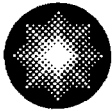


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## Constellation Energy

R.E. Ginna Nuclear Power Plant

July 14, 2004

Mr. Robert L. Clark  
Office of Nuclear Regulatory Regulation  
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

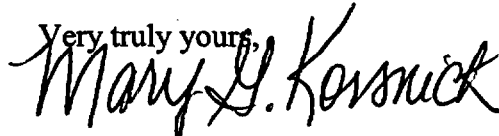
**Subject:** Response to Request for Additional Information  
Regarding R.E. Ginna Nuclear Power Plant  
Relief Requests VR-1, VR-2, and VR-13 for  
The Fourth 10-Year Interval Inspection  
Docket No. 50-244

- References:**
- (1) Letter from R. Clark, NRC, to R. Mecredy, RG&E, Subject: *Request for Additional Information Regarding R.E. Ginna Nuclear Power Plant Relief Requests VR-1, VR-2, and VR-13 for the Fourth 10-year Interval Inspection (Tac No. MB2393)*, dated June 15, 2004.
  - (2) Letter from R. Mecredy, RG&E, to R. Clark, NRC, Subject: *Submittal of Relief Requests VR-1, VR-2, and VR-13 Related to the Requirements of 10CFR50.55a(f), "Inservice Testing Requirements"*, dated March 18, 2004.

Dear Mr. Clark:

In Reference 1, the NRC provided a Request for Additional Information (RAI) related to proposed relief requests for Ginna Station concerning the ASME Section XI Inservice Testing Program (Reference 2). The purpose of this letter is to provide the response to the questions documented in Reference 1 (see enclosure).

No new commitments are being made in this letter.

Very truly yours,  
  
Mary G. Korsnick

attachments

1001076

A017

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## Enclosure 1

### Response to NRC Request for Additional Information (RAI) Dated June 15, 2004

The response to the RAI will be structured as follows. The items in bold below are the questions provided by the NRC in the RAI dated June 15, 2004. A response to each item is then provided by R.E. Ginna.

#### Relief Request No. VR-1, Revision 1

**RAI 1: The licensee states under Relief Request VR-1 "Basis for Relief" Item No. 1, "The design of the system is such that either emergency diesel generators can be isolated and the check valve disassembled with the plant online." Whereas in previously approved Relief Request VR-1 dated June 13, 2000, the licensee stated under "Basis for Relief," "During any mode of plant operation there is no practical means to exercise these valves. The valve closure cannot be verified due to system design. To perform a valve closure verification would require disassembly of mechanical joints in the piping, which would place the diesel in an inoperable condition." The licensee's statements for the same valves under Relief Request VR-1, Revision 0 and VR-1, Revision 1 appears to be contradicting. (a) Please explain, why the testing that was impractical previously can now be performed. (b) Also, if online testing of check valves 5960A/B is practical, then provide the reasoning for not testing these valves at least once every three months as required by the OM-10, para 4.3.2.1.**

Response: Check valves 5960 A and 5960 B were not capable of being flow tested (i.e. can not be verified full open or partially open, or full closed) when VR-1, revision 0 was submitted, and remain incapable of being flow tested (exercised full open and full closed) due to system design. Revision 1 to VR-1 is intended to provide the option of performing the disassembly activity endorsed by Generic Letter 89-04, Position 2, "Alternative to Full Flow Testing of Check Valves " during on-line system maintenance, when the diesel generator is already inoperable, in lieu of only during a refueling outage as stated in the current relief request, as well as in OMA-1988, Part 10, paragraph 4.3.2.4, (c).

Since flow testing of check valves 5960 A and 5960 B is not practical, and since disassembly is the only feasible means to demonstrate the necessary obturator movement (i.e. manually exercise full open and full closed), quarterly flow testing of the check valves is not possible, and quarterly disassembly would be undesirable since it would increase diesel generator unavailability.

**RAI 2: Please identify what specific paragraph of the OM-10 Standard you are requesting relief (e.g. paragraph 4.3.2.4(c) etc.)**

**Response:** Relief is requested from paragraph 4.3.2.4(c). A new revised Relief Request VR-1 is attached.

**RAI 3: Please identify and provide the sizes of the check valves for which relief is requested.**

**Response:** Check valves 5960 A and 5960 B are nominally 1.5 inch.

**RAI 4: Inservice testing of Emergency Diesel Generator Fuel Oil check valves 5960A and 5960B on a rotating basis or grouping may be performed when both valves are the same size, manufacturer, model number, and material of construction. Please provide the information necessary to verify that both valves 5960A and 5960B are the same size , manufacturer, model number, and material of construction.**

**Response:** Ginna currently has NRC approval to inspect these valves on a sampling basis (the original approval of sampling was documented in an SER dated April 15, 1991). This is based on the fact that the valves are the same size, manufacturer, model number and material of construction (i.e., they are 1.5 inch Jenkins Brothers Model 250 brass/bronze lift check valves).

**RAI 5: The Relief Request does not address the safety and risk significance of on-line IST of the check valves. Please address (either in a qualitative or quantitative manner) the potential risk of disassembly and inspection of the check valves on-line compared to the risk when the plant is shutdown.**

**Response:** There is no increase in risk due to the fact that the disassembly and inspection of the valve(s) will be performed during a scheduled maintenance outage of the diesel generator, when it is out of service.

The existing Ginna Station Technical Specification for the diesel generators, LCO 3.8.1, provides for a 7 day allowed outage time. The check valve disassembly can easily be performed within this time window. Also, the inspection and disassembly activities are required to be performed within consideration of the rules involved per 10 CFR 50.65(a)(4).

**RAI 6: Provide sufficient information for NRC staff to reach a safety or risk determination with regards to isolation of these check valves when testing on-line. Also provide copies of drawings (P&IDs) showing check valves and isolation valves and provide details how isolation of these check valves will be established.**

**Response:** As noted in response 1 above, these valves will not be flow tested. As shown on the attached drawings (33013-1239 sheet 1 of 2 coordinates C-1 and 33013-1239 sheet 2 of 2 coordinates C-11), there is no difference in isolation of the affected line regardless of the plant status. These valves are in the overflow line from the respective diesel generator fuel oil day tank to the underground main storage tank. There are no isolation valves in the flowpath. Instead, the diesel generator and fuel oil transfer pump will be isolated at the time that the valve inspection and disassembly take place. The line is normally drained.

**RAI 7:** Provide the leak testing experience and leak tightness reliability of the associated isolation valves and the potential consequences of a loss of isolation capability during disassembly, inspection, and manual exercising of check valves 5960A and 5960B when the plant is on line.

**Response:** As described above, there are no isolation valves involved, and therefore no consequences.

**RAI 8:** Based on the risk significance discussed in RAI 5 above, discuss what preventive or compensatory measures are necessary to maintain safety and minimize risk while performing on-line IST.

**Response:** Since there is no increased risk, as the activity will occur during a scheduled diesel generator minor maintenance outage, the normal risk management tools for work on a diesel generator on-line will be used.

**Relief Request No. VR-2**

**RAI 1: The licensee states under Relief Request VR-2 “Basis for Relief” Item No. 1, “The design of the system is such that either standby auxiliary feedwater pump can be isolated and check valve disassembled with the plant online.” Whereas in previously approved Relief Request VR-2 dated June 13, 2000, the licensee stated under “Basis for Relief,” “Full-stroke exercising cannot be accomplished during power operation or cold shutdown as this would introduce service water to standby auxiliary feedwater system. Service water does not meet purity requirements for the system or steam generators. Service water would be supplied to steam generators during the required quarterly pump tests if exercising valves 9627A/B was performed.” The licensee’s statements for same valves under Relief Request VR-2, Revision 0 and VR-2, Revision 1 appears to be contradicting. (a) Please explain, why the testing that was impractical previously can now be performed. (b) Also, if the online testing of check valves 9627A/B is practical, then provide the reasoning for not testing these valves at least once every three months as required by the OM-10, para 4.3.2.1.**

**Response: Check valves 9627 A and 9627 B were not capable of being fully flow tested (i.e. can not be verified full open, or full closed, though they can be can be partially open tested) when VR-2, revision 0 was submitted, and remain incapable of being fully flow tested (exercised full open or full closed) due to system design. Revision 1 to VR-2 is merely intended to accomplish the disassembly activity endorsed by Generic Letter 89-04, Position 2, "Alternative to Full Flow Testing of Check Valves" during on-line system maintenance, when the standby auxiliary feedwater train is already inoperable, in lieu of only during a refueling outage as stated in the current relief request, as well as in OMA-1988, Part 10, paragraph 4.3.2.4, (c).**

Since full flow testing of check valves 9627 A and 9627 B is not practical, and since disassembly is the only feasible means to demonstrate the necessary obturator movement (i.e. manually exercise full open and full closed), quarterly full flow testing of the check valves is not possible, and quarterly disassembly would be undesirable since it would increase standby auxiliary feedwater system unavailability.

**RAI 2: Please identify what specific paragraph of the OM-10 Standard you are requesting relief (e.g. paragraph 4.3.2.4(c) etc.)**

**Response: Relief is requested from paragraph 4.3.2.4(c). A new revised Relief Request VR-2 is attached.**

**RAI 3: Please identify and provide the sizes of the check valves for which relief is requested.**

**Response: Check valves 9627 A and 9627 B are nominally 4 inch.**

**RAI 4: Inservice testing of Standby Auxiliary Feedwater check valves 9627A and 9627B on a rotating basis or grouping may be performed when both valves are the same size, manufacturer, model number and material of construction. Please provide the information necessary to verify that both valves 9627A and 9627B are the same size , manufacturer, model number and material of construction.**

**Response:** Ginna currently has NRC approval to inspect these valves on a sampling basis (the original approval of sampling was documented in an SER dated April 15, 1991). This is based on the fact that the valves are the same size, manufacturer, model number and material of construction (i.e., they are 4 inch Borg-Warner Model 73490 carbon steel swing check valves).

**RAI 5: The Relief Request does not address the safety and risk significance of on-line IST of the check valves. Please address (either in a qualitative or quantitative manner) the potential risk of disassembly and inspection of these check valves on-line compared to the risk when the plant is shutdown.**

**Response:** There is no increase in risk due to the fact that the disassembly and inspection of the valve(s) will be performed during a scheduled maintenance outage of the standby auxiliary feedwater system, when the system is already out of service.

Ginna has a total of five sources of safety related auxiliary feedwater (as compared to three in most plants) including: two motor driven auxiliary feedwater pumps, one turbine driven auxiliary feedwater pump, and two standby auxiliary feedwater pumps. Only one of the standby auxiliary feedwater pump trains will be affected.

The existing Ginna Station Technical Specification for the standby auxiliary feedwater trains, LCO 3.7.5, provides for a 14 day allowed outage time. The check valve disassembly can easily be performed within this time window. Also, the inspection and disassembly activities are required to be performed within consideration of the rules involved per 10 CFR 50.65(a)(4).

**RAI 6: Provide sufficient information for NRC staff to reach a safety or risk determination with regards to isolation of these check valves when testing on-line. Also provide copies of drawings (P&IDs) showing check valves and isolation valves and provide details how isolation of these check valves will be established.**

**Response:** As noted in response 1 above, these valves will not be full flow tested. As shown on the attached drawings (33013-1250 sheet 2 of 3 coordinates B-9 and B-10, and 33013-1238 coordinates B-1 and I-1) these valves are in the service water line to the standby auxiliary feedwater pumps. The standby auxiliary feedwater pump will be isolated at the time that the valve inspection and disassembly take place. On the service water side, isolation will be performed by a 4 inch isolation valve (9626A or 9626B as shown on drawing 33013-1250 sheet 2 of 3 coordinates A-2 and B-3). There is no

difference in isolation, regardless of the plant status. On the downstream side there are a number of isolation valves between the check valve and the steam generator (including three check valves and numerous isolation valves as shown on drawing 33013-1238).

**RAI 7: Provide the leak testing experience and leak tightness reliability of the associated isolation valves and the potential consequences of a loss of isolation capability during disassembly, inspection, and manual exercising of check valves 9627A and 9627B when the plant is online.**

**Response:** Regardless of whether the valves are inspected and disassembled off-line or on-line they must be isolated from the service water loop. The service water isolation valves have historically performed well as an isolation barrier. The isolation valves between the check valve and the steam generator have also historically performed well as an isolation barrier and are the same isolation valves that are used when performing pump maintenance.

**RAI 8: Based on the risk significance discussed in RAI 5 above, discuss what preventive or compensatory measures are necessary to maintain safety and minimize risk while performing on-line IST.**

**Response:** The draining of the lines for the valve inspection and disassembly is accomplished through existing local manual drain and vent valves, such that there is a positive and controlled means of determining the status of the isolation boundary. The isolation valves provide sufficient isolation of the affected SAFW train from in-service systems. No additional preventative or compensatory measures are required as a result of the valve disassembly.

**Note:** The OM-10 para 4.2.1.1(e) states that “if exercising is not practicable during plant operation or cold shutdowns, it may be limited to full-stroke during refueling outage.” Therefore, the inservice testing (IST) of the check valves must coincide with refueling outage of 18 months. If the licensee changes refueling outage to 24 months as allowed by the Technical Specification, the IST of these valves must coincide with the refueling outage of 24 months. This change can be done without any additional relief requests for these valves.

**Response:** As part of the 1996 conversion of the Ginna Technical Specifications to the format of NUREG-1431, Ginna was evaluated and approved for nominal 24 month surveillance intervals. Though the current nominal cycle length is 18 months, the IST program allows for a refueling outage cycle length test frequency of up to 24 months. The attached Relief Requests VR-1 and VR-2 have been revised to remove the reference to cycle length.



R.E. Ginna Station, Fourth Interval Inservice Testing Program

RELIEF REQUEST NO. VR - 1

**SYSTEM:** Emergency Diesel Generator Fuel Oil

**VALVES:** 5960A, 5960B

**CATEGORY:** C

**SAFETY CLASS:** 3

**FUNCTION:** These check valves open to provide a flow path for overflow from the fuel oil day tank to the fuel oil storage tank. These valves close to prevent reverse flow into the fuel oil day tank during recirculation of the fuel oil storage tank.

**TEST REQUIREMENT:** American Society of Mechanical Engineers (ASME) Code for Operations and Maintenance of Nuclear Power Plants (OM Code), 1987 Edition (ASME/ANSI-1987), Part 10, "Inservice Testing of Valves in Light-Water Reactor Power Plants" (OM-10), paragraph 4.3.2.4(c) states "As an alternative to the testing in (a) and (b) above, disassembly every refueling outage to verify operability of check valves may be used."

**BASIS FOR RELIEF:** Relief is requested to disassemble, manually full stroke exercise and inspect one check valve on a rotating basis, at a frequency of each operating cycle in lieu of during each refueling outage. This is to allow the surveillance requirement to be met with the plant online. The following underscore the usefulness and applicability of an online testing approach:

1. The design of the system is such that either emergency diesel generator can be isolated and the check valve disassembled with the plant online.
2. Performing the inspection with the plant online reduces outage complexity.
3. The check valves are located in an area where performance of the disassembly coupled with other major outage work increases the potential development of error-likely situations in work control and reassembly processes.
4. The check valve disassembly and inspection activities can be completed within 50% or less of the associated system Technical Specification allowed outage time.

5. An acceptable testing frequency can be maintained separately without being tied directly to a refueling outage. Inservice testing on a frequency that maintains the acceptable time period between testing activities during the operating cycle is consistent with the intent of OM-10 and GL 89-04.
6. The number of tests to be performed using either the outage or online frequency statements should be approximately equivalent. Thus, an equivalent level of quality and safety is maintained.

**ALTERNATE TESTING:**

One valve will be disassembled, manually full-stroke exercised and inspected once each operating cycle on a rotating basis. If that valve fails, the remaining valve will be disassembled, full-stroke exercised and inspected for operability at that same time. (re: Generic Letter 89-04, Attachment 1 - Position 2)

R.E. Ginna Station, Fourth Interval Inservice Testing Program

RELIEF REQUEST NO. VR - 2

**SYSTEM:** Standby Auxiliary Feedwater

**VALVES:** 9627A, 9627B

**CATEGORY:** C

**SAFETY CLASS:** 3

**FUNCTION:** These service water suction check valves close to prevent reverse flow from Standby Auxiliary Feedwater (SAFW) System piping back into the Service Water (SW) System and open to provide a flow path for service water to the SAFW pumps.

**TEST REQUIREMENT:** American Society of Mechanical Engineers (ASME) Code for Operations and Maintenance of Nuclear Power Plants (OM Code), 1987 Edition (ASME/ANSI-1987), Part 10, "Inservice Testing of Valves in Light-Water Reactor Power Plants" (OM-10), paragraph 4.3.2.4(c) states "As an alternative to the testing in (a) and (b) above, disassembly every refueling outage to verify operability of check valves may be used."

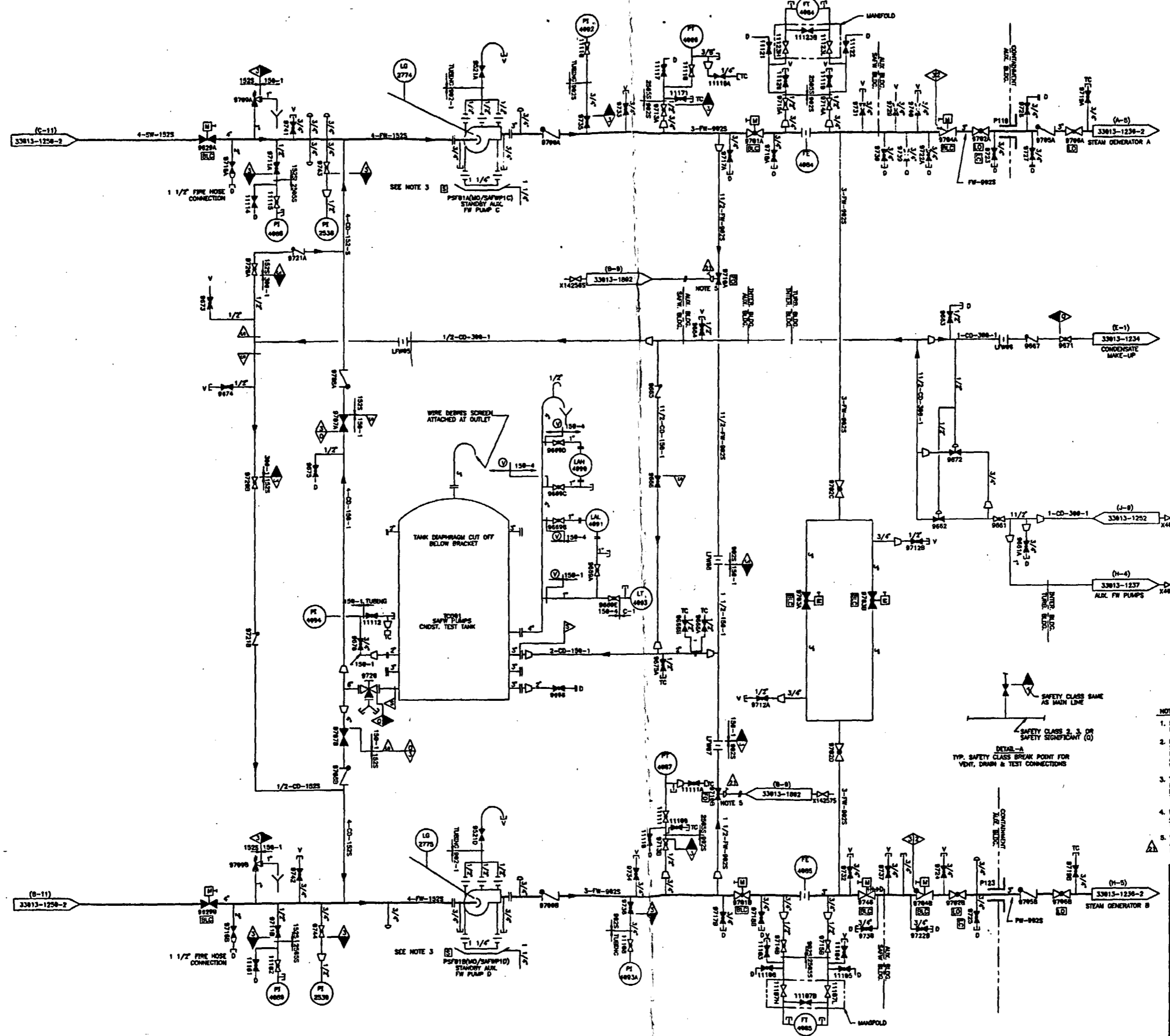
**BASIS FOR RELIEF:** Relief is requested to disassemble, manually full stroke exercise and inspect one check valve on a rotating basis, at a frequency of each operating cycle in lieu of during each refueling outage. This is to allow the surveillance requirement to be met with the plant online. The following underscore the usefulness and applicability of an online testing approach:

1. The design of the system is such that either Standby Auxiliary Feedwater pump can be isolated and the check valve disassembled with the plant online.
2. Performing the inspection with the plant online reduces outage complexity.
3. The check valves are located in an area where performance of the disassembly coupled with other major outage work increases the potential development of error-likely situations in work control and reassembly processes.
4. The check valve disassembly and inspection activities can be completed within 50% or less of the associated system Technical Specification allowed outage time.

5. An acceptable testing frequency can be maintained separately without being tied directly to a refueling outage. Inservice testing on a frequency that maintains the acceptable time period between testing activities during the operating cycle is consistent with the intent of OM-10 and GL 89-04.
6. The number of tests to be performed using either the outage or online frequency statements should be approximately equivalent. Thus, an equivalent level of quality and safety is maintained.

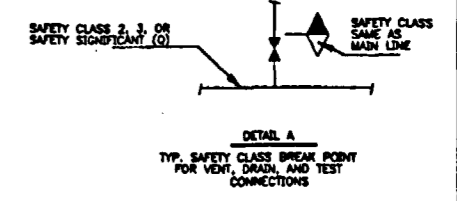
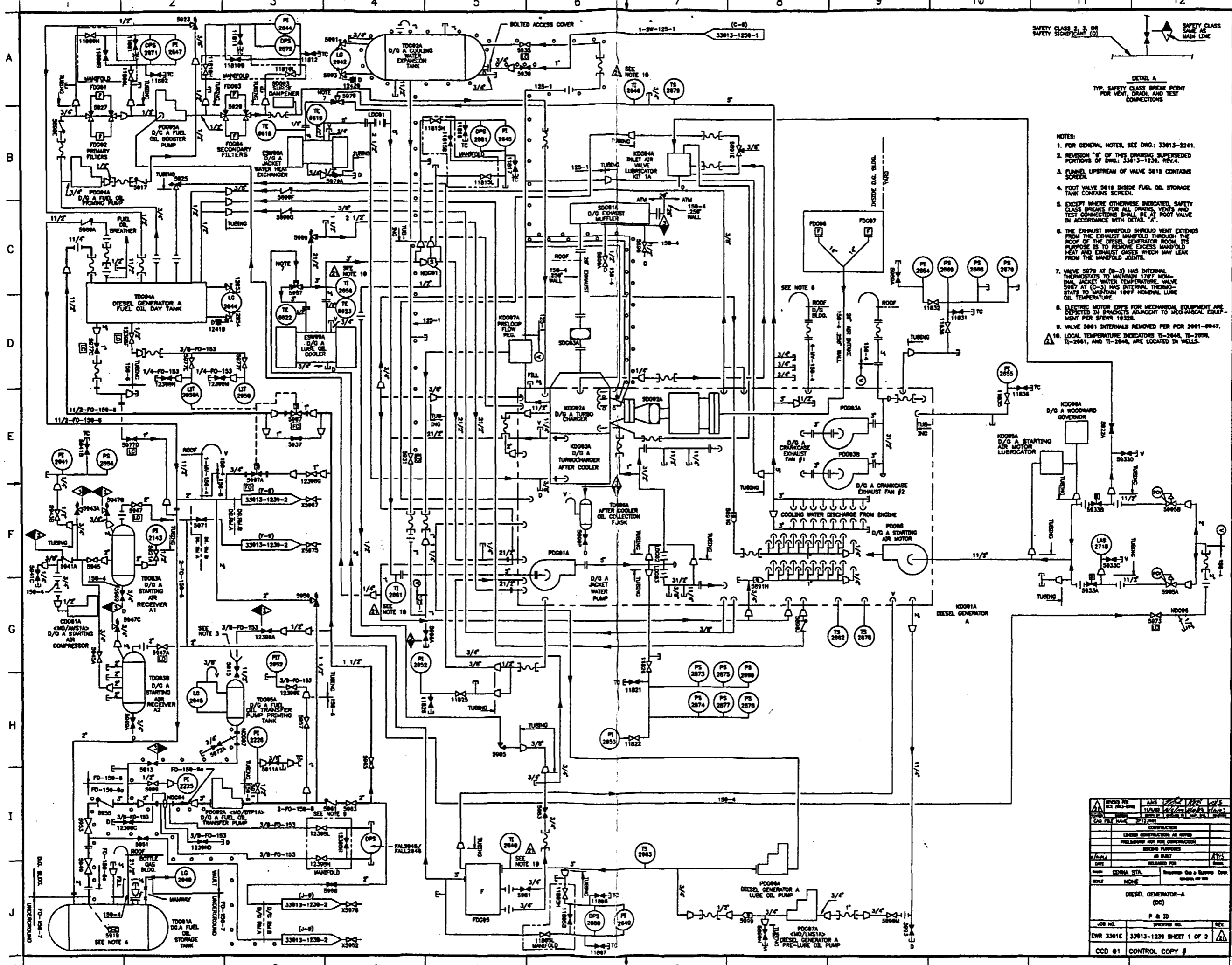
**ALTERNATE TESTING:**

Partial stroke exercising will be performed each quarter. One valve will be disassembled, manually full-stroke exercised and inspected each operating cycle on a rotating basis. If that valve fails, the remaining valve will be disassembled, full-stroke exercised and inspected for operability at that same time. (re. Generic Letter 89-04 - Position 2).



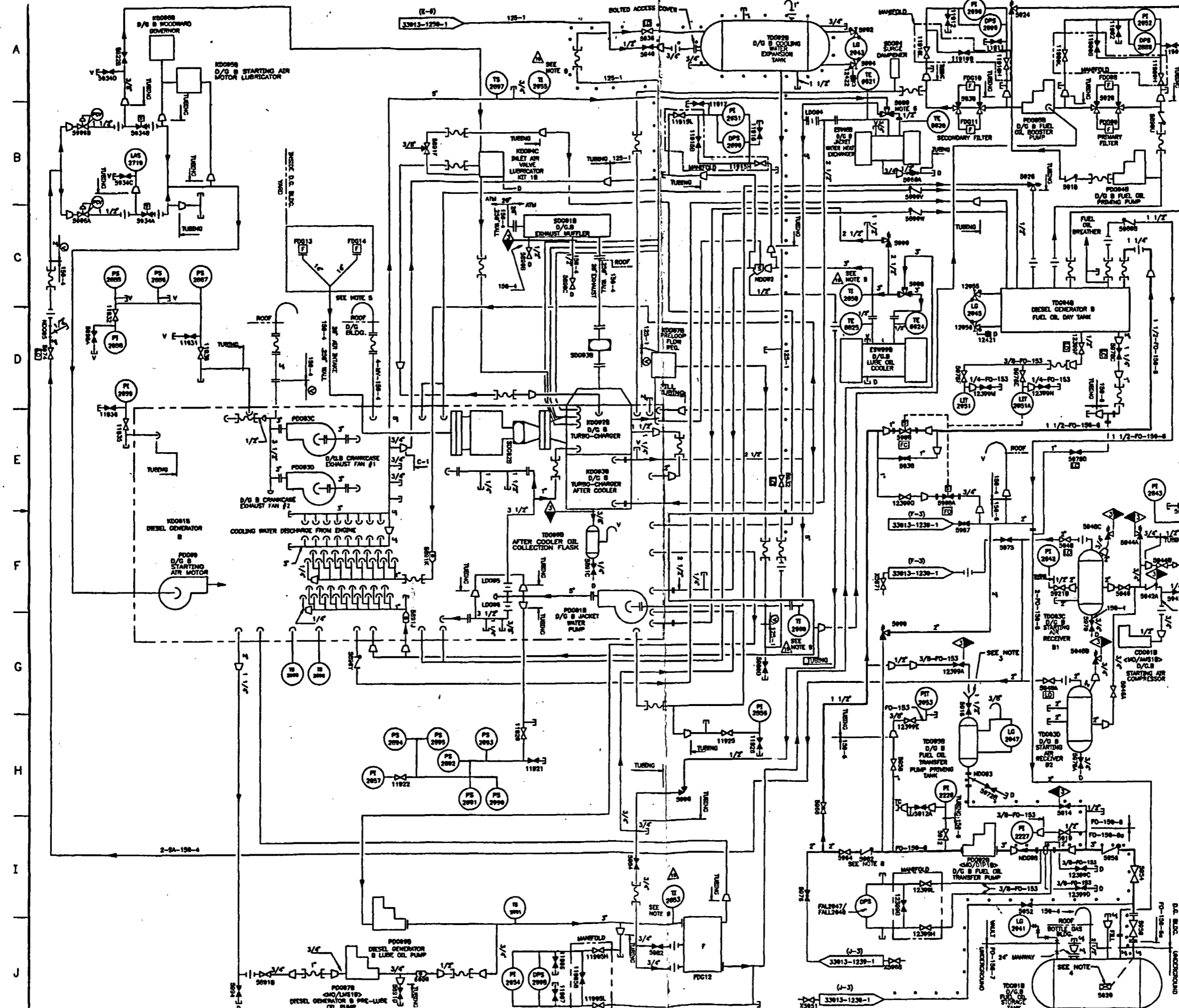
- NOTES:**
1. FOR GENERAL NOTES REFER TO DRAWING 33013-2241.
  2. EXCEPT WHERE OTHERWISE INDICATED, SAFETY CLASS BREAKS FOR ALL VENT, DRAIN & TEST CONNECTIONS SHALL BE AT THE ROOT VALVE IN ACCORDANCE WITH DETAIL "X".
  3. THE [ ] SIGNALS TO STANDY AUX. FW PUMPS C AND D CAUSE THE PUMPS TO BE TROPPED FOLLOWING RECEIPT OF THE SIGNAL.
  4. ELECT. MOTOR EDPS FOR MECH. EQUIP. ARE DEPICTED IN BRACKETS ADJACENT TO MECH. EQUIP. PER SPEWR 1832B.
  5. VALVE FAILS OPEN ON LOSS OF INSTRUMENT AIR AND FAILS CLOSED ON LOSS OF ELECTRIC POWER TO SOLENOID.

DESIGNED BY	AWD	REV	DATE
CHECKED BY	AWD	REV	DATE
CONTRIBUTOR			
LIMITED CONTROL AS SHOWN			
INSTRUMENTS NOT FOR CONTROL			
GROUP PURPOSES			
AS BUILT			
ISSUED FOR			
GENERAL STA.	Provide On a Separate Draw.		
SCALE	NONE		
<b>STANDY AUXILIARY FEEDWATER (SAFW) P&amp;ID</b>			
JOB NO.	DRAWING NO.	REV.	
EWR 3301E	33013-1230	1	
CCD 01	CONTROL COPY #		



- NOTES:
- FOR GENERAL NOTES, SEE DWG: 33013-2241.
  - REVISION "F" OF THIS DRAWING SUPERSEDES PORTIONS OF DWG: 33013-1230, REV. 4.
  - FURNISH UPSTREAM OF VALVE 5015 CONTAINS SCREEN.
  - ROOT VALVE 5019 DISHIDE FUEL OIL STORAGE TANK CONTAINS SCREEN.
  - EXCEPT WHERE OTHERWISE INDICATED, SAFETY CLASS BREAKS FOR ALL DRAINS, VENTS AND TEST CONNECTIONS SHALL BE AT ROOT VALVE IN ACCORDANCE WITH DETAIL "A".
  - THE EXHAUST MANIFOLD SHOULD VENT EXTERIORS FROM THE EXHAUST MANIFOLD THROUGH THE ROOF OF THE DIESEL GENERATOR ROOM. ITS PURPOSE IS TO REMOVE EXCESS MANIFOLD HEAT AND EXHAUST GASES WHICH MAY LEAK FROM THE MANIFOLD JOINTS.
  - VALVE 5078 AT (B-3) HAS INTERNAL THERMOSTATS TO MAINTAIN 170°F NOMINAL JACKET WATER TEMPERATURE. VALVE 5087 AT (C-3) HAS INTERNAL THERMOSTATS TO MAINTAIN 180°F NOMINAL LUBE OIL TEMPERATURE.
  - ELECTRIC MOTOR ERPS FOR MECHANICAL EQUIPMENT ARE DEPICTED IN BRACKETS ADJACENT TO MECHANICAL EQUIPMENT FOR SEWER 11826.
  - VALVE 5061 INTERNALS REMOVED PER PDR 2061-0047.
  - LOCAL TEMPERATURE INDICATORS TI-2648, TI-2650, TI-2651, AND TI-2649, ARE LOCATED IN WELLS.

PROJECT NO. DWG. NO. DATE	REV. 11/4/83 12/12/83	BY JMS JMS	CHECKED JMS JMS
CONSTRUCTION			
LUBRICATING OIL FOR CONSTRUCTION			
PRELIMINARY NOT FOR CONSTRUCTION			
ENGINE DRAWING			
AS BUILT			
DATE RELEASED FOR			
DESIGNED BY			
CHECKED BY			
APPROVED BY			
PROJECT NO. 33013-1230			
DWG. NO. 33013-1230 SHEET 1 OF 2			
REV. 1			
JOB NO. EWR 3301E			
DRAWING NO. 33013-1230 SHEET 1 OF 2			
REV. 1			
CCD 01 CONTROL COPY			



SAFETY CLASS B.3. (Q)  
 SAFETY SIGNIFICANT (Q)  
 DETAIL-A  
 TYP. SAFETY CLASS BREAK POINT FOR VENT, DRAIN & TEST CONNECTIONS

- NOTES:
1. FOR GENERAL NOTES SEE DRAWING 33013-2241.
  2. EXCEPT WHERE OTHERWISE INDICATED, SAFETY CLASS BREAKS FOR ALL VENTS, DRAINS AND TEST CONNECTIONS SHALL BE AT THE ROOF VALVE IN ACCORDANCE WITH DETAIL 'A'.
  3. FUNNEL UPSTREAM OF VALVE 5016 CONTAINS SCREEN.
  4. FOOT VALVE 5020 INSIDE FUEL OIL STORAGE TANK CONTAINS SCREEN.
  5. THE EXHAUST MANIFOLD SHOULD VENT EXTENDS FROM THE EXHAUST MANIFOLD THROUGH THE ROOF OF THE DIESEL GENERATOR ROOM. ITS PURPOSE IS TO REMOVE EXCESS MANIFOLD HEAT AND EXHAUST GASES WHICH MAY LEAK FROM THE MANIFOLD JOINTS.
  6. VALVE 5008 (B-3) HAS INTERNAL THERMOSTATS TO MAINTAIN APPROX. 170°F NOMINAL JACKET WATER TEMPERATURE. VALVE 5008 (C-3) HAS INTERNAL THERMOSTATS TO MAINTAIN APPROX. 180°F NOMINAL LUBE OIL TEMPERATURE.
  7. ELECTRIC MOTOR ED'S FOR MECHANICAL EQUIPMENT ARE DEPICTED IN BRACKETS ADJACENT TO MECHANICAL EQUIPMENT PER SPEWR 18328.
  8. VALVE 5042 INTERNALS REMOVED PER PCR 2091-9047.
  9. LOCAL TEMPERATURE INDICATORS TI-2050, TI-2050A, TI-2053, AND TI-2055 ARE IN WELLS.

REVISED BY	DATE	REASON
DCO FILE NAME	33013-2241	
CONSTRUCTION		
LIMITED CONSTRUCTION - AS NOTED		
PRELIMINARY NOT FOR INSTALLATION		
ENGINE PURSUING		
DATE	AS BUILT	REV.
BY	RELEASED FOR	ENCL.
NAME	CHINA STA.	Prepared by a Bureau Com.
NO.	NONE	Checked by
DIESEL GENERATOR - B (DG)		
P & ID		
JOB NO.	DRAWING NO.	REV.
DCO 3301E	33013-1230 SHEET 2 OF 2	
CCD 01 CONTROL COPY		

