-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0377-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0378-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0379-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0380-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0381-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0382-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0383-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0384-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0385-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0386-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0387-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0388-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0389-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0390-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0391-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0392-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0393-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0394-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0395-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0396-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0397-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0398-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0399-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
  - 302-0400-000000 STANDBY DIESEL-ENGINE CONTROL PANEL 1R43
- NOTES:
- ALL PIPING SHALL BE AS PER LINE SPECIFICATION LI-3 UNLESS OTHERWISE NOTED.
  - ALL PANELS CARRY PREFIX NSI EXCEPT AS NOTED.
  - CONNECTIONS ON ENGINE PNEUMATIC BULKHEAD.
  - DELETED.
  - MOTOR NOT SAFETY RELATED.
  - VENTS SO NOTED SHALL BE NOT LESS THAN 12' ABOVE SURFACE.
  - THE POINT OF ATTACHMENT OF THE 3" SIPHON BREAK LINE TO THE 3" PUMP DISCHARGE LINE SHALL BE NO LESS THAN 1' ABOVE THE TOP OF THE DAY TANK.
  - SAFETY RELATED NON-ASME.
  - PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING REPRESENTS THE MOST COMMON OPERATING CONDITION AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.
  - VENDOR SUPPLIED ASME SECTION III PIPING.

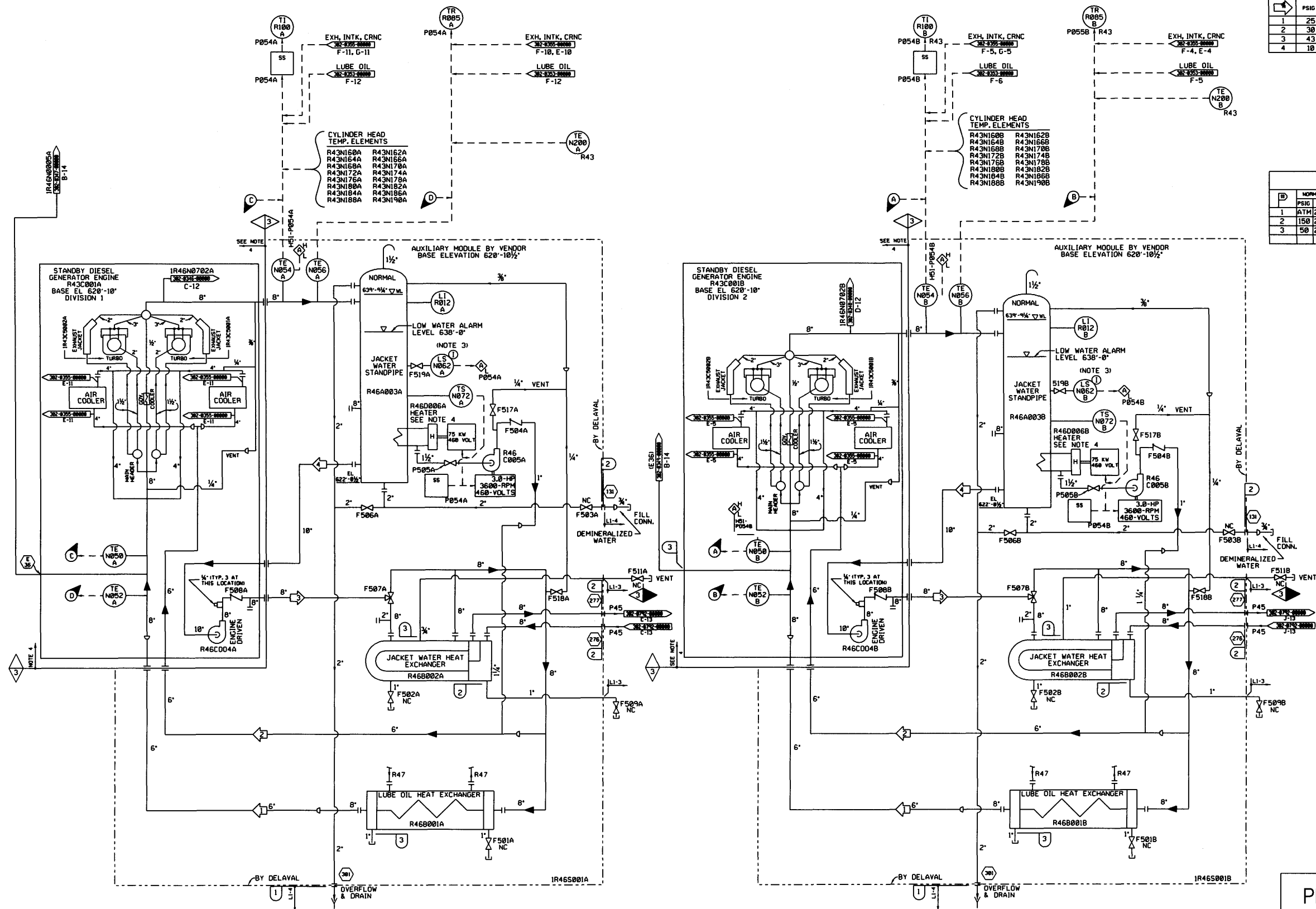
(REV. 19 10/2015)

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

**STANDBY DIESEL GENERATOR**  
**FUEL OIL SYSTEM**  
**FIGURE 9.5-8**  
(DWG. D-302-0352-00000)

OPERATING DATA						
SEE NOTE 6						
	PSIG	GPM	°F	BY	REMARKS	REV
1	25	900	155	JAB		
2	30	900	148	JAB		
3	43	1800	168	MLC	NOTE 5	A
4	10	1800	168	MLC	NOTE 5	A

DESIGN DATA						
ID	NORMAL	UPSET	BY	CHKD	REMARKS	REV
1	PSIG	F	PSIG	F	TIME	
1	ATM	200	N/A			JAB JN
2	150	200	N/A			JAB JN
3	50	200	N/A			



- REFERENCES:
- 09-810-75051 DELAY PIPING SCHEMATIC
  - 09-810-75051 ENGINE PNEUMATIC SCHEMATIC
  - 09-500-75051 CONTROL PANEL SCHEMATIC
  - 09-688-75051 ENGINE AND SKID ELECTRICAL SCHEMATIC
  - 302-0792-00000 EMERGENCY SERVICE WATER SYSTEM P45
  - 302-0353-00000 STANDBY DIESEL GENERATOR LUBE OIL R47
  - 302-0355-00000 MPES & STANDBY DIESEL GENERATOR EXHAUST, INTAKE & CRANKCASE R46/E22
  - 302-0346-00000 STANDBY DIESEL ENGINE MOUNTED PIPING IR43C001A DIV. 1 IR34
  - 302-0347-00000 STANDBY DIESEL ENGINE CONTROL PANEL IR43C001A DIV. 1 IR34
  - 302-0348-00000 STANDBY DIESEL ENGINE MOUNTED PIPING IR43C001B DIV. 2 IR43
  - 302-0349-00000 STANDBY DIESEL ENGINE CONTROL PANEL IR43C001B DIV. 2 IR43

- NOTES:
- DELETED
  - DELETED
  - LS N062A AND B MUST BE LOCATED 20" BELOW CENTER LINE OF JACKET WATER INLET FLANGE ON STANDPIPE.
  - SAFETY RELATED, NON-ASME.
  - JACKET WATER OPERATING TEMPERATURE RANGE IS 158°F TO 168°F.
  - PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA PRESSURES, TEMPERATURES, AND FLOWS PROVIDED ON THIS DRAWING REPRESENTS THE MOST COMMON OPERATING CONDITION AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.

(REV. 19 10/2015)

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

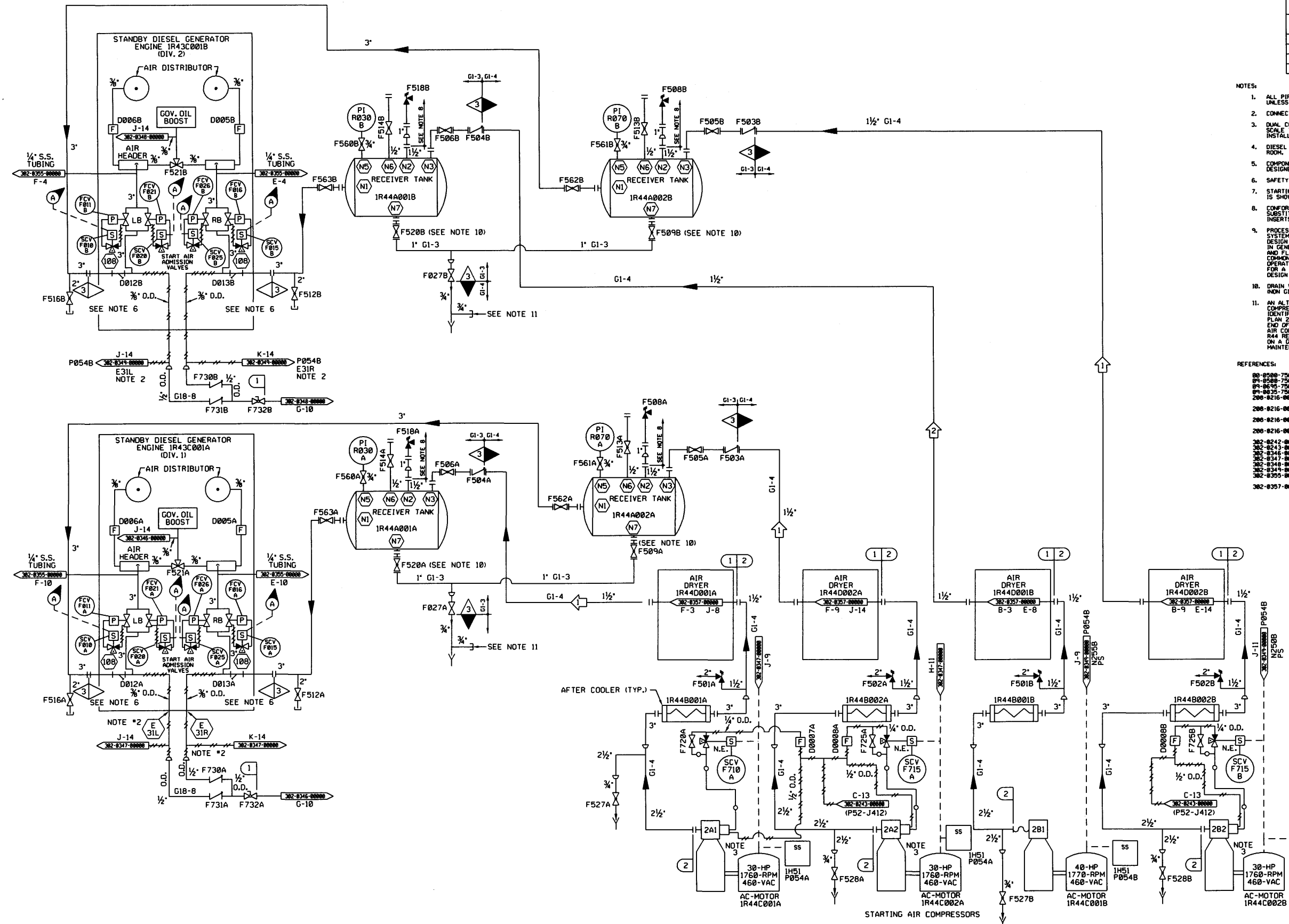
STANDBY DIESEL  
GENERATOR, JACKET WATER  
FIGURE 9.5-9  
(DWG. D-302-0354-00000)



DIV. 1 208-0216-00005 & 00007  
 DIV. 2 208-0216-00006 & 00008  
 DIESEL START SIGNAL  
 8 PLACES

OPERATING DATA						
SEE NOTE 9						
#	CFM	PSIA	"F	BY	REMARKS	REV
1	84	250	122"			
2	87	250	122"			

DESIGN DATA						
#	NORMAL	UPSET	BY	CHKD	REMARKS	REV
1	275	150	-	-	-	JN
2	300	150	-	-	-	-



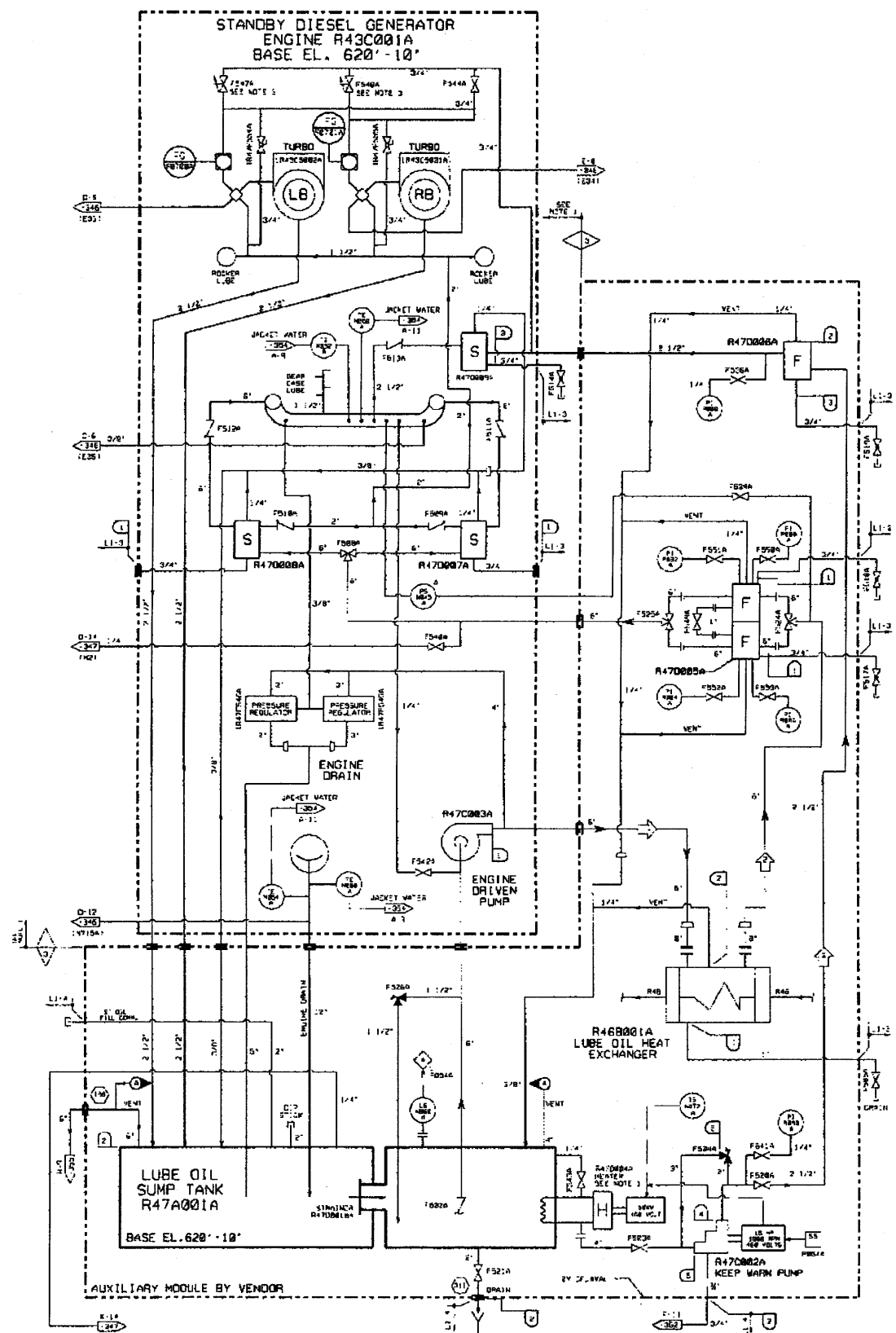
- NOTES:
- ALL PIPING SHALL BE AS PER LINE SPECIFICATION G1-3 UNLESS OTHERWISE NOTED.
  - CONNECTIONS ON ENGINE PNEUMATIC BULKHEAD.
  - DUAL CONTROL COMPONENT CONTAINS PRESSURE SWITCH, SCALE TRIP, PLUS BOOSTER AND RELAY VALVE. FOR INSTALLATION, SEE VENDOR DRAWING.
  - DIESEL GENERATOR GENERAL TROUBLE ALARM IN CONTROL ROOM.
  - COMPONENTS ON THE DIESEL GENERATOR SKID ARE DESIGNED TO DEMO STANDARDS.
  - SAFETY RELATED, NON-ASME DIESEL MFR'S STANDARD.
  - STARTING AIR SYSTEM FOR HPCS DIESEL GENERATOR IS SHOWN ON SYSTEM DIAGRAM 302-0350-00000.
  - CONFORMS TO LINE SPECIFICATION G1-3 EXCEPT FOR SUBSTITUTION OF 3000# SOCKET WELDING REDUCING INSERTS IN LIEU OF 8000# INSERTS.
  - PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING REPRESENTS THE MOST COMMON OPERATING CONDITION AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP. TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.
  - DRAIN VALVES ARE CLASS 300 STAINLESS STEEL INDN G1-3 P.S.
  - AN ALTERNATE AIR SUPPLY SOURCE (I.E. TEMPORARY AIR COMPRESSOR) FOR THE R44 SYSTEM MEETING THE REQUIREMENTS IDENTIFIED IN EDP 13-0509 AND INSTALLED PER MAINTENANCE PLAN 210677 CAN BE CONNECTED TO THE R44 SYSTEM AT THE END OF THE RECEIVER TANK DRAIN LINE. AN ALTERNATE BACKUP AIR COMPRESSOR CAN BE USED PER 501-R44 TO RECHARGE THE R44 RECEIVER TANKS IN SITUATIONS WHERE BOTH COMPRESSORS ON A GIVEN DIVISION BECOME UNAVAILABLE DUE TO SYSTEM MAINTENANCE AND/OR DEGRADED PERFORMANCE.

- REFERENCES:
- 00-0500-75051 CONTROL PANEL INSTALLATION
  - 00-0500-75051 DELAYAL CONTROL PANEL SCHEMATIC
  - 00-0500-75051 DELAYAL ENGINE PNEUMATIC SCHEMATIC
  - 00-0500-75051 DELAYAL STARTING AIR PIPING SCHEMATIC
  - 200-0216-00005 STANDBY DIESEL ENGINE CONTROL PANEL
  - 200-0216-00006 STANDBY DIESEL ENGINE CONTROL PANEL
  - 200-0216-00007 STANDBY DIESEL ENGINE CONTROL PANEL
  - 200-0216-00008 STANDBY DIESEL ENGINE CONTROL PANEL
  - 200-0216-00009 STANDBY DIESEL ENGINE CONTROL PANEL
  - 302-0242-00000 SERVICE AIR DISTRIBUTION DIAGRAM
  - 302-0243-00000 INSTRUMENT AIR
  - 302-0246-00000 STANDBY DIESEL ENGINE MOUNTED PIPING
  - 302-0347-00000 STANDBY DIESEL - ENGINE CONTROL PANEL
  - 302-0348-00000 STANDBY DIESEL - ENGINE MOUNTED PIPING
  - 302-0349-00000 STANDBY DIESEL - ENGINE CONTROL PANEL
  - 302-0350-00000 HPCS AND STANDBY DIESEL GENERATOR EXHAUST, INTAKE AND CRANKCASE
  - 302-0357-00000 DIV 1 & DIV 2 DIESEL AIR DRYER
  - 302-0357-00000 DIAGRAMS 1R44-0001A & B AND 1R44-0002A & B

(REV. 19 10/2015)

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

PIPING SYSTEM DIAGRAM,  
R-44, STANDBY DIESEL  
GENERATOR STARTING AIR  
FIGURE 9.5-10  
(DWG. D-302-0351-00000)

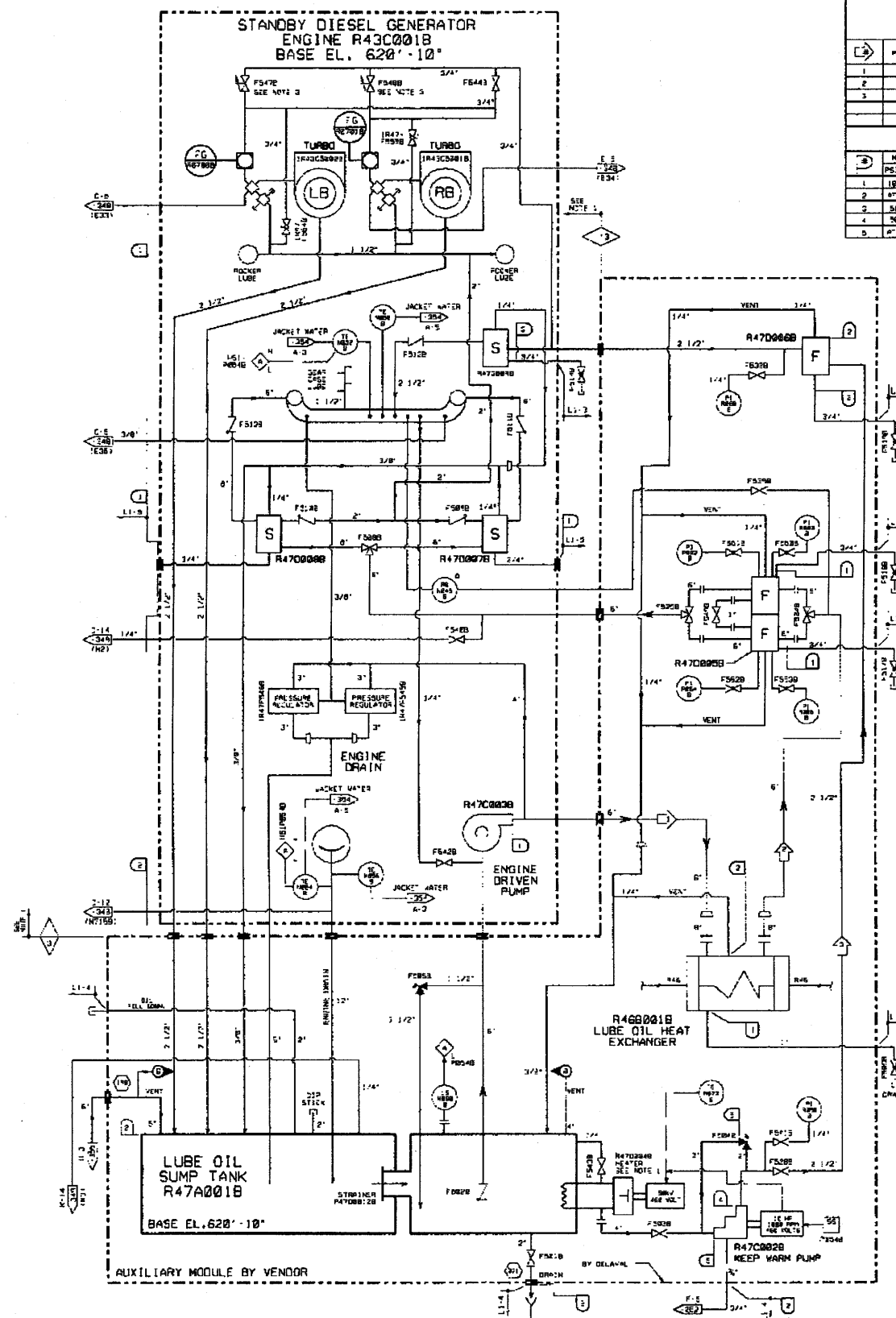


REFERENCES:

- 35-B10-70001 DELTA PIPING SCHEMATIC
- 35-B10-70002 ENGINE PNEUMATIC SCHEMATIC
- 35-B10-70003 CONTROL PANEL SCHEMATIC
- 35-B10-70004 ENGINE AND GYRO ELECTRICAL SCHEMATIC
- 35-B10-70005 STANDBY DIESEL GENERATOR JACKET WATER

NOTES:

- SAFETY RELATED NON-ASME.
- PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SHEET SHOULD BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA SHOULD BE USED TO OPERATE AND MAINTAIN THE SYSTEM. THE DESIGN BASIS INFORMATION IS THE MOST CURRENT OPERATING CONDITION AND/OR SYSTEM MODE. OPERATING AND MAINTENANCE DATA SHOULD BE USED TO OPERATE AND MAINTAIN THE SYSTEM. THE DESIGN BASIS INFORMATION IS THE MOST CURRENT OPERATING CONDITION AND/OR SYSTEM MODE. OPERATING AND MAINTENANCE DATA SHOULD BE USED TO OPERATE AND MAINTAIN THE SYSTEM.
- VALVE IS THROTTLED TO PRESET CONDITIONS.

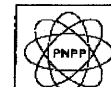


OPERATING DATA						
SEE NOTE 1						
ITEM	PSIG	SPM	°F	BY	REMARKS	REV
1	70	500	150	JMB		
2	60	500	150	JMB		
3	15	40	150			

DESIGN DATA						
ITEM	NORMAL	PSIG	SPM	°F	BY	REV
1	100	500	150	JMB		
2	80	500	150	JMB		
3	15	40	150			
4	10	40	150			
5	10	40	150			

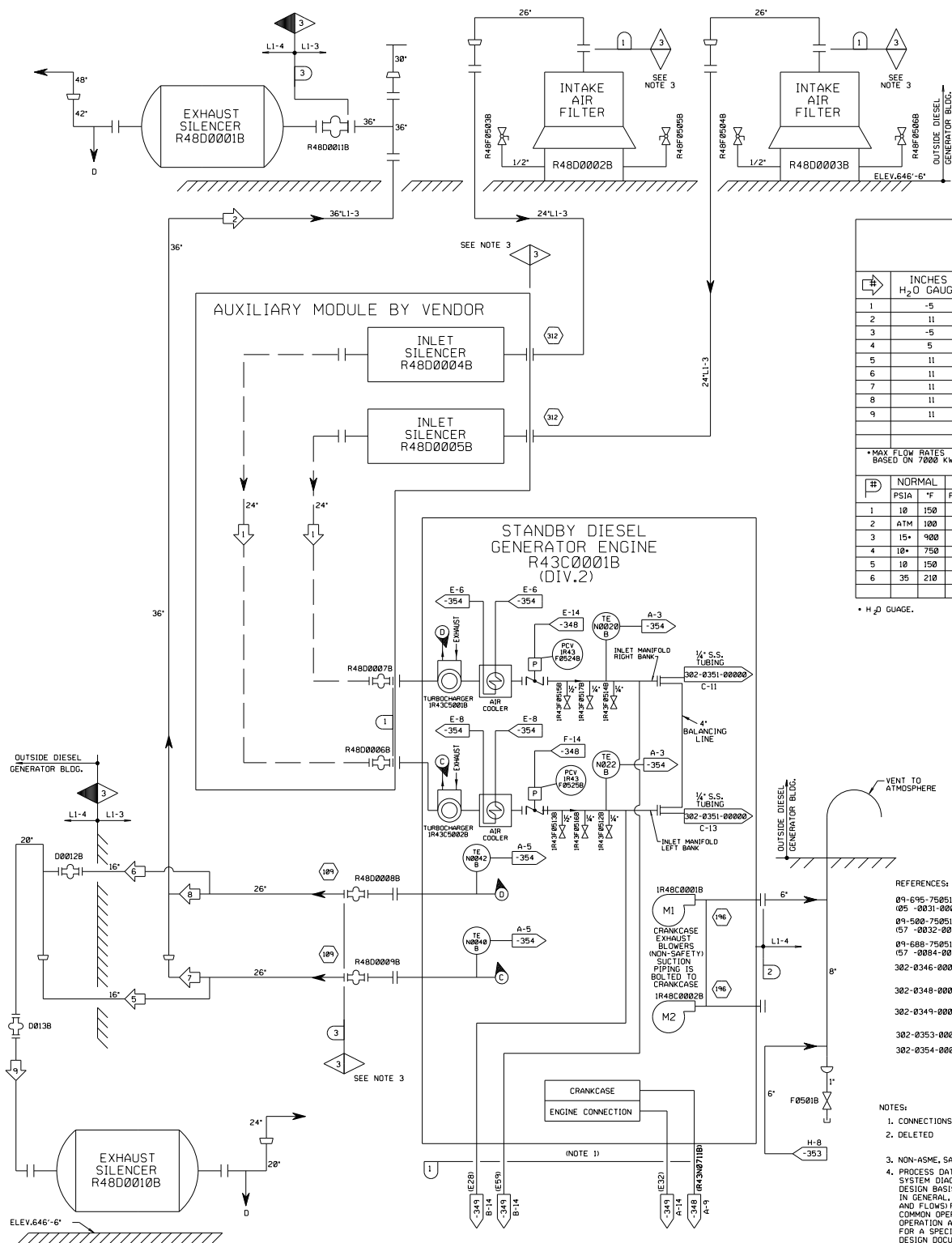
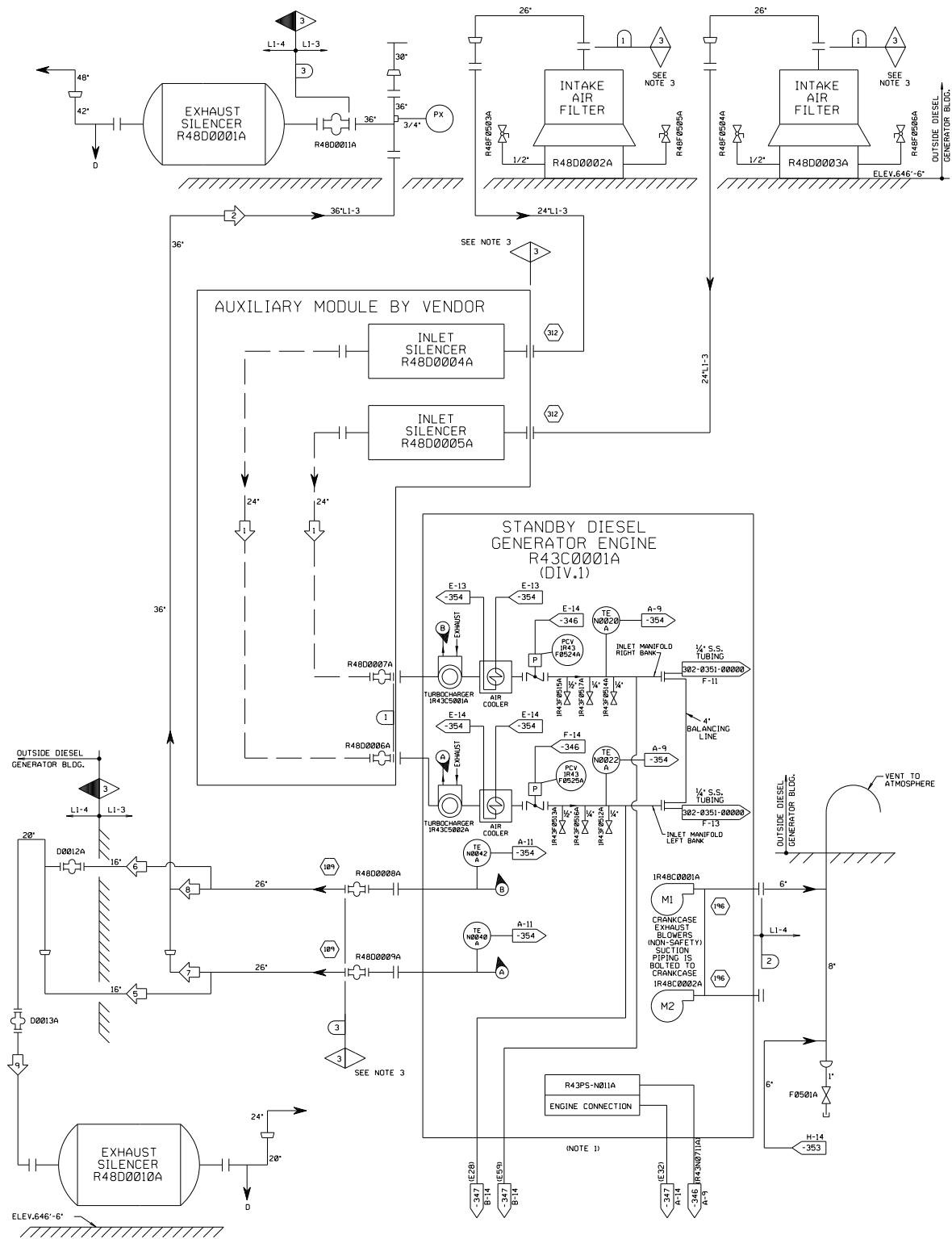
(Rev. 14 10/05)



**PERRY NUCLEAR POWER PLANT**

Standby Diesel Generator,  
Lube Oil

Figure 9.5-11  
(Dwg. D-302-353)



OPERATING DATA					
SEE NOTE 4					
#	INCHES H <sub>2</sub> O GAUGE	ACFM	SCFM	*F	REMARKS
1	-5	14,078	104		SCFM
2	11	+56,700	850		ACFM
3	-5	10,700	104		ACFM
4	5	23,000	735		ACFM
5	11	+4,400	850		ACFM
6	11	+10,000	850		ACFM
7	11	+30,500	850		ACFM
8	11	+25,200	850		ACFM
9	11	+20,200	850		ACFM

\* MAX FLOW RATES  
BASED ON 7000 KW

#### DESIGN DATA

#	NORMAL		UPSET			REMARKS
	PSIA	*F	PSIG	*F	T	
1	10	150	NA	NA	NA	* 25 "USED FOR STRUCTURAL ANALYSIS OF PIPING"
2	ATM	100	NA	NA	NA	
3	15*	900	NA	NA	NA	
4	10*	750	NA	NA	NA	
5	10	150	NA	NA	NA	
6	35	210	NA	NA	NA	

\* H<sub>2</sub>O GAUGE.

#### REFERENCES:

- 09-695-75051 DELAVAL ENGINE PNEUMATIC SCHEMATIC (05 -0031-00000)
- 09-500-75051 DELAVAL CONTROL PANEL SCHEMATIC (57 -0032-00001 THRU 57 -0032-00010)
- 09-688-75051 DELAVAL ENGINE AND SKID ELECTRICAL SCHEMATIC (57 -0004-00001 THRU 57 -0004-00009)
- 302-0346-00000 STAND-BY DIESEL ENGINE MOUNTED PIPING (DIVISION I) IR43C0001A
- 302-0348-00000 STAND-BY DIESEL ENGINE MOUNTED PIPING (DIVISION I) IR43C0001B
- 302-0349-00000 STAND-BY DIESEL ENGINE CONTROL PANEL (DIVISION I) IR43C0001B
- 302-0353-00000 STAND-BY DIESEL GENERATOR LUBE OIL
- 302-0354-00000 STAND-BY DIESEL GENERATOR JACKET WATER

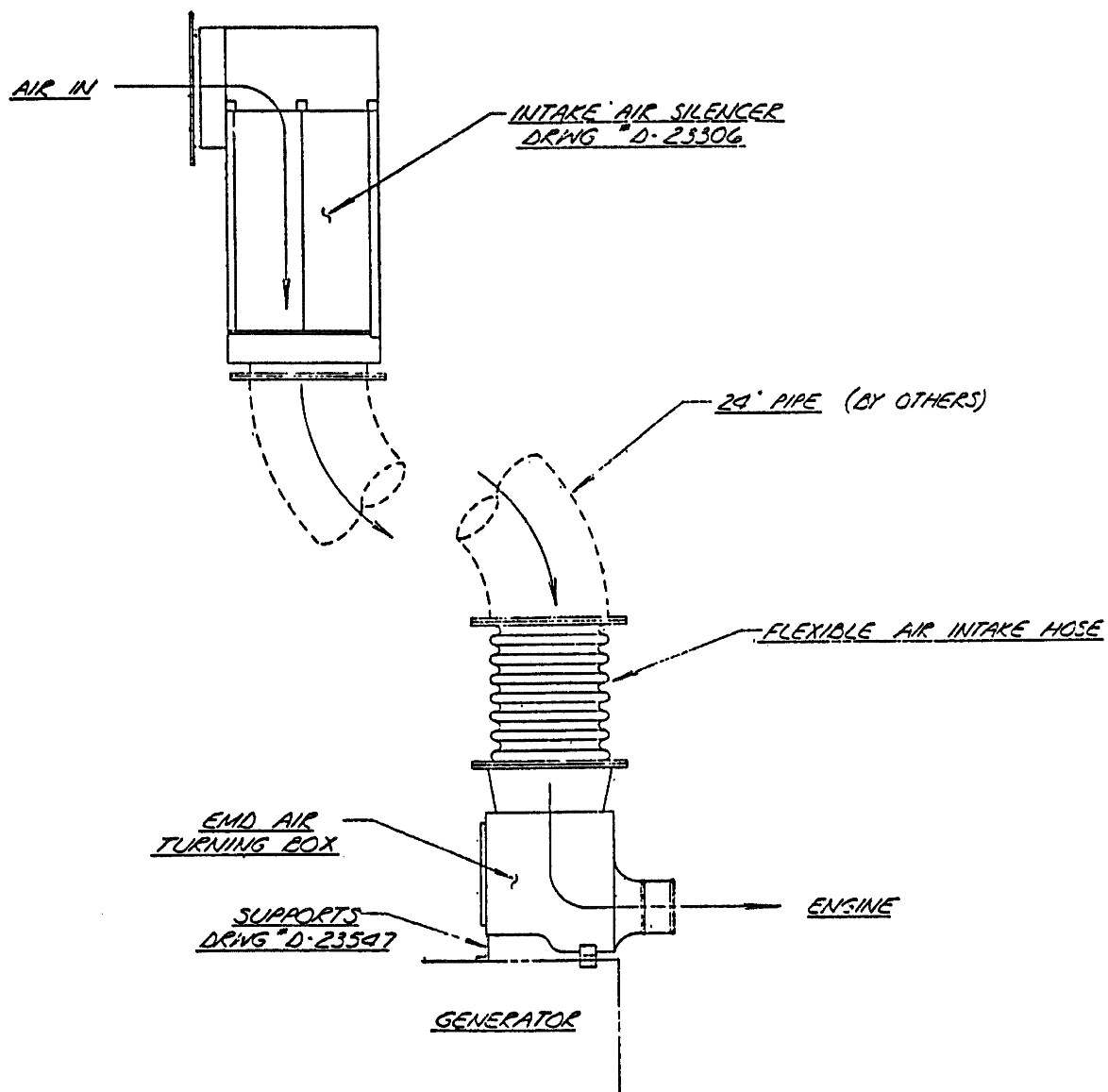
#### NOTES:

- CONNECTIONS ON ENGINE PNEUMATIC BULKHEAD.
- DELETED
- NON-ASME, SAFETY RELATED - DIESEL MFR. STANDARDS.
- PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING, REPRESENTS THE MOST COMMON OPERATING CONDITION, AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP, TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.
- DELETED

(REV. 20 10/2017)

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

STANDBY DIESEL GENERATOR EXHAUST,  
INTAKE AND CRANKCASE  
FIGURE 9.5-12  
(DWG. D-302-0355-00000)

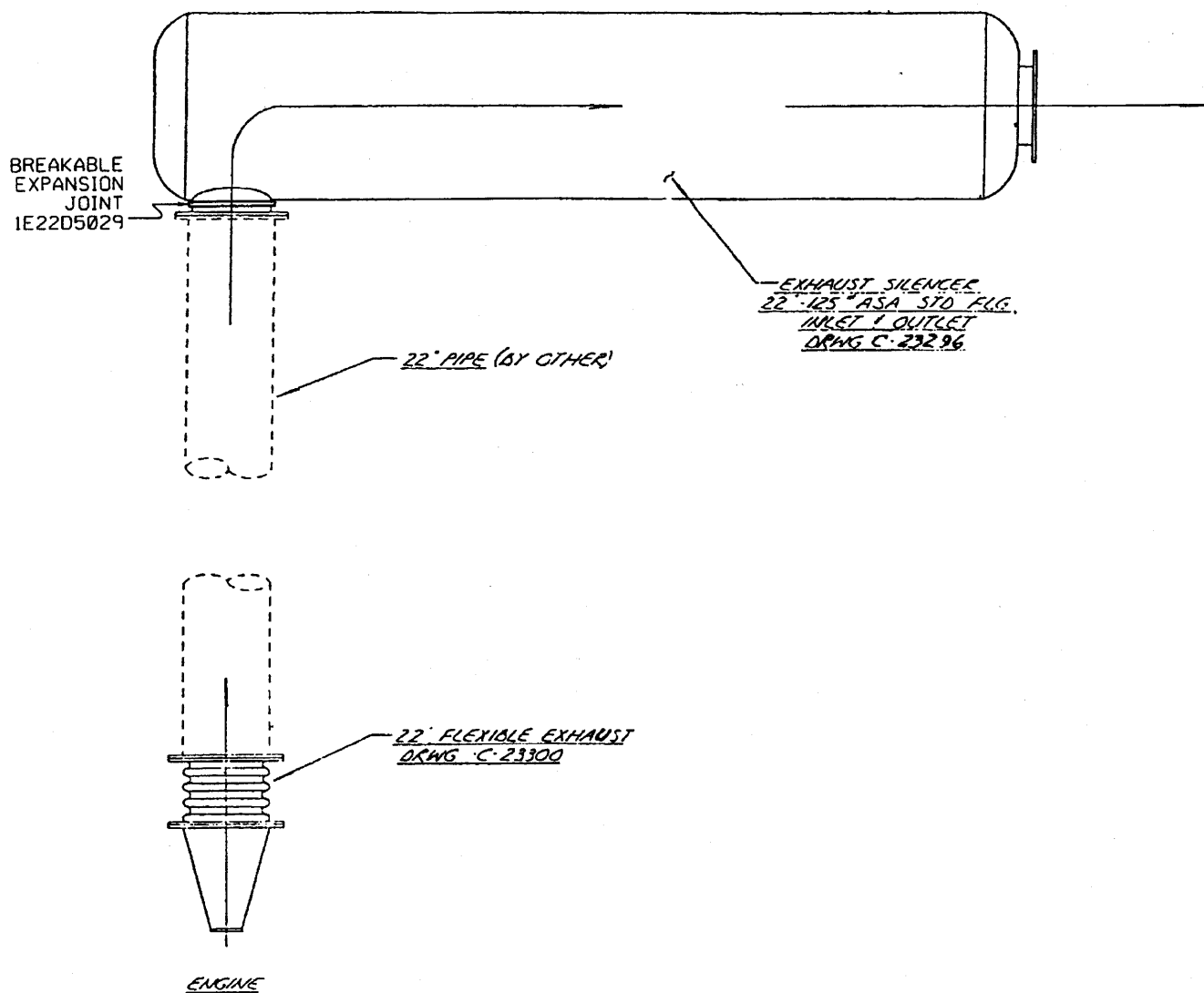


(Rev. 18 10/13)

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

G.E. Intake Air System 2600 kW  
Generator Set

Figure 9.5-13



(Rev. 14 10/05)



## PERRY NUCLEAR POWER PLANT

G.E. Exhaust Air System 2600 kW  
Generator Set

Figure 9.5-14

OPERATING DATA						
SEE NOTE 7						
#	PSIG	GPM	F	BY	REMARKS	REV
1	73	90	102			
2	15	135	93			
3	20	4	102			

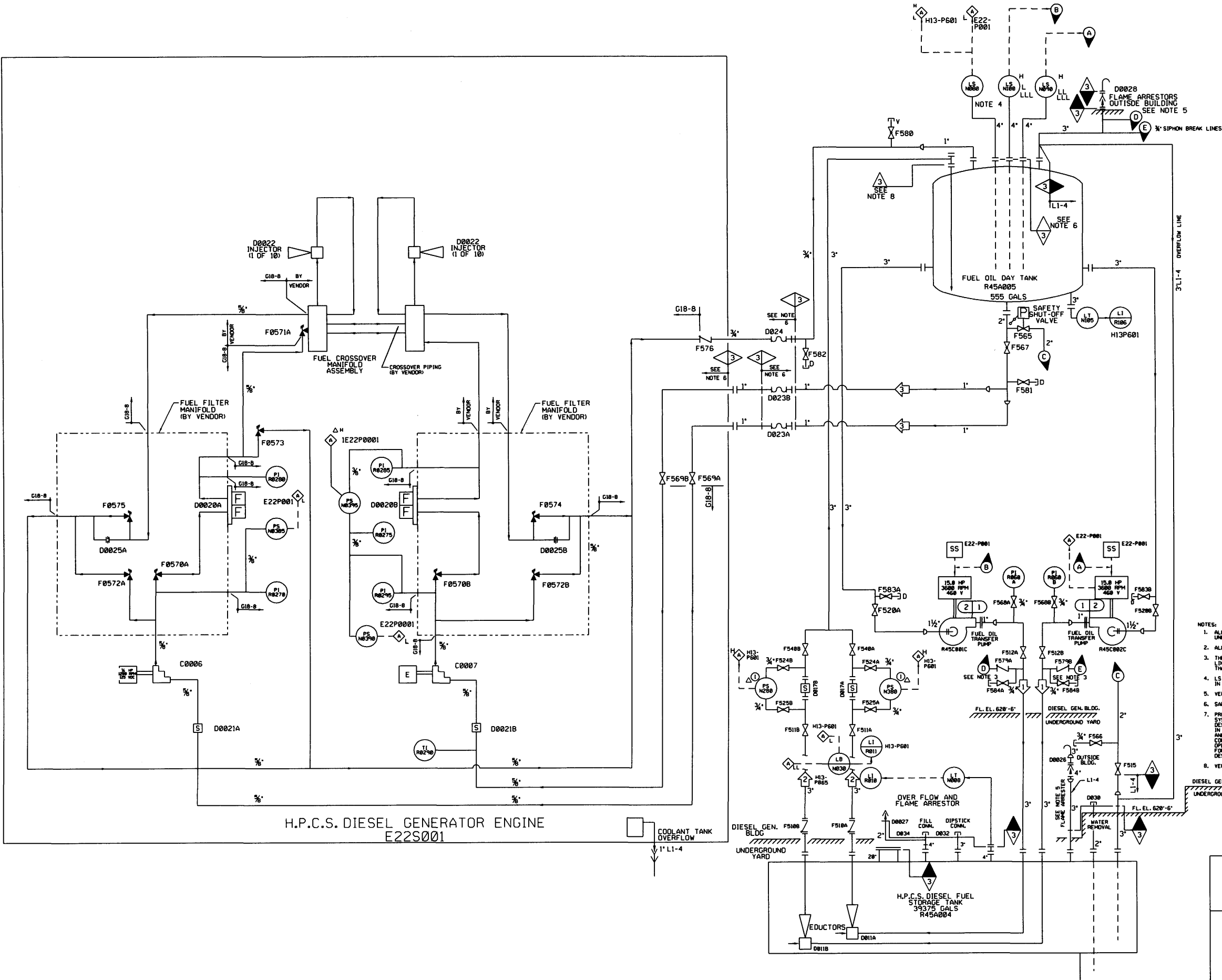
DESIGN DATA						
#	NORMAL	UPSET	BY	CHKD	REMARKS	REV
1	150	110	NA	NA	NA	JJM JCM
2	ATH	110	NA	NA	NA	JJM JCM

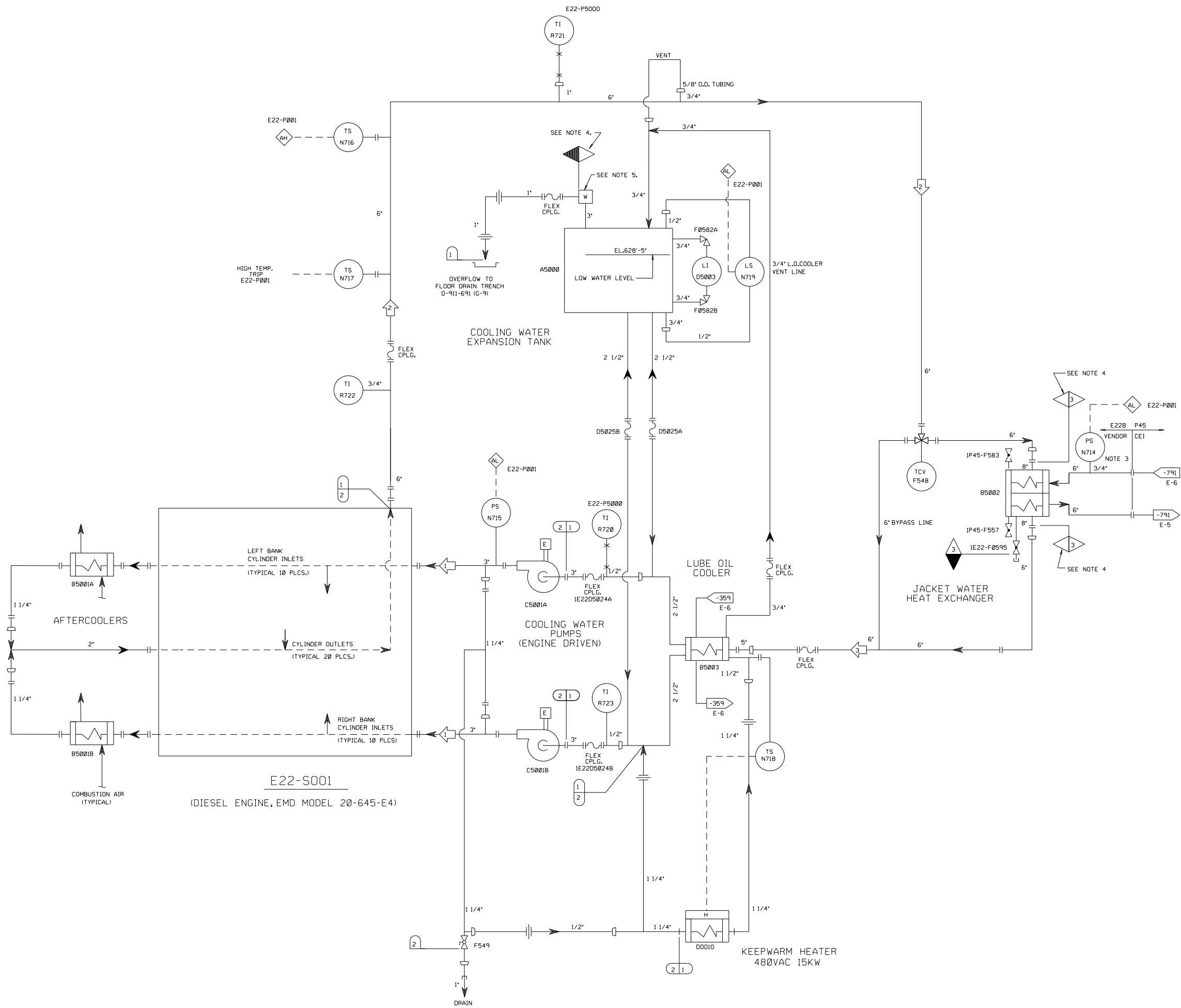
- NOTES:
- ALL PIPING SHALL BE AS PER LINE SPECIFICATION L1-3 UNLESS OTHERWISE NOTED.
  - ALL PANELS CARRY PREFIX H01, EXCEPT AS NOTED.
  - THE POINT OF ATTACHMENT OF THE 3" SIPHON BREAK LINE TO THE 3" PUMP DISCHARGE LINE SHALL BE NO LESS THAN 1' ABOVE THE TOP OF THE DAY TANK.
  - LS N000 ACTIVATES VENDOR SUPPLIED ALARM ON E22P001. IN LIEU OF OG VENDOR SUPPLIED SWITCH S17.
  - VENT SO NOTED SHALL BE NOT LESS THAN 12' ABOVE SURFACE.
  - SAFETY RELATED, NON-ASME.
  - PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING REPRESENTS THE MOST COMMON OPERATING CONDITION AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION. THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.
  - VENDOR SUPPLIED ASME SECTION III PIPING.

(REV. 19 10/2015)

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

HPCS DIESEL GENERATOR  
FUEL OIL SYSTEM  
FIGURE 9.5-15  
(DWG. D-302-0356-00000)





OPERATING DATA						
SEE NOTE 6						
#	PSIG	GPM	*F	BY	REMARKS	REV
1	55	550	165	MLC		-
2	5	1100	175	MLC		-
3	2	1100	165	MLC		-

DESIGN DATA								
#	NORMAL		UPSET			BY	CHKD	REV
	PSIG	* F	PSIG	* F	TIME			
1	5	190	5	200	-	MLC		-
2	70	190	70	200	-	MLC		-

REFERENCES:

302-0001-00000  
302-0791-00000  
302-0359-00000

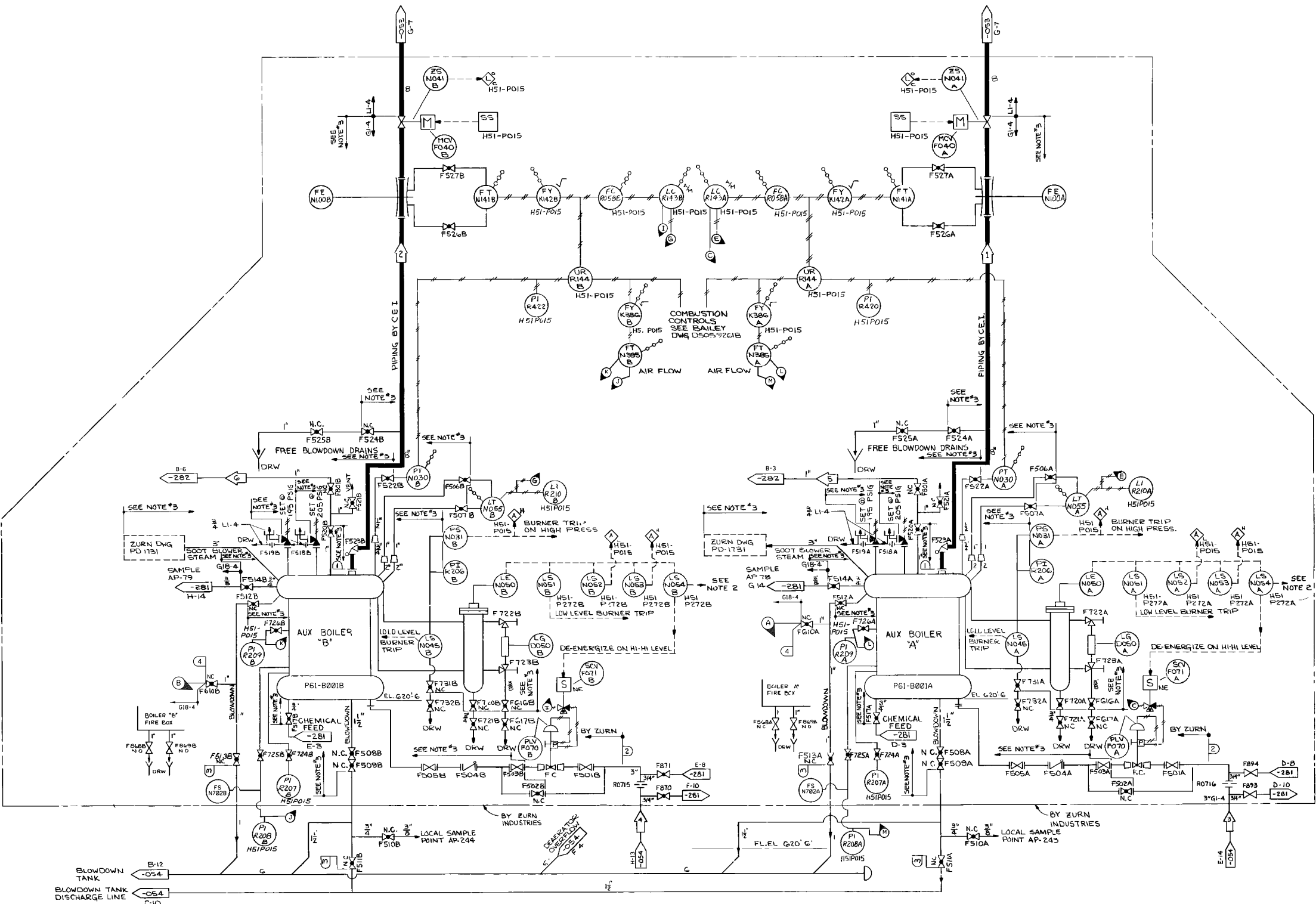
NOTES:

1. DIAGRAM AS SHOWN ON THIS DRAWING HAS BEEN DEVELOPED/ REFORMATED FROM STEWART & STEVENSON DWG.NO.23305. AND G.E.DWG.NO. 945E419.
2. FOR VALVE/PIPING/COMPONENT MATERIAL SPECIFICATION DETAILS REFER TO STEWART & STEVENSON INSTRUCTION AND PARTS MANUAL FOR 2600 KW GENERATOR SET ( FILE 239-G ).
3. REFER TO VALVE LINE-UP DIAGRAM FOR ASSOCIATED VALVE MPL NOS.
4. NON-ASME,SAFETY RELATED DIESEL MANUFACTURER'S STD.
5. [W] INDICATES AUTOMATIC WATER/VAPOR PRESSURE RELIEF DEVICE (FILLER/RELIEF CAP). CAP RELIEF SETPOINT IS 4 PSIG.
6. PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING, REPRESENTS THE MOST COMMON OPERATING CONDITION, AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP. TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.

(REV. 20 10/2017)

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

DIVISION 3 DIESEL JACKET  
WATER COOLING SYSTEM DIAGRAM  
FIGURE 9.5-16  
(DWG. D-302-0360-00000)



OPERATING DATA (NORMAL)

SEE NOTE 4

#	HR	PSIG	°F	BY	REMARKS	V
1	42.6	173	376	KE	BOTH UNITS RUNNING	D
2	0					D
3	105.783	240	227	KE	INTERMITTENT	D
4	0			AA		D
5	1250	175	377	AA		D
6	0			AA		D

OPERATING DATA (UNITS DOWN)

SEE NOTE 4

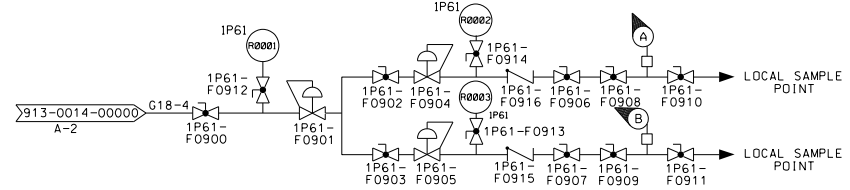
#	HR	PSIG	°F	BY	REMARKS	V
1	100,000	165	373	KE	MAX. DESIGN	D
2	100,000	165	373	KE	MAX. DESIGN	D
3	105.783	240	227	AA	MAX. DESIGN	D
4	105.783	240	227	KE	MAX. DESIGN	D
5	1250	175	377	AA		D
6	1250	175	377	AA		D

DESIGN DATA

#	NORMAL	UPSET	TIME	BY	REMARKS	V
1	195	386	205	390	KE	MAX. DESIGN
2	305	298	305	298	KE	MAX. DESIGN
3	56	298	56	298	MC	MAX. DESIGN
4	150	110	-	-	MC	MAX. DESIGN

- REFERENCES:
- 302-0052-00000 AUXILIARY STEAM P61
  - 302-0053-00000 AUXILIARY STEAM P61
  - 302-0281-00000 AUXILIARY BOILER CHEMICAL TREATMENT P65
  - 302-0241-00000 SERVICE AND INSTRUMENT AIR SUPPLY P51 AND P52
  - 302-0742-00000 LRV - WASTE EVAPORATOR CONDENSER P45
  - H51-P015 AUXILIARY BOILER CONTROL PANEL
  - H51-P272 BURNER - MANAGEMENT PANEL
  - 302-0054-00000 AUXILIARY STEAM P61

- NOTES:
- ENTIRE SYSTEM IN ACCORDANCE WITH LINE SPECIFICATION LI-4, EXCEPT WHERE INDICATED AS GI-4.
  - BOILER "A" HI-HI LEVEL AND BOILER "B" HI-HI LEVEL TRIPS ALL THREE BOILER FEED PUMPS ON DWG. 302-0054-00000.
  - DESIGNED AND FABRICATED IN ACCORDANCE WITH SECTION 1 OF THE ASME BOILER AND PRESSURE VESSEL CODE FROM THE INDICATED POINT TO THE BOILER, HOWEVER, PER ASME SECTION 1-1974, PG. 58.3, THE MATERIALS, DESIGN, FABRICATION, INSTALLATION, AND TESTING OF BOILER EXTERNAL PIPING SHALL BE IN ACCORDANCE WITH ANSI/ASME B31.1, PER ASME B31.1, PARAGRAPH (D.01.3), INSTRUMENTATION IS EXEMPT FROM SECTION 1 CODE REQUIREMENTS WITH EXCEPTION OF TEMPERATURE AND PRESSURE REQUIREMENTS.
  - PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING, REPRESENTS THE MOST COMMON OPERATING CONDITION, AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP. TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.



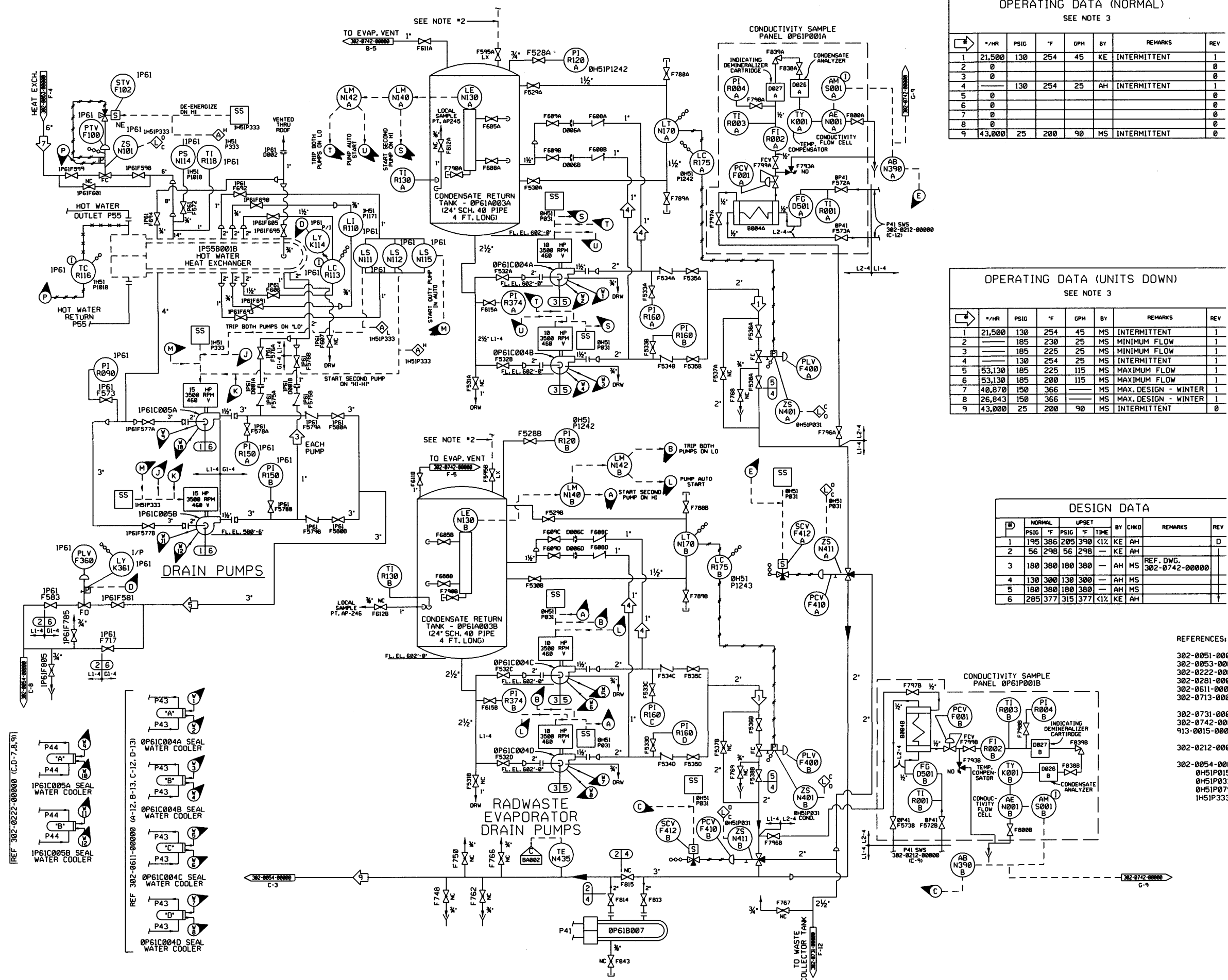
(REV. 20 10/2017)

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

AUXILIARY STEAM

FIGURE 9.5-17  
(DWG. D-302-0051-00000)





OPERATING DATA (NORMAL)  
SEE NOTE 3

#	°/HR	PSIG	°F	GPM	BY	REMARKS	REV
1	21,500	130	254	45	KE	INTERMITTENT	1
2	0						0
3	0						0
4		130	254	25	AH	INTERMITTENT	1
5	0						0
6	0						0
7	0						0
8	0						0
9	43,000	25	200	90	MS	INTERMITTENT	0

OPERATING DATA (UNITS DOWN)  
SEE NOTE 3

#	WHR	PSIG	°F	GPM	BY	REMARKS	REV
1	21,500	130	254	45	MS	INTERMITTENT	1
2	=====	185	230	25	MS	MINIMUM FLOW	1
3	=====	185	225	25	MS	MINIMUM FLOW	1
4	=====	130	254	25	MS	INTERMITTENT	1
5	53,130	185	225	115	MS	MAXIMUM FLOW	1
6	53,130	185	200	115	MS	MAXIMUM FLOW	1
7	40,870	150	366	=====	MS	MAX. DESIGN - WINTER	1
8	26,843	150	366	=====	MS	MAX. DESIGN - WINTER	1
9	43,000	25	200	90	MS	INTERMITTENT	0

DESIGN DATA

#	NORMAL		UPSET		BY	CHKD	REMARKS	REV
	PSIG	"F	PSIG	"F				
1	195	386	205	390	<1%	KE	AH	D
2	56	298	56	298	—	KE	AH	
3	180	380	180	380	—	AH	MS	REF. DWG. 302-0742-00000
4	130	300	130	300	—	AH	MS	
5	180	380	180	380	—	AH	MS	
6	285	377	315	377	<1%	KE	AH	

NOTES:

- ENTIRE SYSTEM IN ACCORDANCE WITH LINE SPECIFICATION L1-4, EXCEPT WHERE OTHERWISE INDICATED.
- PIPING ABANDONED THIS SIDE OF ISOLATION. FOR DETAILS SEE TECHNICAL ASSIGNMENT FILE 81653.
- PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING, REPRESENTS THE MOST COMMON OPERATING CONDITION, AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP. TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.

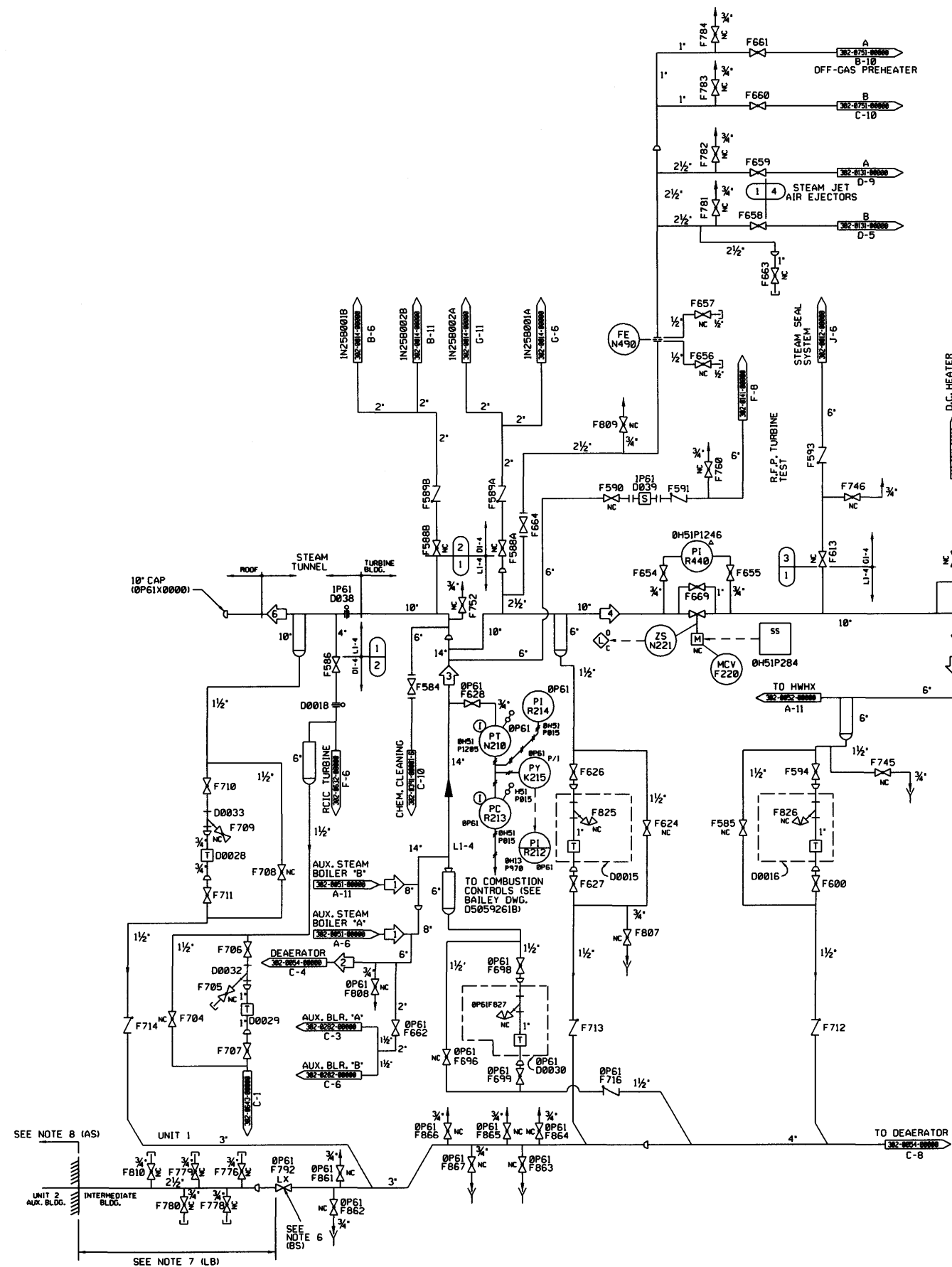
REFERENCES:

- 302-0051-00000 AUXILIARY STEAM P61
- 302-0053-00000 AUXILIARY STEAM P61
- 302-0222-00000 TURBINE BUILDING CLOSED COOLING P41
- 302-0281-00000 AUXILIARY BOILER CHEMICAL TREATMENT P85
- 302-0611-00000 NUCLEAR CLOSED COOLING SYSTEM P43
- 302-0713-00000 TWO BED DEMINERALIZER AND DISTRIBUTION SYSTEM - STORAGE AND NORTH ZONE DISTRIBUTION P21
- 302-0731-00000 LRW - FLOOR DRAIN COLLECTOR TANKS AND WASTE COLLECTOR TANKS G50
- 302-0742-00000 LRW - WASTE EVAPORATOR / CONDENSERS G50
- 913-0015-00000 HOT WATER HEATING SYSTEM DIAGRAM - HEATER BAY, AUXILIARY BUILDING AND TURBINE POWER COMPLEX - P55
- 302-0212-00000 SERVICE WATER SYSTEM
- 302-0054-00000 AUXILIARY STEAM P61
- 0H51P015 AUXILIARY BOILER CONTROL PANEL
- 0H51P031 RADWASTE CONTROL PANEL
- 0H51P079 DEAERATOR CONTROL PANEL
- 1H51P333 HOT WATER HEATING CONTROL PANEL

(REV. 19 10/2015)

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

AUXILIARY  
STEAM  
FIGURE 9.5-18  
(DWG. D-302-0052-00000)



# OPERATING DATA (NORMAL)

SEE NOTE 4

#	#/HR.	PSIG	°F	GPM	BY	REMARKS	REV
1	42,690	170	375	-	KSE	INTERMITTENT	2
2	690	170	375	-	KSE	CONTINUOUS	
3	42,000	170	375	-	KSE	INTERMITTENT	
4	0			-	KSE		
5	0			-	KSE		
6	42,000	170	375	-	KSE	INTERMITTENT	

# OPERATING DATA (UNITS DOWN)

SEE NOTE 4

#	#/HR.	PSIG	°F	GPM	BY	REMARKS	REV
1	100,000	155	368	-	KSE	MAX. CONT. DESIGN	2
2	28,620	155	368	-	KSE	MAX. DESIGN	
3	200,000	155	368	-	KSE	MAX. CONT. DESIGN	
4	108,730	150	366	-	KSE	MAX. DURING COLD STARTUP OR STANDBY	
5	48,730	150	366	-	KSE	MAX. BLDG HEATING REQ. - WINTER	
6	124,730	150	366	-	KSE	MAX. DURING COLD STARTUP OR STANDBY	

# DESIGN DATA

#	NORMAL		UPSET		BY	CHKD	REMARKS	R
	PSIG	F	PSIG	F				
1	195	386	205	390	<12	KSE/AEH		
2	1250	575	-	-	-	KSE/AEH	REF. 302-0014-00000	
3	248	510	-	-	-	AEH/JPS	REF. 302-0012-00000	
4	150	386	-	-	-	MGQ/JPS		

## REFERENCES:

- 302-0011-00000 MAIN STEAM SYSTEM M11
- 302-0012-00000 REHEAT STEAM SYSTEM M11
- 302-0041-00000 EXTRACTION STEAM N36
- 302-0051-00000 AUXILIARY STEAM P81
- 302-0052-00000 AUXILIARY STEAM P81
- 302-0141-00000 STEAM SEAL SYSTEM N33
- 302-0341-00000 CHEMICAL CLEANING OF CONDENSATE AND FEEDWATER P81
- 302-0632-00000 REACTOR CORE ISOLATION COOLING E51
- 0851P815 AUXILIARY BOILER CONTROL PANEL
- 0851P831 RADWASTE CONTROL PANEL
- 302-0054-00000 AUXILIARY STEAM P81
- 302-0014-00000 REHEATER HEATING STEAM SYSTEM M11
- 302-0131-00000 CONDENSER AIR REMOVAL SYSTEM M52
- 302-0202-00000 AUXILIARY BOILER FUEL OIL SYSTEM 0P61B0001A
- 302-0643-00000 RESIDUAL HEAT REMOVAL SYSTEM E12
- 302-0751-00000 OFF-GAS SYSTEM M54

## NOTES:

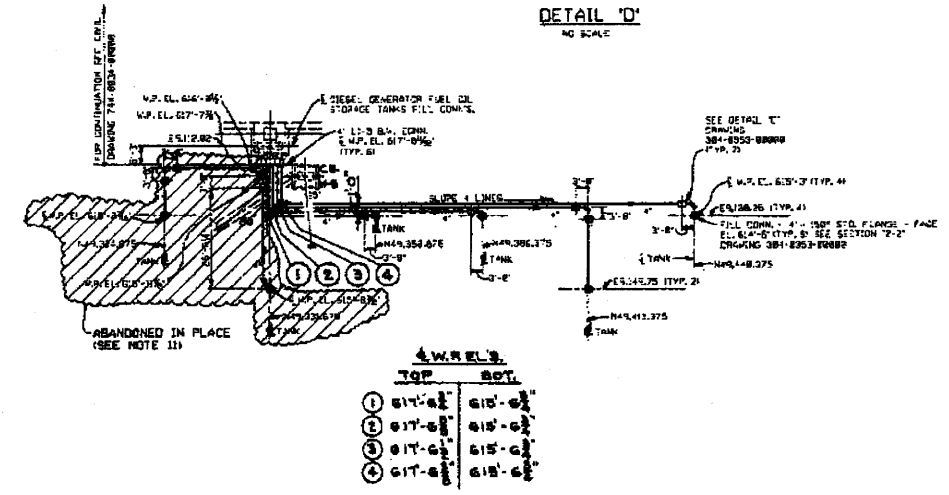
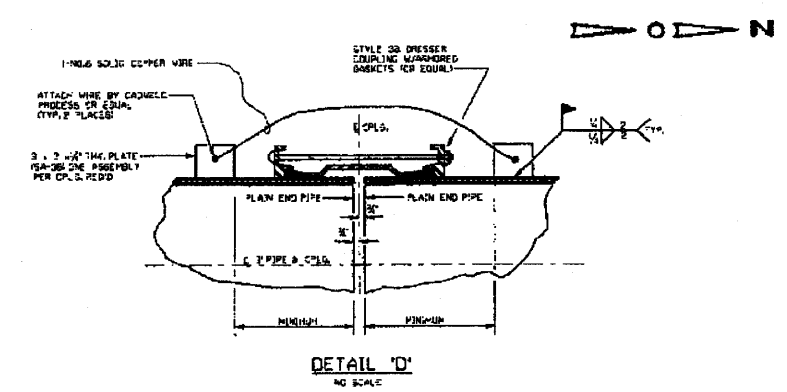
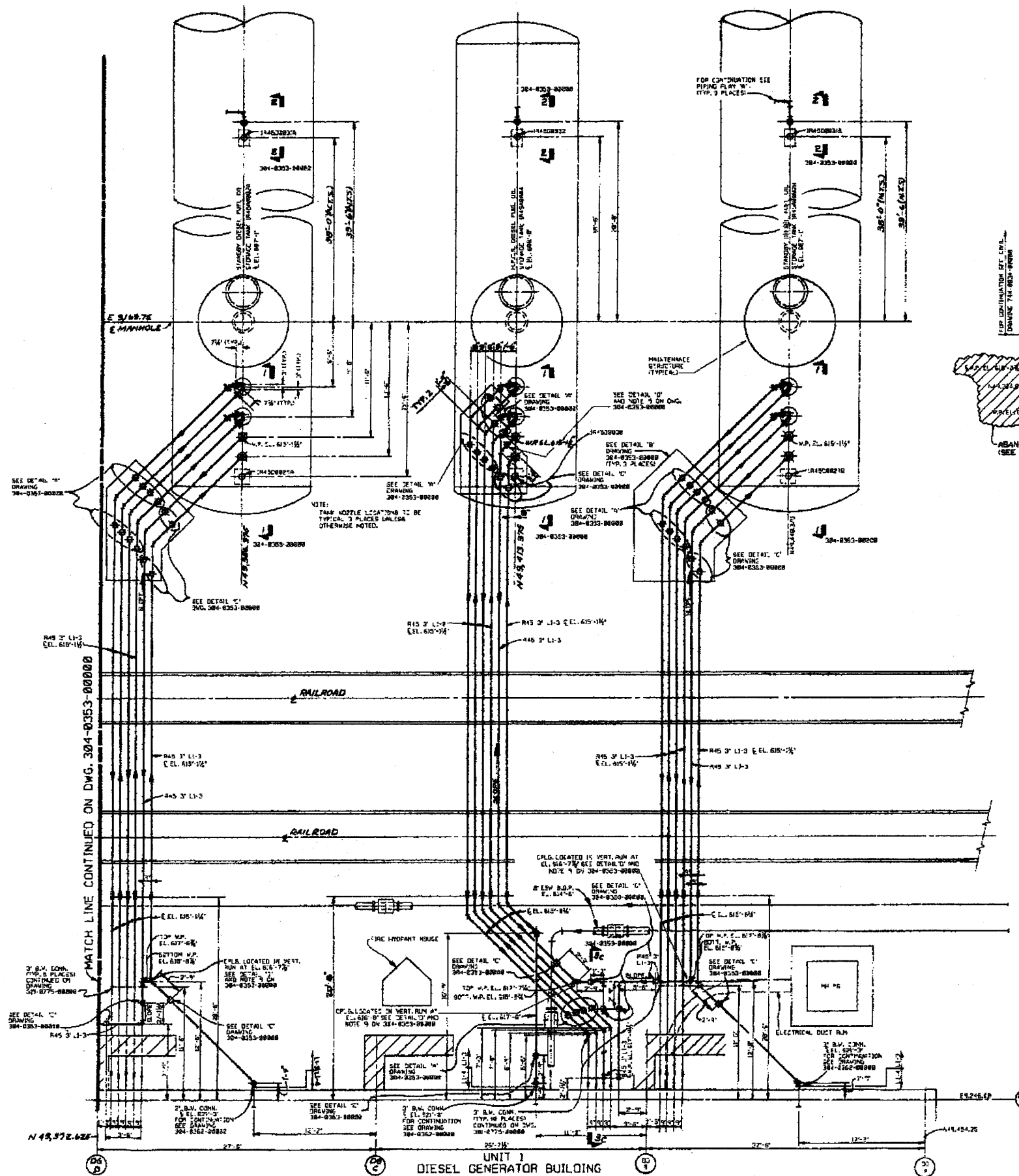
- THE DATA UNDER THE "NORMAL" COLUMN ARE THE SYSTEM DESIGN CONDITIONS. THESE VALUES SHALL BE USED FOR SYSTEM PRESSURE TESTING.
- VALVE 0P61F805 HAS BEEN REMOVED FROM THE SYSTEM AND REPLACED WITH A SPOOL PIECE AND BLANKS. SEE DRAWING 302-0041-00000 (A-B). 1P61F370 IS SPARED IN PLACE.
- DELETED
- PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING REPRESENTS THE MOST COMMON OPERATING CONDITION AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP. TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.
- ALL COMPONENTS ARE IPSI UNLESS OTHERWISE NOTED.
- (BS) UNIT 1/2 BOUNDARY SEPARATION. FOR DETAILS SEE TAF 81653.
- (LB) LICENSE RENEWAL. LEAKAGE BOUNDARY FOR ABANDONED, RETIRED IN PLACE SSC'S. FOR DETAILS SEE ECP 14-0506.
- (AS) ABANDONED SSC'S OUTSIDE THE SCOPE OF LICENSE RENEWAL. CONFIGURATION CONTROL NOT MAINTAINED FOR ABANDONED SSC'S IF INSTALLED OUTSIDE THE SCOPE OF LICENSE RENEWAL.

(REV. 19 10/2015)

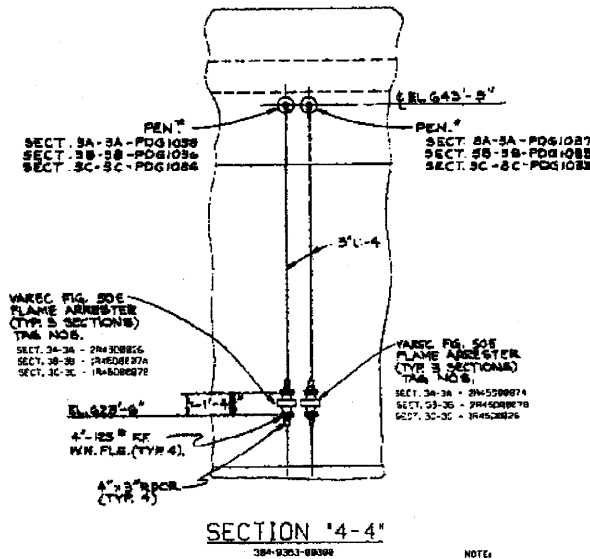
PERRY NUCLEAR POWER PLANT  
10 CENTER RD., PERRY, OHIO 44081

AUXILIARY  
STEAM  
FIGURE 9.5-19  
(DWG. D-302-0053-00000)





PIPING PLAN 'A' - SHOWING OIL FILL LINES  
SCALE: 1/4" = 1'-0"



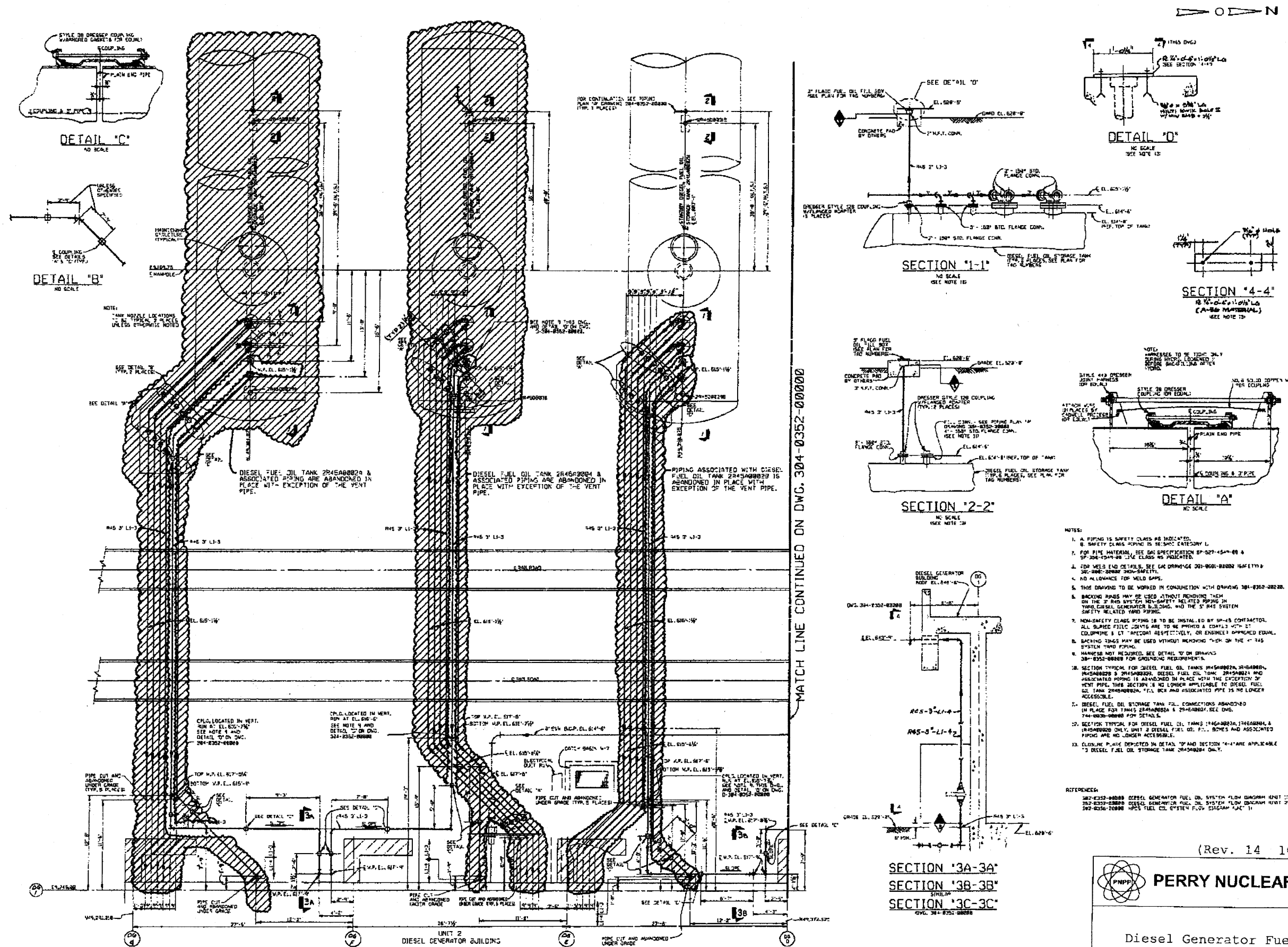
NOTE:  
1. FOR NOTES AND REFERENCES, SEE DRAWING 304-8353-00000.

(Rev. 14 10/05)

**PERRY NUCLEAR POWER PLANT**

Diesel Generator Fuel Oil Piping -  
Yard Area

Figure 9.5-21 (Sheet 1 of 2)  
(Dwg. D-304-352)



- NOTES:**
1. A PIPING IS SAFETY CLASS AS INDICATED.
  2. FOR PIPE MATERIAL, SEE SPECIFICATION SP-527-454-00 4.
  3. FOR WELD END OF TUBES, SEE SPECIFICATION SP-527-454-00 4.
  4. NO ALLOWANCE FOR WELD CAPS.
  5. THIS DRAWING IS TO BE WORKED IN CONJUNCTION WITH DRAWING 304-0352-00000.
  6. BACKING PIPES MAY BE USED WITHOUT REMOVING THEM ON THE 2" RAS SYSTEM NON-SAFETY RELATED PIPING IN THE DIESEL GENERATOR BUILDING, AND THE 2" RAS SYSTEM SAFETY RELATED PIPING.
  7. NON-SAFETY CLASS PIPING IS TO BE INSTALLED BY SP-135 CONTRACTOR. ALL SHARP FIELD JOINTS ARE TO BE FINISHED & CORDED WITH 1" COLUMBIUM 5 LT "RECORD" RESPECTIVELY, OR ENGINEER APPROVED EQUAL.
  8. BACKING PIPES MAY BE USED WITHOUT REMOVING THEM ON THE 4" RAS SYSTEM YARD PIPING.
  9. HANDBOOK NOT REQUIRED. SEE DETAIL "D" ON DRAWING 304-0352-00000 FOR GROUNDING REQUIREMENTS.
  10. SECTION TYPICAL FOR DIESEL FUEL OIL TANKS 2845A00002A, 2845A00002B, 2845A00002C & 2845A00002D. DIESEL FUEL OIL TANK 2845A00002E AND ASSOCIATED PIPING IS ABANDONED IN PLACE WITH THE EXCEPTION OF VENT PIPE. THIS SECTION IS NO LONGER APPLICABLE TO DIESEL FUEL OIL TANK 2845A00002F, TELL ROO AND ASSOCIATED PIPE IS NO LONGER ACCESSIBLE.
  11. DIESEL FUEL OIL STORAGE TANK FILL CONNECTIONS ABANDONED IN PLACE FOR TANKS 2845A00002A & 2845A00002B. SEE DWG. 744-0000-00000 FOR DETAILS.
  12. SECTION TYPICAL FOR DIESEL FUEL OIL TANKS 1946A00002A, 1946A00002B & 1946A00002C. DIESEL FUEL OIL TANK 1946A00002D AND ASSOCIATED PIPING IS ABANDONED IN PLACE WITH THE EXCEPTION OF VENT PIPE. THIS SECTION IS NO LONGER APPLICABLE TO DIESEL FUEL OIL TANK 1946A00002E, TELL ROO AND ASSOCIATED PIPE IS NO LONGER ACCESSIBLE.
  13. CLOSURE PLATE DEPICTED IN DETAIL "D" AND SECTION "4-4" ARE APPLICABLE TO DIESEL FUEL OIL STORAGE TANK 2845A00002A ONLY.

**REFERENCES:**

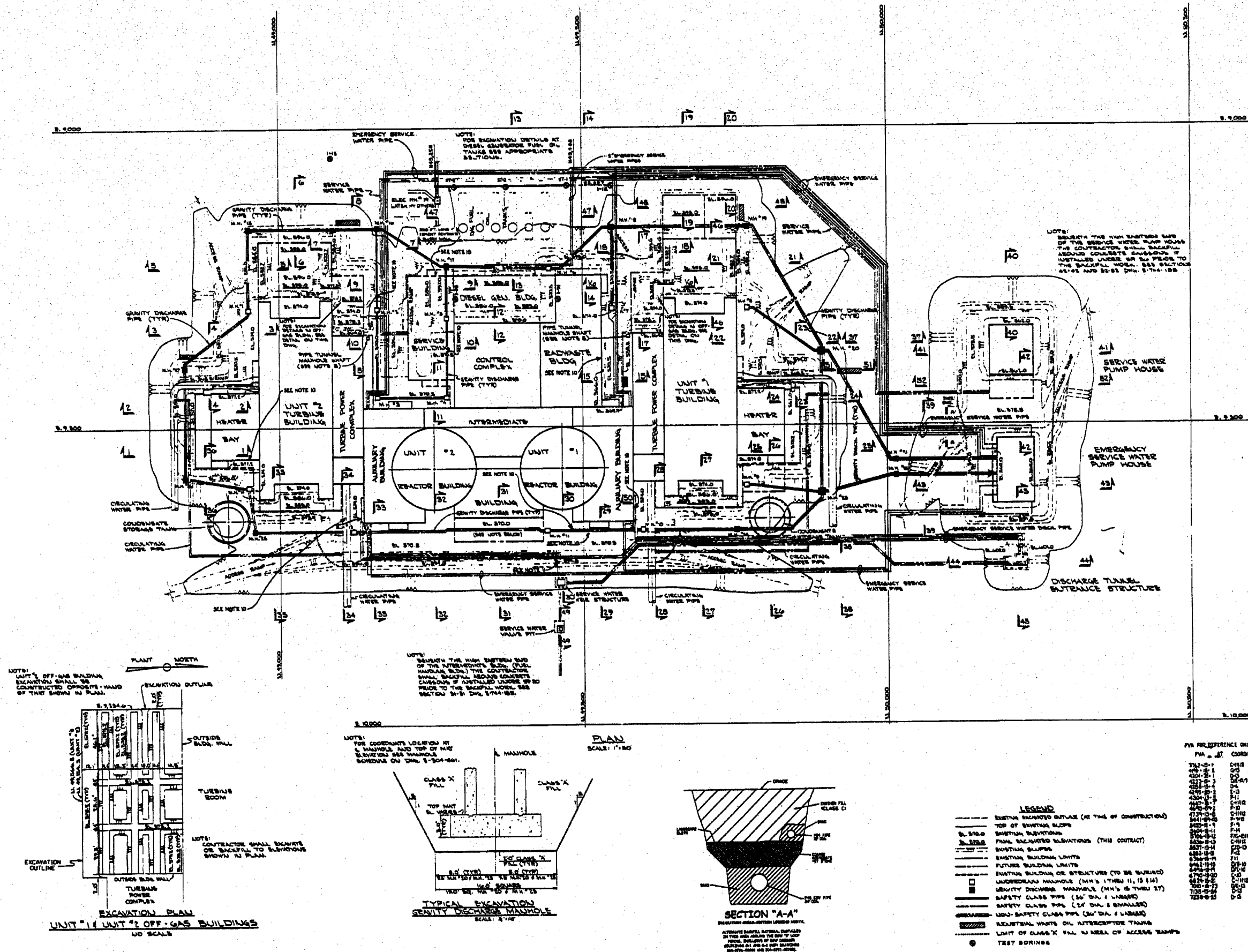
304-0352-00000 DIESEL GENERATOR FUEL OIL SYSTEM FLOW DIAGRAM UNIT 2  
304-0352-00000 DIESEL GENERATOR FUEL OIL SYSTEM FLOW DIAGRAM UNIT 2  
304-0352-00000 DIESEL FUEL OIL SYSTEM FLOW DIAGRAM UNIT 1

(Rev. 14 10/05)

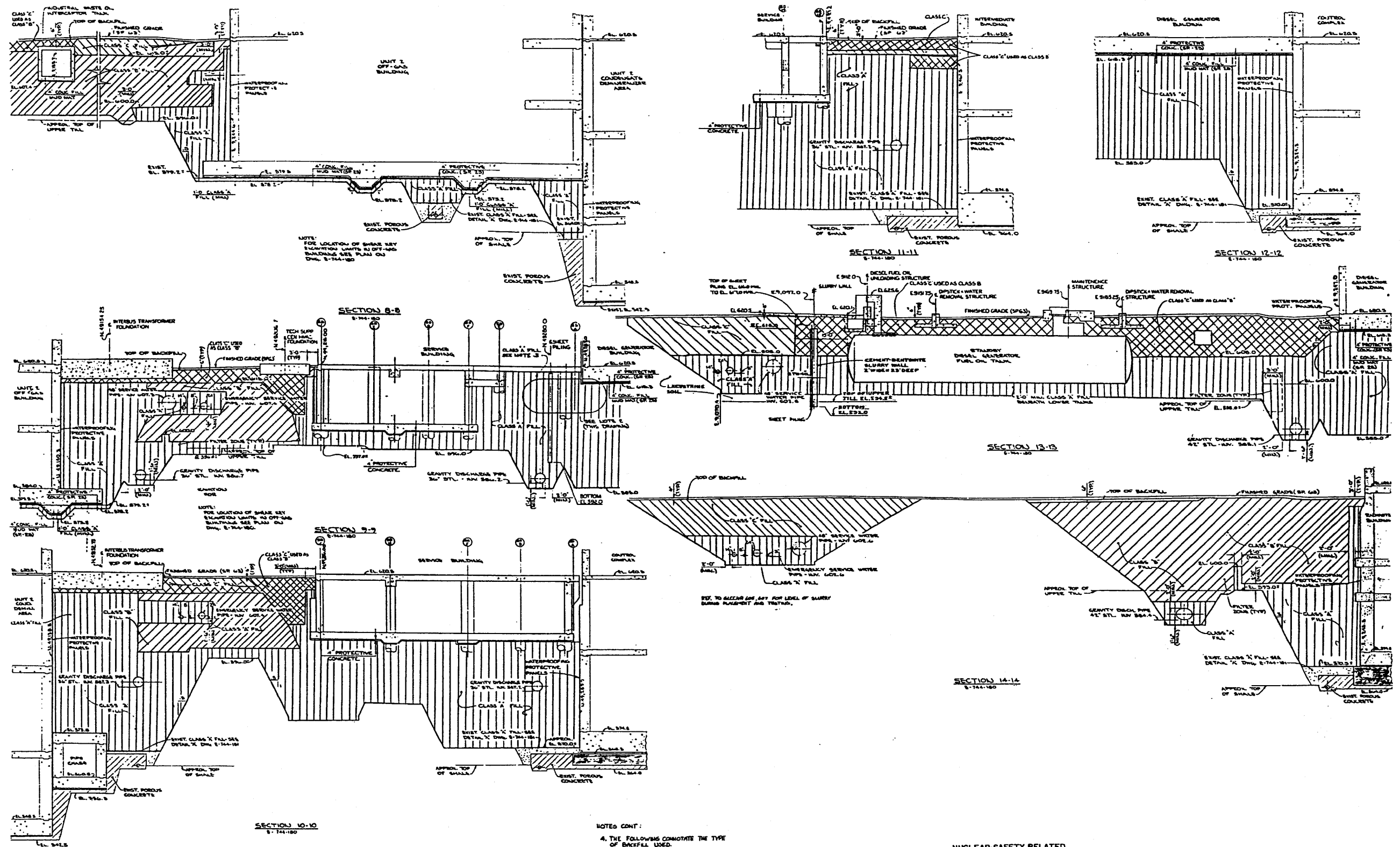
**PERRY NUCLEAR POWER PLANT**

**Diesel Generator Fuel Oil Piping - Yard Area**

Figure 9.5-21 (Sheet 2 of 2)  
(Dwg. D-304-353)







NUCLEAR SAFETY RELATED

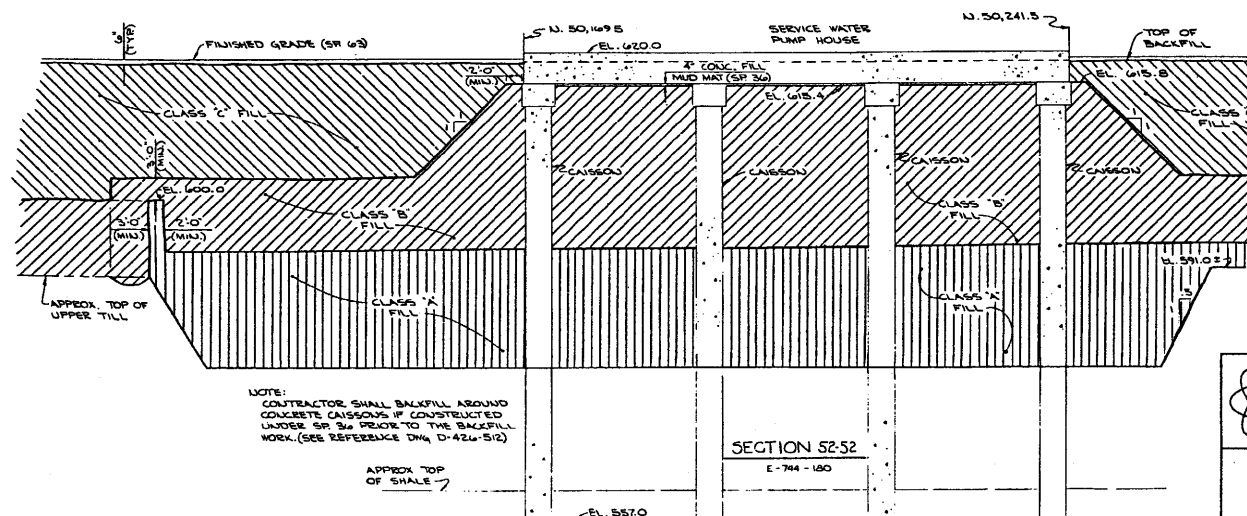
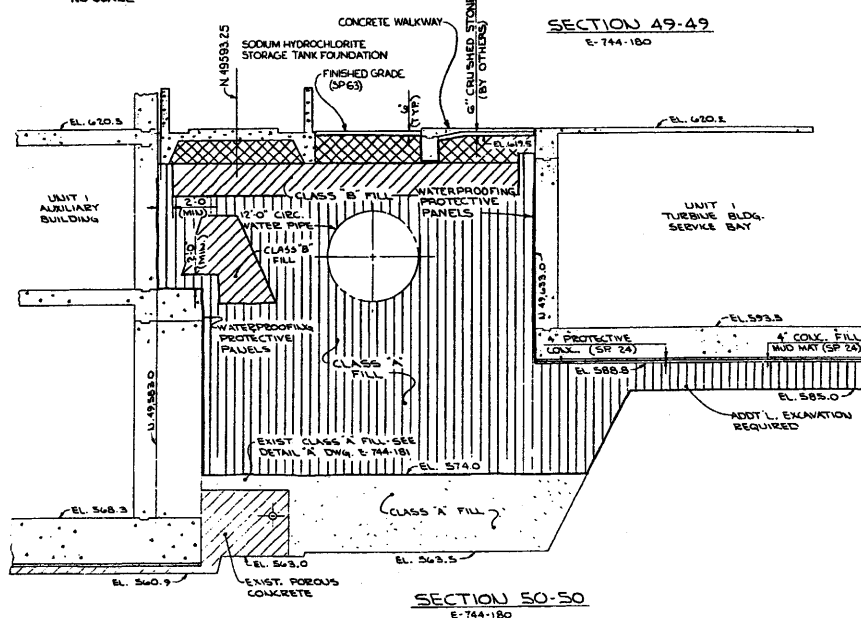
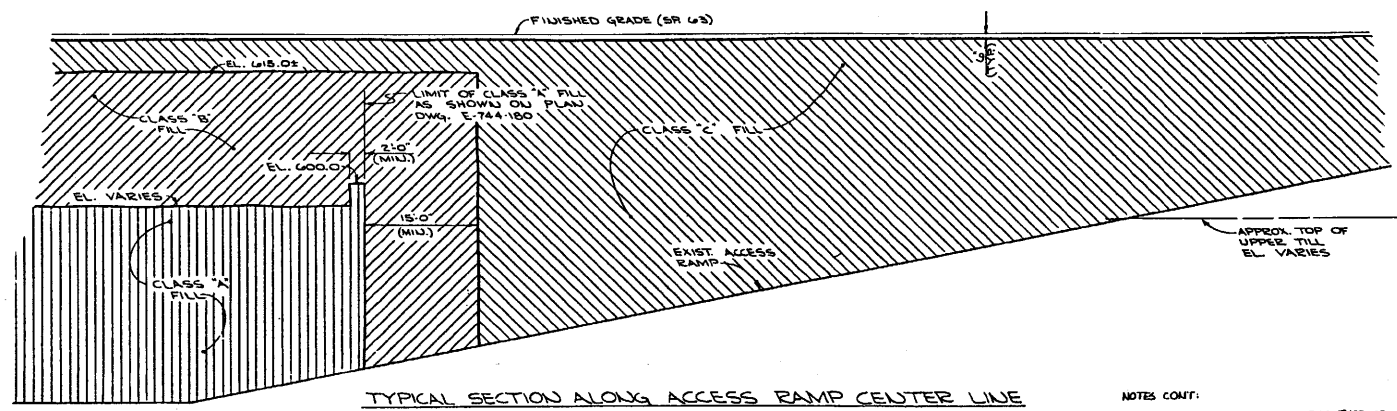
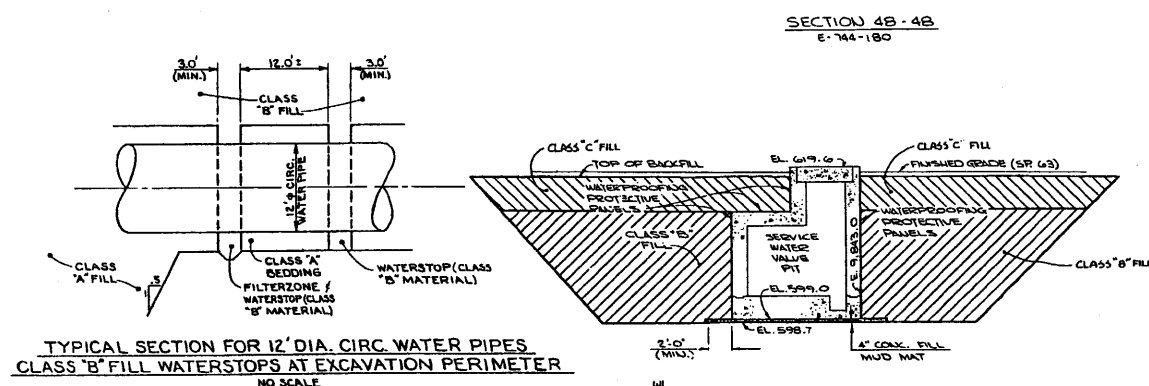
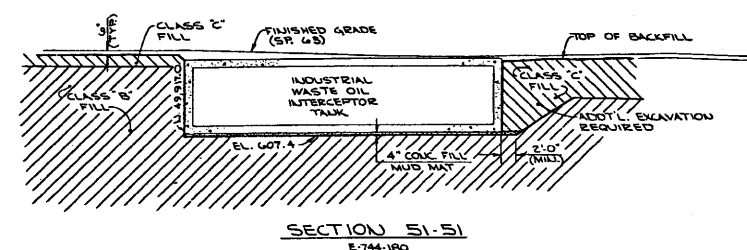
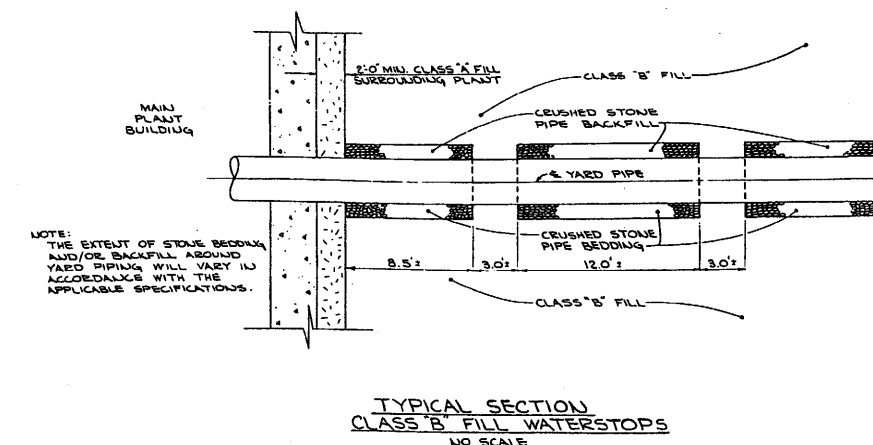
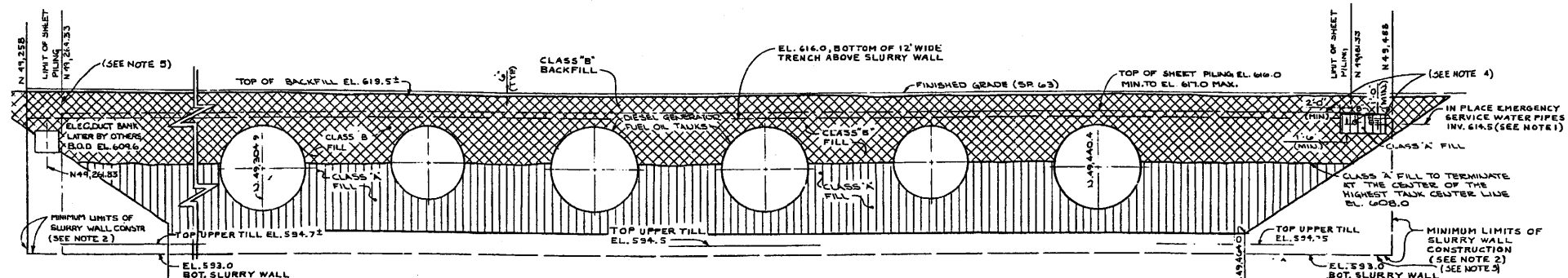
(Rev. 12 1/03)



**PERRY NUCLEAR POWER PLANT**

Plant Backfill and Excavation  
Showing Diesel Generator Piping  
and Fuel Oil Tanks

Figure 9.5-22 (Sheet 2 of 3)  
(Dwg. E-744-182)



- NOTES CONT:
2. THE FOLLOWING CANNOTATE THE TYPE OF BACKFILL USED:
- CLASS "A" BACKFILL
  - CLASS "B" BACKFILL
  - CLASS "C" BACKFILL
  - CLASS "C" BACKFILL USED AS "B"
- NUCLEAR SAFETY RELATED

1. FOR NOTES AND REFERENCES SEE DWG. E-744-181.



(Rev. 12 1/03)

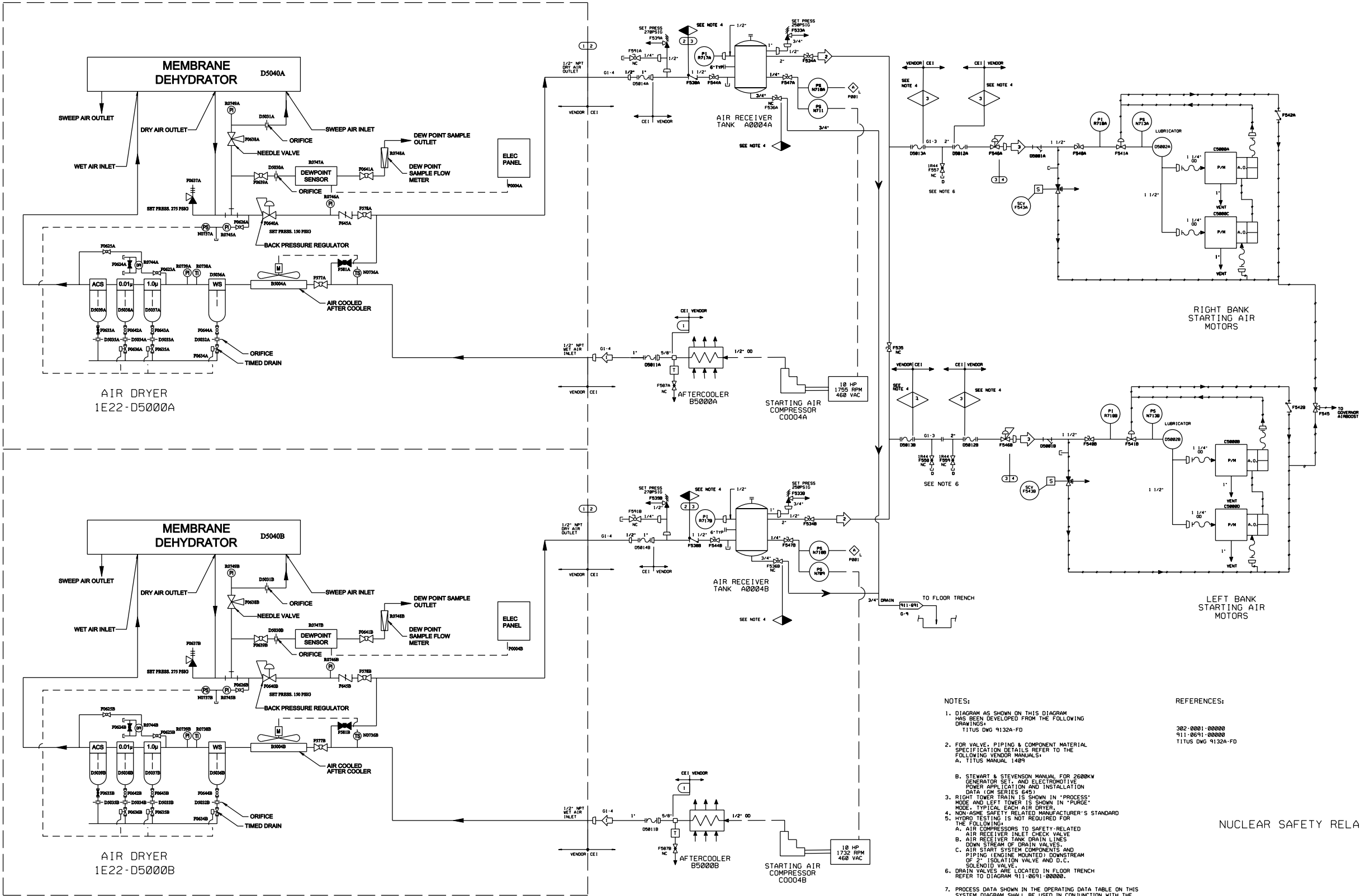
**PERRY NUCLEAR POWER PLANT**

Plant Backfill and Excavation  
Showing Diesel Generator Piping  
and Fuel Oil Tanks

Figure 9.5-22 (Sheet 3 of 3)  
(Dwg. E-744-188)



OPERATING DATA							DESIGN DATA							
SEE NOTE 7														
	PSIG	SCFM	* F	BY	REMARKS	REV		NORMAL PSIG °F	UPSET PSIG °F	TIME	BY	CHKD	REV	
1	250	22.5	142° F				1	275	150	275	150			
2	250	2340	142° F				2	270	150	270	150			
3	200	2340	120° F				3	250	150	250	150			
4							4	200	120	200	120			
5														



NOTES:

1. DIAGRAM AS SHOWN ON THIS DIAGRAM HAS BEEN DEVELOPED FROM THE FOLLOWING DRAWINGS:  
TITUS DWG 9132A-FD
2. FOR VALVE, PIPING & COMPONENT MATERIAL SPECIFICATION DETAILS REFER TO THE FOLLOWING VENDOR MANUALS:  
A. TITUS MANUAL 1489  
B. STEWART & STEVENSON MANUAL FOR 2600KW GENERATOR SET, AND ELECTROMOTIVE POWER APPLICATION AND INSTALLATION DATA (OM SERIES 645)  
3. RIGHT TOWER TRAIN IS SHOWN IN 'PROCESS' MODE AND LEFT TOWER IS SHOWN IN 'PURGE' MODE. TYPICAL EACH AIR DRYER.  
4. NON-ASME SAFETY RELATED MANUFACTURER'S STANDARD  
5. HYDRO TESTING IS NOT REQUIRED FOR THE FOLLOWING:  
A. AIR COMPRESSORS TO SAFETY-RELATED AIR RECEIVER INLET CHECK VALVE  
B. AIR RECEIVER TANK DRAIN LINES DOWN STREAM OF DRAIN VALVES.  
C. AIR START SYSTEM COMPONENTS AND PIPING (ENGINE MOUNTED) DOWNSTREAM OF 2" ISOLATION VALVE AND D.C. SOLENOID VALVE.  
6. DRAIN VALVES ARE LOCATED IN FLOOR TRENCH REFER TO DIAGRAM 911-001-00000.  
7. PROCESS DATA SHOWN IN THE OPERATING DATA TABLE ON THIS SYSTEM DIAGRAM SHALL BE USED IN CONJUNCTION WITH THE DESIGN BASIS INFORMATION AND SHALL BE USED WITH CAUTION. IN GENERAL, THE OPERATING DATA (PRESSURES, TEMPERATURES, AND FLOWS) PROVIDED ON THIS DRAWING, REPRESENTS THE MOST COMMON OPERATING CONDITION, AND/OR SYSTEM MODE OF OPERATION AND/OR LINEUP, TO DETERMINE THE REQUIRED VALUES FOR A SPECIFIC OPERATING CONFIGURATION, THE APPROPRIATE DESIGN DOCUMENTS NEED TO BE REVIEWED.

REFERENCES:

302-0001-00000  
911-001-00000  
TITUS DWG 9132A-FD

NUCLEAR SAFETY RELATED

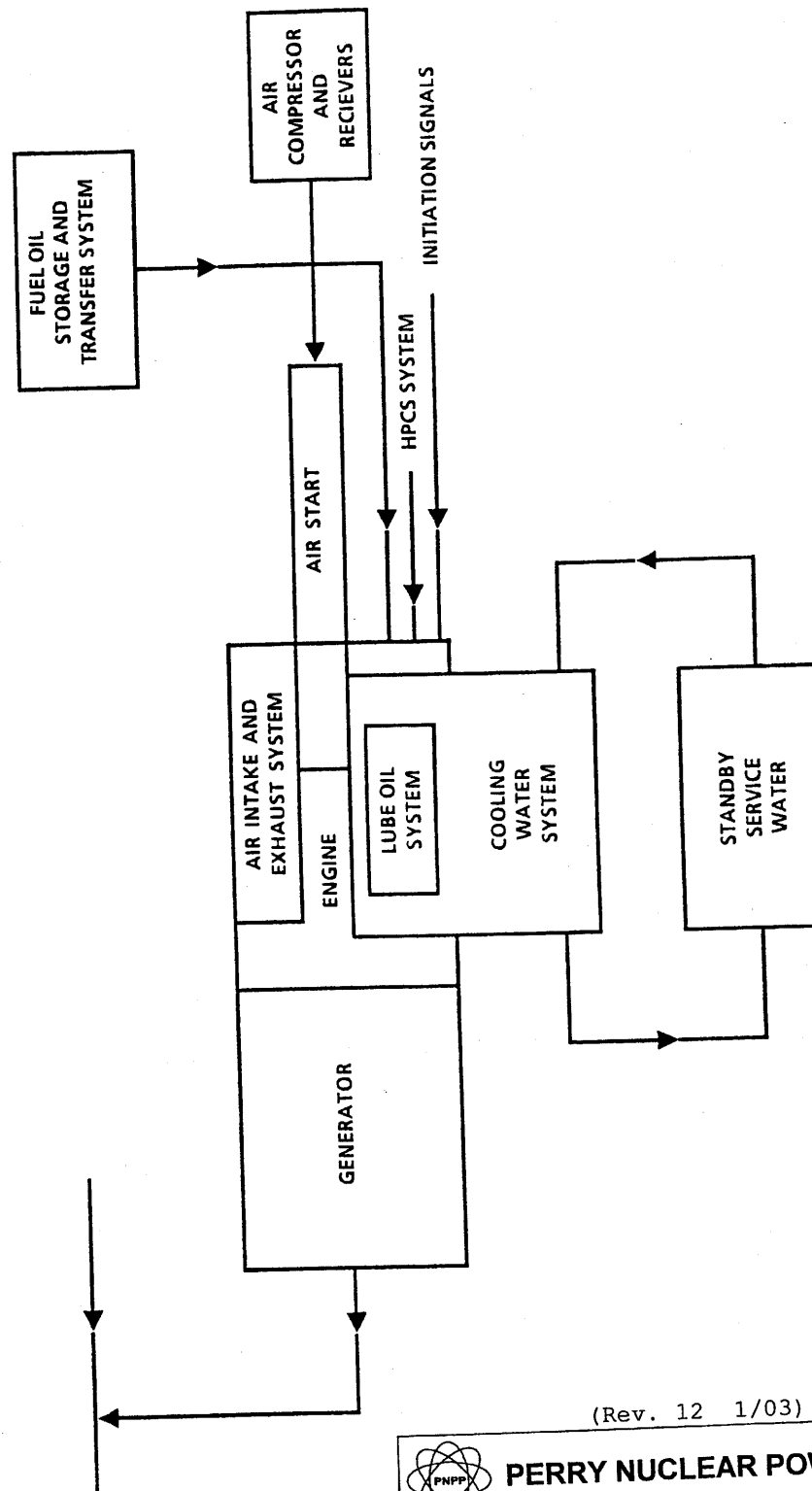
(Rev. 17 10/11)

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

Division 3 Diesel  
Starting Air/Air Dryer Diagram

Figure 9.5-24  
(DWG. D-302-0358-00000)





(Rev. 12 1/03)



## PERRY NUCLEAR POWER PLANT

Functional Block Diagram of  
Division 3 HPCS Diesel Generator

Figure 9.5-26