

Final Submittal
(Blue Paper)

FINAL SRO
WRITTEN EXAMINATION
AND REFERENCES

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 076

Given the following:

- Power ascension is in progress on Unit 2.
- RCO reports the 2A1 RCP upper thrust bearing at 185°F and rising at approximately 1 °F per minute.
- 2A1 lower thrust bearing is 160 °F and rising at 1 °F every 3 minutes.
- 2A1 upper and lower guide bearings are at 160 °F and rising at 1 °F per minute.

Which ONE (1) of the following describes the plant condition and action required?

- A. An RCP bearing temperature limit has been exceeded. Stop the power ascension and determine the cause in accordance with 2-NOP-01.02, RCP Operation.
- B. An RCP bearing temperature limit has been exceeded. Trip the reactor and turbine, and stop RCP 2A1 in accordance with ONP-2-0120034, Reactor Coolant Pump Off Normal.
- C. An RCP bearing temperature limit will be exceeded in approximately 15 minutes. When the limit is exceeded, stop the power ascension and determine the cause in accordance with 2-NOP-01.02, RCP Operation.
- D. An RCP bearing temperature limit will be exceeded in approximately 15 minutes. When the limit is exceeded, trip the reactor and turbine, and stop RCP 2A1 in accordance with ONP-2-0120034, Reactor Coolant Pump Off Normal.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 077

Given the following Unit 1 plant conditions:

- The crew is performing the actions of 1-EOP-01, Standard Post Trip Actions.
- CEAs have FAILED to insert.
- Reactor power indicates 65%.
- Actions for Reactivity Control are being carried out.
- The crew determines that the following occurs in rapid succession:
 - RCS temperature and pressure rising.
 - Pressurizer PORVs indicate open.
 - Quench Tank temperature, pressure, and level are rising.

Which ONE (1) of the following has occurred and what procedure entry is required?

- A. The turbine has tripped; enter 1-EOP-15, Functional Recovery.
- B. The turbine has tripped; remain in 1-EOP-01, Standard Post Trip Actions.
- C. The reactor has tripped; remain in 1-EOP-01, Standard Post Trip Actions.
- D. The reactor has tripped; enter 1-EOP-15, Functional Recovery.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 078

Given the following plant conditions:

- Unit 1 tripped due to a 300 gpm Loss of Coolant Accident (LOCA).
- The Optimal Recovery Procedure for a LOCA, EOP-03, has been entered.
- RCS pressure is 1550 psig and lowering slowly
- RCS temperature is 515 degrees F and stable
- Five minutes later, the following conditions are observed:
 - SG 1A pressure is indicating 450 psig and lowering
 - RCS temperature is 440 deg F and lowering
 - RCS pressure is 1350 psig and lowering

Which ONE (1) of the following describes the strategy for the current plant conditions?

- A. Remain in EOP-03. ECCS flow is causing the RCS cooldown.
- B. Go to the ESD Optimal Recovery Procedure, EOP-05, to isolate the 1A SG and stabilize RCS temperature.
- C. Go to the Functional Recovery Procedure, EOP-15, and isolate the 1A SG by use of the appropriate RCS Inventory Control Success Path.
- D. Go to the Functional Recovery Procedure, EOP-15, and isolate the 1A SG by use of the appropriate RCS Heat Removal Success Path.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 079

Given the following:

- Unit 2 is in Mode 1.
- An electrical transient has occurred.
- Bistables are lit for Channel C RPS and ESF actuations.
- Instrument Bus 2MC indicates 0 volts.

Which ONE (1) of the following describes the Technical Specification implications of this failure?

- A. Action is required in accordance with Tech Spec 3.3.1, Reactor Protective Instrumentation, within 1 hour.
Action is required in accordance with Tech Spec 3.8.3.1, Onsite Distribution Systems, within 1 hour.
- B. Action is required in accordance with Tech Spec 3.3.1, Reactor Protective Instrumentation, within 1 hour.
Action is required in accordance with Tech Spec 3.8.3.1, Onsite Distribution Systems, within 2 hours.
- C. Action is NOT required in accordance with Tech Spec 3.3.1, Reactor Protective Instrumentation, because all bistables are in their 'fail' positions.
Action is required in accordance with Tech Spec 3.8.3.1, Onsite Distribution Systems, within 1 hour.
- D. Action is NOT required in accordance with Tech Spec 3.3.1, Reactor Protective Instrumentation, because all bistables are in their 'fail' positions.
Action is required in accordance with Tech Spec 3.8.3.1, Onsite Distribution Systems, within 2 hours.

U.S.N.R.C. Site-Specific Written Examination
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Question 080

Given the following:

- Unit 1 is at 100% power.
- The AB Bus is aligned to the 'B' side.
- Annunciator E-30, ICW HEADERS PRESS LOW, has just alarmed and locked in.
- Annunciator E-7, 1B ICW PUMP OVRLD/TRIP, has just alarmed and locked in.
- PIS-21-8A, ICW header 1A indicates 44 psig
- PIS-21-8B, ICW header 1B indicates 0 psig.
- 1A ICW Pump is running.
- 1B ICW Pump amps indicate 0.
- 1C ICW Pump is Pull to Lock.
- One attempt to restart 1B ICW Pump was unsuccessful.

Which ONE (1) of the following actions should the control room operators perform next in accordance with ONP 1-0640030, ICW Off-Normal?

- A.
 - Notify electrical to meet the SNPO at the 1C ICW Pump breaker.
 - Reset any relays associated with the 1AB 4.16 kV bus.
 - Start 1C ICW Pump.
- B.
 - Notify electrical to meet the SNPO at the 1B ICW Pump breaker.
 - Reset any relays associated with the 1B3 4.16 kV bus.
 - Start 1B ICW Pump.
- C.
 - Align or ensure the 1C ICW pump is aligned to the 1B ICW header per the ICW ONP.
 - Instruct the ANPO to CLOSE the 1C ICW pump discharge valve and then throttle 10 turns open.
 - Start 1C ICW Pump.
- D.
 - Attempt one more start of the 1B ICW Pump.
 - If the pump does not start, then instruct the ANPO to CLOSE the 1B ICW pump discharge valve and then throttle 10 turns open.

U.S.N.R.C. Site-Specific Written Examination
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Question 081

Given the following:

- Unit 1 is at 100% power.
- The following indications are received.
 - Alarm F-21, Instrument Air Compressor Auto Start.
 - Alarm F-5, Instrument Air High or Low Pressure.
 - Instrument Air Pressure indication PI-18-9 indicates 88 psig, lowering slowly.
 - 1C and 1D Instrument Air Compressors are running.

Which ONE (1) of the following describes the action required?

- A. Enter ONP 1-1010030, Loss of Instrument Air, due to the low instrument air pressure condition, and bypass the air dryer package, if required.
- B. Trip the reactor and enter EOP-01, Standard Post Trip Actions, due to lowering Instrument Air pressure with both air compressors running.
- C. Verify the proper operation of Main Feedwater Regulating Valves and MFIVs in accordance with the applicable Annunciator Response procedures.
- D. Begin a plant shutdown to Hot Standby in accordance with 1-GOP-123, Turbine Shutdown – Full Load to Zero Load in anticipation of possible feedwater system anomalies.

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Question 082

Unit 1 is operating at 100% power (MOC condition) when a dropped CEA on Unit 1 results in the in-core detectors remaining in alarm after Tref is matched to Tavg.

If FOUR (4) in-core detectors remain in alarm, what, if any, operator action is required per Technical Specifications?

- A. No action is currently required since the alarms will clear after the CEA is restored to its normal position.
- B. Maintain reactor power at the current value until Reactor Engineering evaluates core conditions using BEACON.
- C. Initiate actions within 15 minutes to reduce the linear heat rate to within acceptable values within one hour.
- D. Initiate action within 1 hour to determine that all other CEAs in the group with the dropped CEA are above the Long Term Steady State Insertion Limit.

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Question 083

The following conditions exist on Unit 1:

- Reactor power is 20% during a plant startup.
- Group 7 is being withdrawn at 120 inches when it is noticed that two CEAs in the group have stopped moving.
- Annunciator K-18, CEA POSITION DEVIATION (DCS) is in alarm.
- Annunciator K-24, CEA POSITION DEVIATION MOTION BLOCK (CEAPDS) is in alarm
- All CEA motion is IMMEDIATELY stopped.
- The highest CEA in Group 7 indicates 122 inches.
- The two misaligned CEAs are determined to be IMMOVABLE

Which ONE (1) of the following describes the position of the LOWEST stuck CEA and the actions that will be required?

- A. 116 inches. Immediately initiate emergency boration, verify Shutdown Margin within 1 hour, and be in Hot Standby within 6 hours.
- B. 118 inches. Insert Group 7 CEAs to the position of the stuck CEAs. Restore the stuck CEAs to OPERABLE status within 1 hour or be in Hot Standby within the following 6 hours.
- C. 116 inches. Maintain current power. Operation in Mode 1 may continue indefinitely if the remainder of the Group 7 CEAs are within 7.0 inches of the stuck CEAs
- D. 118 inches. Immediately trip the reactor and ensure the reactor trip breakers are open.

U.S.N.R.C. Site-Specific Written Examination
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Question 084

Given the following:

- A Unit 2 Reactor startup is in progress.
- Reactor Power is 5E-4%.
- Wide Range Power Channel 'C' has failed.
- Functions provided by the channel were placed in TRIP.
- The startup has been stopped to determine the cause of the failure.
- The Reactor Control Operator reports the following information:
 - Wide Range Power Channel 'A' has risen 1 decade in the last 10 seconds and continues to rise.
 - Wide Range Power Channels 'B' and 'D' are stable.

Which ONE (1) of the following actions is required by the crew?

- A. Stabilize power and Bypass Channel 'C' in accordance with ONP- 99.01, Loss of Tech Spec Instrumentation.
- B. Verify the reactor has tripped or trip the reactor and perform EOP-01, SPTAs.
- C. Bypass Channels 'A' and 'C' prior to raising reactor power above 10%.
- D. Reduce power to below 10-4% and return BOTH Channels 'A' and 'C' to operable status prior to resuming reactor startup.

U.S.N.R.C. Site-Specific Written Examination
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Senior Reactor Operator

Question 085

Given the following:

- Unit 1 is in Mode 4 with a Reactor Coolant System degasification in progress.
- Waste Gas Compressor 1A is in service and aligned to Waste Gas Decay Tank (WGDT) 1B.
 - 1B WGDT pressure is 15 psig.
- Waste Gas Decay Tank 1A was recently filled (< 24 hours ago) and is currently isolated.
 - 1A WGDT pressure is 155 psig.
- Waste Gas Decay Tank 1C has sufficiently decayed (> 6 months) and is currently aligned for release via V6565.
 - 1C WGDT pressure is 150 psig.

Shortly after the release is started the following occurs:

- Annunciator N-38, WASTE GAS DISCH RAD HIGH goes into alarm.
- The SNPO reports WGDT pressures as follows: 1A 140 psig; 1B 20 psig; 1C 140 psig.
- Area radiation levels have remained constant.

What is the cause of the accidental gas release and what action is required to secure the release?

- A.
 1. Waste Gas Compressor 1A is discharging into Waste Gas Decay Tank 1A and 1C.
 2. Ensure the following valves are closed: V6579, V6597, V6701, V6582, V06825
- B.
 1. Waste Gas Compressor 1A is discharging into Waste Gas Decay Tanks 1A & 1B.
 2. Ensure the following valves are closed: V6565, V6745, V06823, V6579, V6592, V6582
- C.
 1. Waste Gas Decay Tank 1A is cross connected to Waste Gas Decay Tank 1C.
 2. Ensure the following valves are closed: V6565, V6588, V6599, V6584, V6580, V6598
- D.
 1. Waste Gas Decay Tank 1A relief valve is lifting.
 2. Ensure the following valves are closed: V6547, V6579, V6599, V6588, V6584

U.S.N.R.C. Site-Specific Written Examination
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Question 086

While purging the Volume Control Tank (VCT), level was increased to 75% without any concurrent adjustment in VCT pressure as level was raised.

Which ONE (1) of the following describes the effect on RCP Controlled Bleedoff flow and the action(s) required to mitigate the effect?

- A. CBO flow decreases. Venting the VCT will be required.
- B. CBO flow decreases. Aligning CBO flow to the Quench Tank will be required.
- C. CBO flow increases. Throttle closed CBO Throttle Valve V2198 to raise CBO pressure.
- D. CBO flow increases. Throttle open CBO Throttle Valve V2198 to lower CBO pressure.

U.S.N.R.C. Site-Specific Written Examination
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Question 087

Given the following:

- Unit 1 is in a Station Blackout (SBO) condition.
- Unit 2 has 2 DGs running.
- The decision has been made to cross tie Unit 2 to Unit 1 power in accordance with EOP-99, Appendix V, Receiving Power From Unit 2 Using SBO Cross-Tie.

Which ONE (1) of the following describes the direction the Unit Supervisor will give to energize the preferred train on Unit 1 in accordance with EOP-99, Appendix V?

- A. Energize Bus 1AB; Strip all Train 'B' loads; Energize Bus 1B.
- B. Strip all Train 'B' 4160V loads; Energize Bus 1AB; Energize Bus 1B.
- C. Energize Bus 1AB; Strip all Train 'A' 4160V loads; Energize Bus 1A.
- D. Strip all Train 'A' 4160V loads; Energize Bus 1AB; Energize Bus 1A.

U.S.N.R.C. Site-Specific Written Examination
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Senior Reactor Operator

Question 088

Unit 2 has sustained a 200 gpm LOCA and EOP-03, Loss of Coolant Accident, has been entered.

All HPSI pumps have TRIPPED and CANNOT be restarted.

Which ONE (1) of the following describes the correct actions required?

- A. Continue use of EOP-03 until an alternate procedure is designated by the Safety Function Status Check, because the Inventory Control Safety Function Status will be UNSAT.
- B. Continue the use of EOP-03 since the event has been diagnosed as a LOCA and all of the Safety Function Status Checks will remain SATISFIED.
- C. Return to the Diagnostic Flowchart in EOP-01, Standard Post Trip Actions; continue in the LOCA procedure since SI Tanks remain available for Inventory Control.
- D. Return to the Diagnostic Flowchart in EOP-01, Standard Post Trip Actions; continue in the LOCA procedure since LPSI remains available for Inventory Control.

U.S.N.R.C. Site-Specific Written Examination
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Question 089

Unit 2 reactor power is 82%. Reactor Cavity Cooling Fan HVS-2B has just tripped due to an electrical fault.

Which ONE (1) of the following describes the required operator actions regarding HVS-2A, Reactor Cavity Cooling Fan?

- A. HVS-2A must be started within 30 minutes or a reactor trip is required per 2-ONP-25.01, Loss of Reactor Containment Building Cooling Fans.
- B. HVS-2A must be started within 45 minutes or a reactor trip is required per 2-ONP-25.01, Loss of Reactor Containment Building Cooling Fans.
- C. HVS-2A must be started within 30 minutes or reactor power must be reduced to less than 30% per 2-NOP-25.05, Containment Ventilation Systems.
- D. HVS-2A must be started within 45 minutes or reactor power must be reduced to less than 30% per 2-NOP-25.05, Containment Ventilation Systems.

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Senior Reactor Operator

Question 090

Unit 2 conditions:

- 100% power.
- 2A Diesel Generator (EDG) will be tested in accordance with 2-2200050A, 2A Diesel Generator Periodic Test and General Operating Instructions.

Which ONE (1) of the following correctly describes the status of 2A EDG while paralleled to the grid?

- A. Operable because it is capable of automatically separating from the grid if emergency loading is required.
- B. Operable because the 86 relay provides electrical protection against grid problems.
- C. Inoperable because the Start Circuit Switch (Norm/Isolate #3) is in ISOLATE.
- D. Inoperable because the LOOP undervoltage relay protection scheme is blocked.

U.S.N.R.C. Site-Specific Written Examination
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Question 091

Unit 1 was shutdown for two months following a LOCA inside Containment.

- The containment iodine removal system has been in continuous operation for one month to clean up the containment atmosphere in preparation for reentry.
- Iodine Removal System fan HVE-1 is in operation.
- 2 Containment Fan Coolers are in operation.
- Containment temperature is 90 degrees F.

The following alarm is received:

- P-37, AIRBORNE ACT HVE-1/2 ADSORB TEMP HIGH

The RCO determines that the alarm is valid.

Which ONE (1) of the following describes the actions required?

- A. Start and run all available Containment Fan Coolers until the alarm clears. Notify Chemistry to sample the Charcoal Filter.
- B. Stop HVE-1 and bypass the charcoal filter train. Restart HVE-1 and ensure proper air flow. Notify Maintenance to replace the Charcoal Filter.
- C. Stop HVE-1 and place HVE-2 in service. Notify Maintenance to replace the Charcoal Filter.
- D. With HVE-1 running, start HVE-2 to raise airflow to clear the alarm. Notify Chemistry to sample the Charcoal Filter.

U.S.N.R.C. Site-Specific Written Examination
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Senior Reactor Operator

Question 092

Unit 1 was operating at 60% power. The following conditions exist:

- Seawater temperature is 85°F.
- Condenser $\Delta T = 20^\circ\text{F}$.

A differential current lockout occurs on the 1A2 4.16 KV Bus.

Which ONE (1) of the following statements correctly describes the plant response and the required action?

- A. The 1A and 1B Condenser will lose equal amount of circulating water flow. Trip the unit if condenser backpressure exceeds 5.5 inches of Hg abs.
- B. The 1A and 1B Condenser will lose equal amount of circulating water flow. Trip the unit if condenser backpressure exceeds 3.5 inches of Hg abs.
- C. The 1A Condenser will lose all circulating water flow. Trip the unit if high differential pressure between condensers exceeds 2.5 inches of Hg abs.
- D. The 1A Condenser will lose all circulating water flow. Trip the unit if condenser backpressure exceeds 5.5 inches of Hg abs.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 093

A Secondary Chemistry transient has occurred on Unit 2.

The Unit Supervisor has entered ONP 2-0610030, Secondary Chemistry-Off Normal.

Chemistry has determined that an Action Level 3 condition exists. Plant Management concurs with the recommended action and time frame.

Which ONE (1) of the following describes the action required for the Chemistry Action Level?

- A. Ensure Feedwater Hydrazine is maintained greater than 8 times Condensate dissolved oxygen and that feedwater dissolved oxygen is < 5 ppb.
- B. Commence a downpower to 28-32% power at a rate of 10-15 MW/min in accordance with 2-ONP-22.01, Rapid Downpower.
- C. Return the chemistry parameter to below the Action Level 3 threshold within 100 hours, or reduce power as recommended by Chemistry to perform a hot soak of the SGs to promote removal of contaminants.
- D. Shutdown to at least Mode 2 in accordance with 2-ONP-22.01, Rapid Downpower, at a rate of 10-15 MW/min, regardless of the duration of the excursion into Action Level 3.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 094

What ONE (1) of the following is the MOST RESTRICTIVE event associated with Technical Specification requirements for Shutdown Margin?

- A. Excessive cooldown resulting from a Main Steam Break at end of core life from 0% power conditions.
- B. Positive reactivity addition resulting from a Rod Ejection event at end of core life from 100% power conditions.
- C. Positive reactivity addition resulting from a Rod Ejection event beginning of core life from 0% power conditions.
- D. Excessive cooldown resulting from a Main Steam Break at beginning of core life from 100% power conditions.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 095

Unit 2 is in a refueling outage. The following plant conditions exist:

- RCS is at 152°F and atmospheric pressure.
- 2A LPSI Pump is running with cross-tie valve V3545 open.
- Pressurizer level is 10% cold calibrated.
- Reactor has been subcritical for 130 hours.
- CCW temperature is 85°F.
- LPSI flow indicates 3400 GPM

Which ONE (1) of the following describes the plant condition, and action, if any, required, in accordance with 2-NOP-03.05, Shutdown Cooling?

- A. Total Shutdown Cooling flow and LPSI Pump 2A flow are within limits. No action is required.
- B. Total Shutdown Cooling flow is within limits. LPSI Pump 2A flow must be reduced to within limits.
- C. Total Shutdown Cooling flow must be reduced to within limits. LPSI Pump 2A flow is within limits.
- D. Total Shutdown Cooling flow and LPSI Pump 2A flow BOTH must be reduced to within limits.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 096

Core Reload is in progress on Unit 2.

32 Fuel Assemblies have been loaded into the core.

During insertion of the 33rd assembly, count rate increases from 110 CPS to 245 CPS.

Which ONE (1) of the following describes the condition that exists and the action required in accordance with POP-3200090, Refueling Operation?

- A. This is an EXPECTED condition during core reload. Direct Reactor Engineering to validate the reading and renormalize the 1/M.
- B. This is an EXPECTED condition during core reload. Direct Reactor Engineering to validate the reading and ensure the 1/M does NOT extrapolate to 0 prior to any additional fuel movement.
- C. This is an UNEXPECTED condition during core reload. Stop all fuel movement, leave the assembly grappled, verify Shutdown Margin, and direct Reactor Engineering to evaluate plant conditions prior to resuming fuel movement.
- D. This is an UNEXPECTED condition during core reload. Withdraw the assembly, verify Shutdown Margin, and direct Reactor Engineering to evaluate plant conditions prior to resuming fuel movement.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 097

Given the following:

- You are the On-Shift Unit Supervisor.
- You have been designated as the SRO Approval Authority for a Temporary Procedure Change (TC) to an Operations Dept. surveillance procedure.
- The Qualified Reviewer has determined that a 10CFR50.59 Safety Evaluation is NOT required for the TC.
- The TC does NOT change the intent of the procedure.

Which ONE (1) of the following describes the administrative requirements associated with the approval of the TC in accordance with ADM-11.03, Temporary Change to Procedures?

- A. You may be designated as Independent Reviewer as well as approval authority since it is an Operations Dept. procedure.
- B. You may be designated as the Management Member as well as the approval authority since it is an Operations Dept. procedure.
- C. You are required to verify that all other reviews and approvals for the TC have been obtained. You may have no other responsibilities related to the TC.
- D. You may review the TC as the Management Member but final approval must be obtained from the Shift Manager.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 098

Given the following conditions:

- Unit 2 is in Mode 4.
- A 12 hour Containment Mini-Purge is planned.

Which ONE (1) of the following describes the requirement for issuance of a Release Permit in accordance with OP 2-0530021, Controlled Gaseous Batch Release to Atmosphere?

- A. A Gaseous Batch Release Permit must be issued for the release. The release is accounted for as a Continuous Release after 10 hours.
- B. A Gaseous Batch Release Permit must be issued for the release. After 10 hours, a new Gaseous Batch Release Permit must be issued to continue the release.
- C. A 12 hour Mini-Purge is considered a continuous release and a Gaseous Batch Release Permit is NOT required if all required Radiation Monitoring instrumentation is operable.
- D. A 12 hour Mini-Purge is considered a continuous release and a Gaseous Batch Release Permit is NOT required UNLESS a Gas Decay Tank release is in progress.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 099

Unit 2 is operating at 100% power when the following occurs:

- Loss of Off-Site Power
- Reactor Trip

Subsequently ten minutes after the trip, the following conditions exist:

- AFW is feeding BOTH SGs
- SG 2A Pressure is 950 psia and stable
- SG 2B Pressure is 950 psia and stable
- All RCPs are OFF
- PZR Pressure is 2200 psia and slowly rising
- Thot is approximately 565 °F in both loops and stable
- REPCET is 587 °F
- Tcold is approximately 550 °F in both loops and stable
- Reactor Vessel Level is 100% (Head)

Which ONE (1) of the following describes the status of RCS Heat Removal and the action required, if any?

- A. Natural Circulation exists. The SBCS control valves are maintaining heat removal.
- B. Natural Circulation does not exist. Heat removal may be established by opening the SBCS control valves.
- C. Natural Circulation exists. ADVs are maintaining heat removal.
- D. Natural Circulation does not exist. Heat removal may be established by opening the ADVs.

U.S.N.R.C. Site-Specific Written Examination
St. Lucie
Senior Reactor Operator

Question 100

A General Emergency has been declared.

All Emergency Response Facilities are operational and all turnovers have been completed.

Which ONE (1) of the following describes the person responsible to make Protective Action Recommendations in accordance with EPIP-08, Off-Site Notifications and Protective Action Recommendations?

- A. Shift Manager
- B. Emergency Coordinator
- C. Technical Support Center Coordinator
- D. Recovery Manager

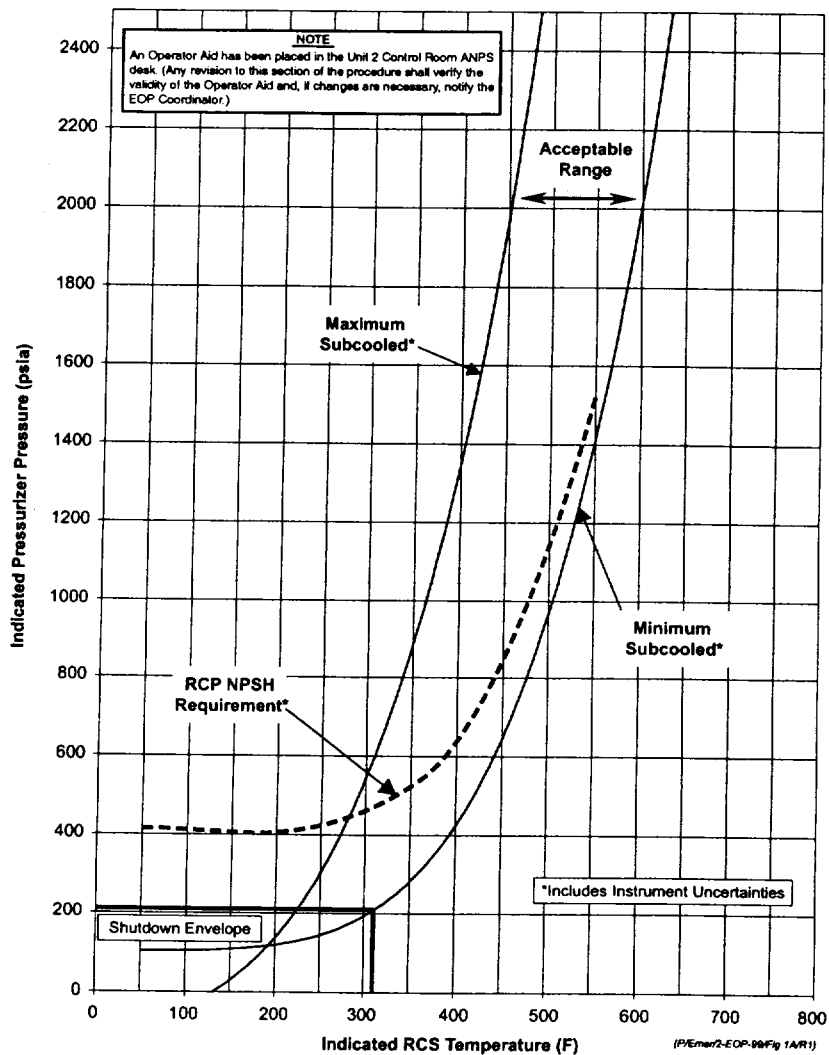
Steam Tables

FIGURE 1A
RCS PRESSURE TEMPERATURE
(Page 1 of 1)

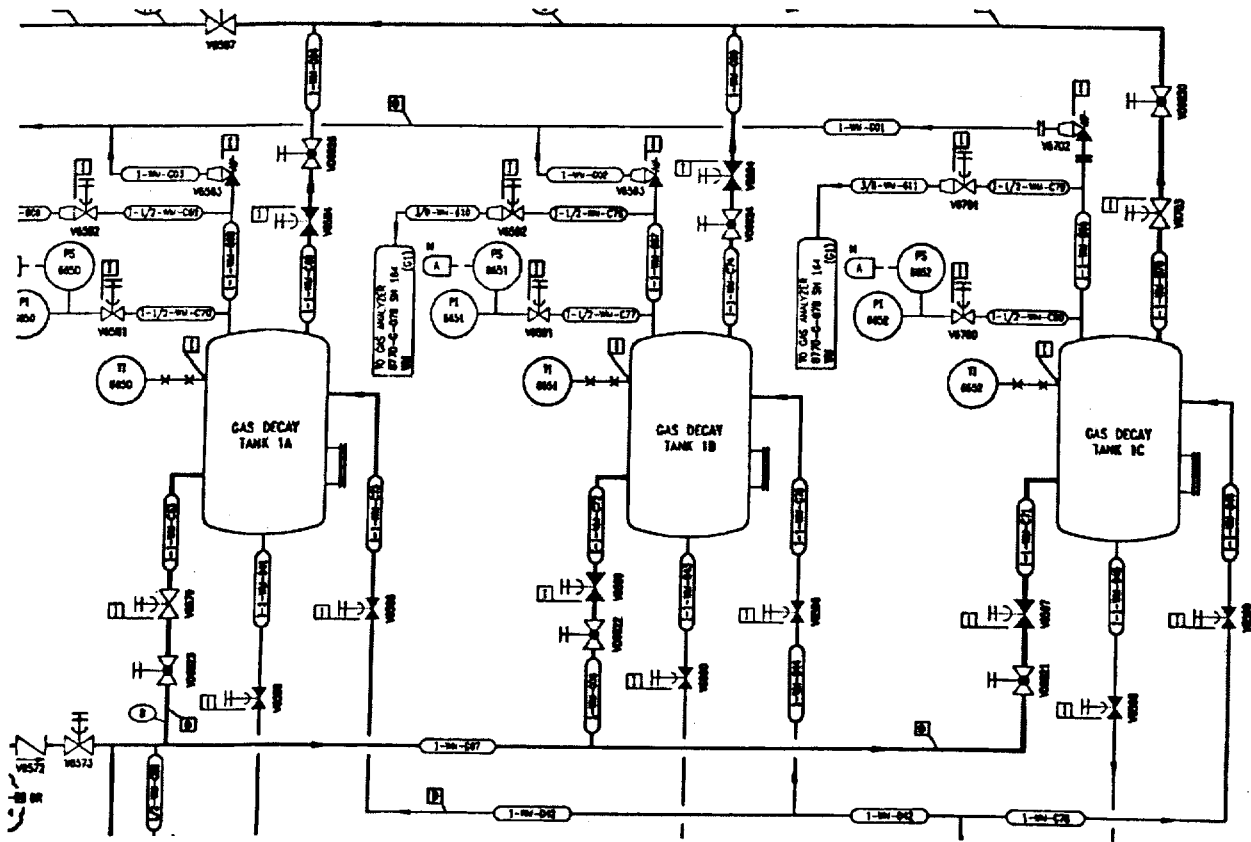
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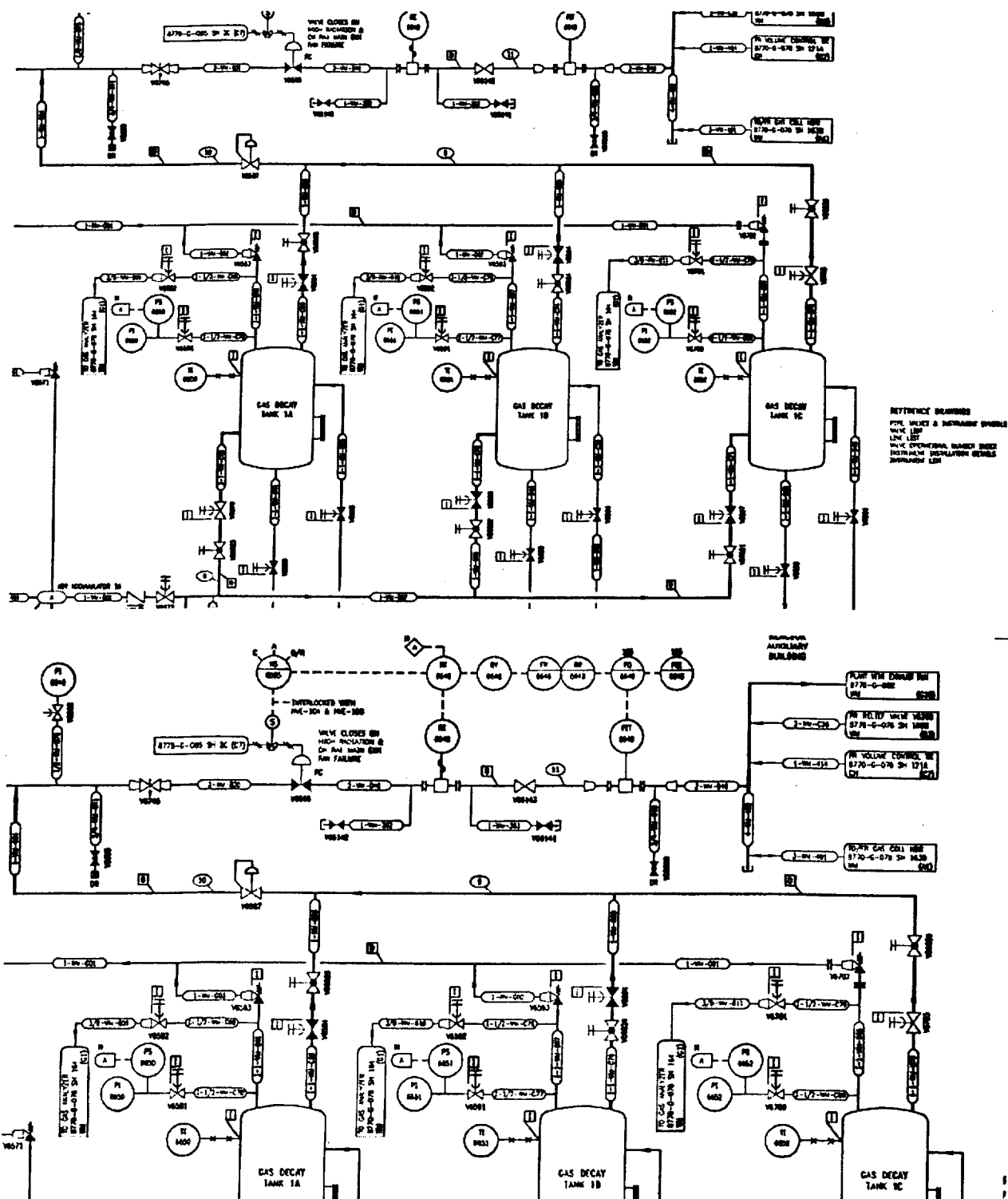
CAUTION

The RCP NPSH curve assumes one pump is operating in each loop. RCP instrumentation should be monitored for seal and pump performance in accordance with 2-EOP-99, Table 13.



RCS Pressure Range	Required QSPDS Subcooled Margin Reading (Rep CET)
2250 psia to 1000 psia	40 to 180°F
1000 psia to 500 psia	50 to 170°F
Less than 500 psia	80 to 160°F





REVISION NO.: 27A

PROCEDURE NO.: 2-NOP-03.05

PROCEDURE TITLE: SHUTDOWN COOLING

ST. LUCIE UNIT 2

PAGE: 135 of 141

APPENDIX C

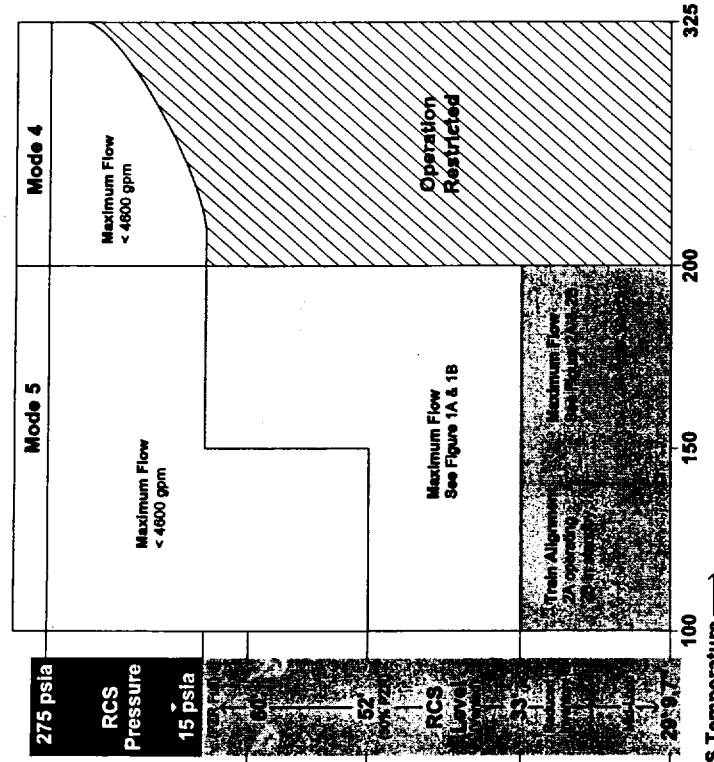
SDC & LPSI PUMP FLOW REQUIREMENTS

(Page 1 of 5)

Unit 2 SDC Flow Limit Guide

Minimum LPSI Pump Flow
(In ALL Conditions)
100 gpm < 1 hour
> 1000 gpm continuous

Mode 6	Minimum System Flow (Note 1)	Maximum Flow < 4600 gpm
	Minimum System Flow (Note 1)	Maximum Flow See Figure 1A & 1B
	Minimum System Flow (Note 1)	Maximum Flow See Figure 2A & 2B Train Alignment Train Alignment Train Alignment



NOTE 1: A. SDC flow total > 3000 gpm (Both trains combined).
Not achievable in Mode 6 below 33' Elevation due to single train operation.

OR

B. IF ALL of the following conditions are satisfied:
 1. The reactor has been subcritical for > 125 hours
 2. RCS temperature < 117 °F
 3. CCW temperature < 87 °F
 Then SDC total flow > 1850 gpm (Both trains combined)

THIS AN OPERATOR AID (OA). IF THIS FIGURE IS REVISED, THE (OA) WILL ALSO HAVE TO BE REVISED.

REVISION NO.:

27A

PROCEDURE NO.:

2-NOP-03.05

PROCEDURE TITLE:

SHUTDOWN COOLING

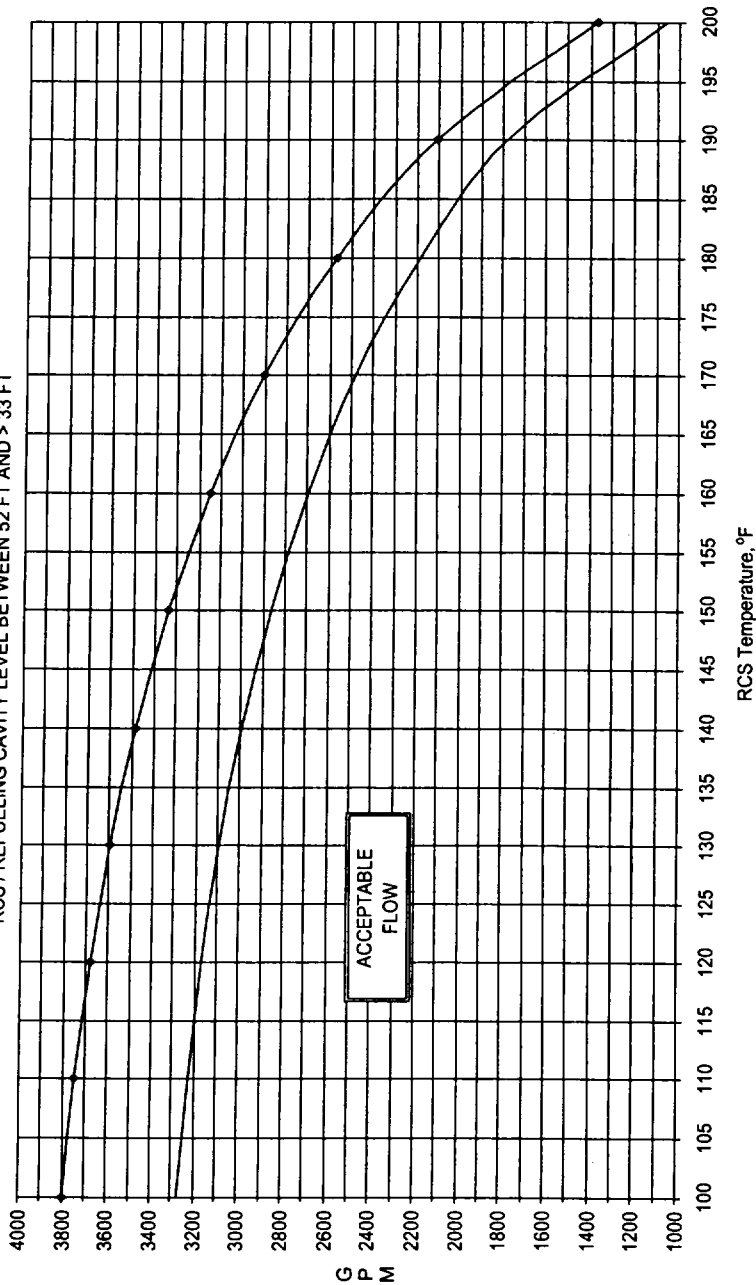
PAGE:

136 of 141

ST. LUCIE UNIT 2

APPENDIX C
SDC & LPSI PUMP FLOW REQUIREMENTS
(Page 2 of 5)

FIGURE 1A
2A LPSI PUMP FLOW LIMITS
RCS / REFUELING CAVITY LEVEL BETWEEN 52 FT AND > 33 FT



— Maximum Allowable Indicated Flow, V3545 Closed - - - V3545 Open, Single Train Operation

REVISION NO.:

27A

PROCEDURE NO.:

2-NOP-03.05

PROCEDURE TITLE:

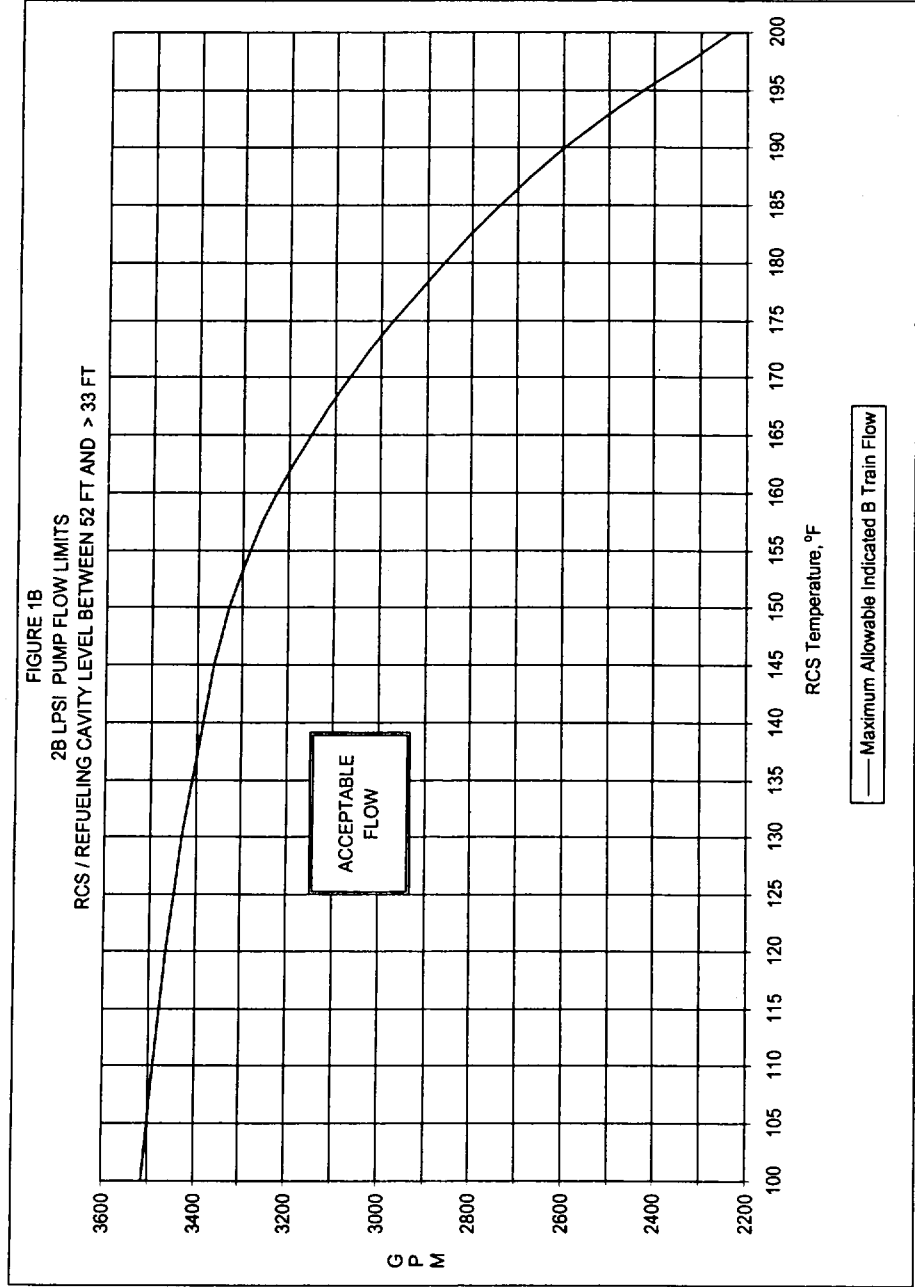
SHUTDOWN COOLING

ST. LUCIE UNIT 2

PAGE:

137 of 141

APPENDIX C
SDC & LPSI PUMP FLOW REQUIREMENTS
 (Page 3 of 5)



REVISION NO.:

27A

PROCEDURE NO.:

2-NOP-03.05

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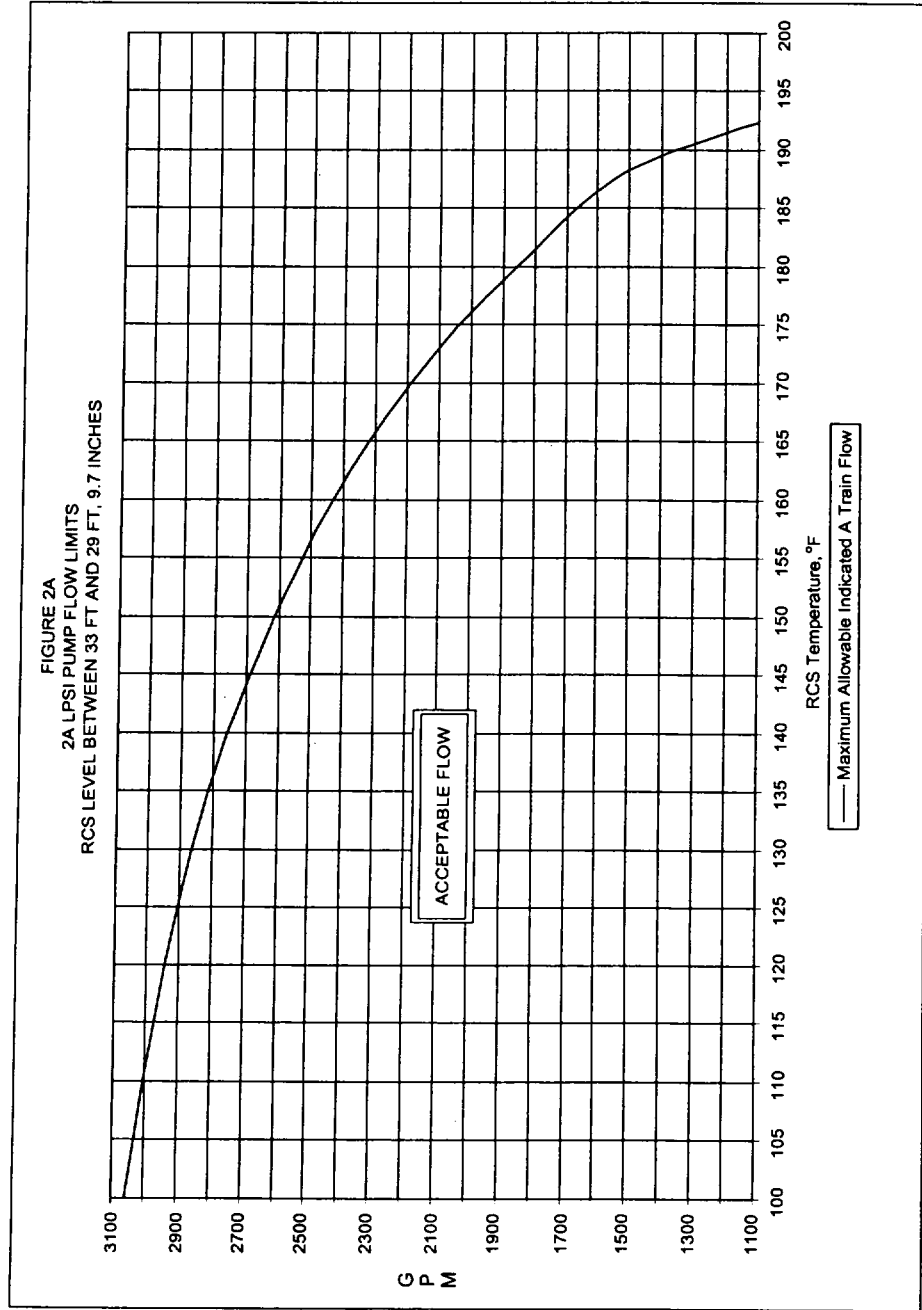
SHUTDOWN COOLING

PAGE:

138 of 141

ST. LUCIE UNIT 2

APPENDIX C
SDC & LPSI PUMP FLOW REQUIREMENTS
(Page 4 of 5)



REVISION NO.:

27A

PROCEDURE NO.:

2-NOP-03.05

PROCEDURE TITLE:

SHUTDOWN COOLING

PAGE:

139 of 141

ST. LUCIE UNIT 2

APPENDIX C
SDC & LPSI PUMP FLOW REQUIREMENTS
(Page 5 of 5)

