Sump Tank/Pump System Operation

Tank Farm Plant Operating Procedure Effluent Treatment Facility

USQ Not Required – ETF is a < Hazard Category 3 Radiological Facility

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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for operating the ETF Sump Pump/Tank System (20B-TK-1/2).

1.2 Scope

Procedure instructions include steps for startup, operation, and shutdown of the ETF Sump Pump/Tank System (20B-TK-1/2).

2.0 INFORMATION

2.1 Terms and Definitions

- CIP – Clean In Place
- EDTA - Ethylenediaminetetraacetic Acid
- RO - Reverse Osmosis.

2.2 General Information

RO membrane flushing or CIP tank draining can result in a high foam level in Sump Tank 2. High foam level can cause unexpected radioactive contamination of the sump hatch area. Foaming is caused by MC 4, Terg-A Zyme, or Tetra-sodium EDTA. Monitoring of Sump Tank 2 is performed during RO membrane flushing. Foaming in Sump Tank 2 is excessive when a level of foam is within three feet of the sump hatch.

There is no automatic protection from overfilling SWRT B with Sump Tank 2 water.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 All work will be performed in accordance with DOE-0359, Hanford Site Electrical Safety Program.

3.1.2 Operation of Circuit Breakers, Electrical disconnect Switches, and Similar Switching Equipment shall be performed by a qualified person.

3.1.3 Component operation requires completion of an Electrical Risk Assessment (ERA).

3.1.4 When the clean and inspects are current on the electrical equipment (breaker, switchgear, disconnects, motor starters, etc.), the ERA for normal operating condition is applicable, for those workers interacting with electrical equipment.

3.1.4.1 Use safety glasses and leather gloves when manipulating electrical components per the normal ERA.

3.1.5 When the clean and inspects are delinquent, the ERA for non-normal operating condition is applicable, for those workers interacting with electrical equipment.

3.2 Radiation and Contamination Control

3.2.1 When this procedure is worked in radiological areas, an approved radiological work permit (RWP) is required. If radiological conditions or work performed falls outside the scope of the RWP, all work activities must be discontinued until a new or revised RWP has been issued in accordance with TFC-ESHQ-RP_RWP-C-03.

3.3 Environmental Compliance

3.3.1 In the event of a spill/leak/release, notify the SOM/FWS and respond per ETF-ERP-85B-003, Emergency Spill or Release at ETF.
4.0 PREREQUISITES

4.1 Performance Documents

The following documents may be needed to perform this procedure:
- ETF-25B-001, Electrical Distribution System Startup and Operations
- ETF-45D-001, Vessel Off-Gas System Operation
- ETF-55-001, Monitor and Control System Operations
- ETF-60H-001, Verification System Operations
- ETF-65D-003, Package Waste
- ETF-ARP-60I-002, Secondary Waste Receiving Tanks Alarm Response
- ETF-ERP-85B-003, Emergency Spill or Release at ETF

4.2 Field Preparation

4.2.1 **CONFIRM** electrical power is available to sump pumps 20B-P-1A and 1B and sump pumps 20B-P-2A and 2B, per ETF-25B-001, Electrical Distribution System Startup and Operation.

**NOTE** - This Verification Return Pump 60H-P-1 is needed for the cooling of sump pump shaft bearings.

4.2.2 **CONFIRM** Verification Return Pump 60H-P-1 is operating per ETF-60H-001, Verification System Operations.

4.2.3 **CONFIRM** the MCS is operating per ETF-55-001, Monitor and Control System Operations.

4.2.4 **CONFIRM** compressed air is available for level instrumentation per ETF-01B-001, Compressed Air System Operations.

4.2.5 **WHEN** performing Ro/filter cleaning, **ENSURE** on graphic RO/FILTER CLEANING handswitch is ON to maintain sump tank level between 40 and 50% to avoid excessive foaming in Sump Tank 2.
5.0 PROCEDURE

**Special Instructions**

Sections 5.2 through 5.13 may be worked concurrently, independently, in parallel, or in any logical order.

5.1 Valve Lineup Determination

5.1.1 (SOM) **DETERMINE** which valve lineup Checklists/Data sheets needs to be performed.

5.1.2 (SOM) **IF** valves are known to be in the required position and do not require verification, **INITIAL/DATE AND DOCUMENT** reason in the comments section of the Checklist/Data Sheet.

5.1.3 (SOM) **IF** valves are not in the required position because of an existing process (i.e., LOTO, Caution Tag, Work Package, Administrative Lock, Facility Tag or Status Seals), **MARK N/A** on the Checklist/Data Sheet **AND** **INITIAL/DATE AND DOCUMENT** reason in the comments section of the Checklist/Data Sheet.

5.2 Sump Tank 1 (20B-TK-1) Pre-Startup Breaker and Valve Lineup

5.2.1 **DON** PPE per appropriate ERA listed in Section 3.1.

5.2.2 **ENSURE** breaker MCC-2 (20B-P-1A) is ON.

5.2.3 **ENSURE** breaker MCC-2 (20B-P-1B) is ON.

5.2.4 **VERIFY** valve lineup per Data Sheet 1 - Sump Tank 1 Valve Lineup.
5.3 Sump Tank 1 (20B-TK-1) Auto Mode Startup and Operation

5.3.1 ENSURE the following valves are OPEN:
- 20B-002
- 20B-007
- 20B-005.

5.3.2 PERFORM the following on graphic SUMP TANK 20B:

5.3.2.1 SELECT AND PLACE P1A (20B-P-1A, SUMP TANK 1 PUMP 1A) in AUTO.

5.3.2.2 SELECT AND PLACE P1B (20B-P-1B, SUMP TANK 1 PUMP 1B) in AUTO.

5.3.2.3 IF Sump Tank 1 is to be routed to SWRT, on graphic VO41/VO42 SELECT SWRT.

NOTE - Aligning Sump Tank 1 discharge to surge tank may cause a change in filter differential pressure rise and filter plugging problems.

5.3.2.4 IF Sump Tank 1 is to be routed to surge tank, on graphic VO41/VO42 SELECT SURGE.

5.3.2.5 ENSURE V041 (AOV-20B-041, A0V20B041) is in AUTO.

5.3.2.6 ENSURE V042 (AOV-20B-042, A0V20B042) is in AUTO.

NOTE - Steps 5.3.2.7 and 5.3.2.8 allow the Sump 1 system to be operated in automatic mode if one of the two sump pumps is out of service for maintenance.

5.3.2.7 IF Sump Tank 1 pump 20B-P-1A is out-of-service for maintenance, SELECT PUMP 1A OUT OF SERVICE to ON OR ENSURE PUMP 1A OUT OF SERVICE is selected to OFF.

5.3.2.8 IF Sump Tank 1 pump 20B-P-1B is out-of-service for maintenance, SELECT PUMP 1B OUT OF SERVICE to ON OR ENSURE PUMP 1B OUT OF SERVICE is selected to OFF.

5.3.2.9 SELECT SUMP 1 to OPERATION.
5.4 Sump Tank 2 (20B-TK-2) Pre-Startup Breaker and Valve Lineup

5.4.1 CONFIRM breaker MCC-2 (20B-P-2A) is ON.

5.4.2 CONFIRM breaker MCC-2 (20B-P-2B) is ON.

5.4.3 VERIFY valve lineup per Data Sheet 2 - Sump Tank 2 Valve Lineup.

5.4.4 IF Sump Tank 2 water is to be directed to SWRT B, CONFIRM the following valve lineup:
   - Sump Tank 2 discharge to SWRT B valve 20B-058 OPEN.
   - Sump Tank 2 discharge to surge tank valve 20B-057 CLOSED.

NOTE - Aligning Sump Tank 2 discharge to surge tank may cause filter plugging problems.

5.4.5 IF Sump Tank 2 water is to be directed to surge tank, PERFORM the following valve lineup:

   5.4.5.1 OPEN 20B-057, Sump Tank 2 discharge to surge tank valve.

   5.4.5.2 CLOSE 20B-058, Sump Tank 2 discharge to SWRT B valve.
5.5 Sump Tank 2 (20B-TK-2) Auto Mode Startup and Operation

NOTE - To avoid excessive foaming in Sump Tank 2, the RO/filter handswitch is placed in the ON position if RO membrane cleaning or CIP tank draining is being performed.

5.5.1 ENSURE the following valves are OPEN:
- 20B-018
- 20B-025
- 20B-020.

5.5.2 PERFORM the following on graphic Sump:

5.5.2.1 SELECT Sump Pump P2A AUTO.

5.5.2.2 SELECT Sump Pump P2B AUTO.

NOTE - Steps 5.5.2.3 and 5.5.2.4 allow the Sump 2 system to be operated in AUTOMATIC mode if one of the two sump pumps is out of service for maintenance.

5.5.2.3 IF Sump Tank 2 pump P-2A is out-of-service for maintenance, SELECT PUMP 2A OUT-OF-SERVICE.

5.5.2.4 IF Sump Tank 2 pump P-2B is out-of-service for maintenance, SELECT PUMP 2B OUT-OF-SERVICE.

5.5.2.5 SELECT Sump Tank 2 OPERATION.

NOTE - There is no automatic protection from overfilling SWRT B with Sump Tank 2 water.

5.5.3 MONITOR SWRT B level LI-60I001B.

5.5.4 IF pumping to SWRT B and level alarm LAHH-60I001B is received, RESPOND per ETF-ARP-60I-002.
5.6 **Sump Tank 1 (20B-TK-1) Manual Mode Startup**

5.6.1 **ENSURE** the following valves are OPEN:
- 20B-002
- 20B-007
- 20B-005.

5.6.2 **PERFORM** the following on graphic Sump:

5.6.2.1 **SELECT** Sump Tank 1 Pump P1A MAN.

5.6.2.2 **SELECT** Sump Tank 1 Pump P1B MAN.

5.6.3 **IF** Sump Tank 1 Pump P1A is chosen for operation, **SELECT** Sump Tank 1 Pump P1A START.

5.6.4 **IF** Sump Tank 1 pump P1B is chosen for operation, **SELECT** Sump Tank 1 Pump P1B START.

5.6.5 **MONITOR** Sump Tank 1 level on graphic Sump.

5.6.6 **IF** Sump Tank 1 level continues to increase, **START** second pump as follows:

5.6.6.1 **SELECT** Sump Tank 1 Pump P1A START,

**OR**

**SELECT** Sump Tank 1 Pump P1B START.

**NOTE** - When operating in MANUAL, certain control interlocks are disabled.

5.6.7 **MONITOR** the following alarms on Alarm Summary screen:
- LAHH-20B001 sump 1 high-high level alarm
- LAHX-60A012 surge tank high level alarm
- LAH-60I001A secondary waste receiving tank A alarm
- LAH-60I001B secondary waste receiving tank B alarm.

5.6.8 **MONITOR** on graphic Sump:

<table>
<thead>
<tr>
<th>Description</th>
<th>Instrument EIN</th>
<th>Expected Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sump Tank 1 Pump Discharge Pressure</td>
<td>PI-20B011</td>
<td>50 PSIG (one pump)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55 PSIG (two pumps)</td>
</tr>
<tr>
<td>Sump Tank Outlet Flow</td>
<td>FI-20B022</td>
<td>50 (40 to 60) GPM (one pump)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 50 GPM (two pumps)</td>
</tr>
</tbody>
</table>
5.6 Sump Tank 1 (20B-TK-1) Manual Mode Startup (Cont.)

5.6.9 MONITOR on group display 47.

<table>
<thead>
<tr>
<th>Equipment ID</th>
<th>Instrument ID</th>
<th>Expected Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sump Pump 20B-P-1A (motor amperage)</td>
<td>IT-20B032</td>
<td>&lt; 10.2 AMPS</td>
</tr>
<tr>
<td>Sump Pump 20B-P-1B (motor amperage)</td>
<td>IT-20B034</td>
<td>&lt; 10.2 AMPS</td>
</tr>
</tbody>
</table>

5.6.10 IF cooling water (Verification) has been adjusted, CONFIRM on local indicator FI-60H129, that sump bearing cooling water flow is greater than or equal to 4 GPM, during Sump Tank 1 operations.

OR

IF directed by SOM.
5.7 **Sump Tank 2 (20B-TK-2) Manual Mode Startup**

5.7.1 **ENSURE** the following valves are OPEN:
- 20B-018
- 20B-025
- 20B-020.

5.7.2 **PERFORM** the following on graphic Sump:

5.7.2.1 **SELECT** Sump Tank 2 Pump P2A MAN.

5.7.2.2 **SELECT** Sump Tank 2 Pump P2B MAN.

5.7.3 **IF** Sump Tank 2 Pump P2A is to be used, **SELECT** Sump Tank 2 Pump P2A START.

5.7.4 **IF** Sump Tank 2 Pump P2B is to be used, **SELECT** Sump Tank 2 Pump P2B START.

5.7.5 **MONITOR** Sump Tank 2 level on graphic Sump.

5.7.6 **IF** Sump Tank 2 level continues to increase, **START** second pump as follows:

5.7.6.1 **SELECT** Sump Tank 2 Pump P2A START,

**OR**

**SELECT** Sump Tank 2 Pump P2B START.

**NOTE** - When operating in MANUAL, certain control interlocks are disabled.

5.7.7 **MONITOR** the following alarms on the alarm summary screen:
- LAHH-20B002 high-high level alarm
- LAHX-60A012 surge tank high level alarm
- LAHH-60I001B SWRT B alarm.

5.7.8 **MONITOR** the following parameters during Sump Tank 2 operations, on graphic Sump:

<table>
<thead>
<tr>
<th>Equipment ID</th>
<th>Instrument ID</th>
<th>Expected Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sump Pump 20B-P-2A/B</td>
<td>PI-20B012</td>
<td>43 PSIG (one pump) 60 PSIG (two pumps)</td>
</tr>
<tr>
<td>Sump Tank Outlet Flow</td>
<td>FI-20B025</td>
<td>&gt; 100 GPM (one pump) &gt; 120 GPM (two pumps)</td>
</tr>
</tbody>
</table>
5.7 Sump Tank 2 (20B-TK-2) Manual Mode Startup (Cont.)

5.7.9 **MONITOR** the following on group display 47:

<table>
<thead>
<tr>
<th>Equipment ID</th>
<th>Instrument ID</th>
<th>Expected Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sump Pump 20B-P-2A (motor amperage)</td>
<td>IT-20B036</td>
<td>&lt; 12.5 AMPS</td>
</tr>
<tr>
<td>Sump Pump 20B-P-2B (motor amperage)</td>
<td>IT-20B938</td>
<td>&lt; 12.5 AMPS</td>
</tr>
</tbody>
</table>

5.7.10 **IF** cooling water (Verification) has been adjusted, **CONFIRM** on local indicator FI 60H136, that sump bearing cooling water flow is greater than or equal to 4 GPM, during Sump Tank 2 operations.

**OR**

**IF** directed by SOM.

5.8 Sump Tank 1 (20B-TK-1) Washdown

5.8.1 **IF** requested by SOM, **OPEN** valve 60H-225, sump tank 20B-TK-1 washdown header isolation valve.

5.8.2 **AFTER** spraying sump walls for a period designated by SOM, **CLOSE** valve 60H-225.

5.9 Sump Tank 2 (20B-TK-2) Washdown

5.9.1 **IF** requested by SOM, **OPEN** valve 60H-070, sump tank 20B-TK-2 washdown header isolation valve.

5.9.2 **AFTER** spraying sump walls for a period designated by SOM, **CLOSE** valve 60H-070.
5.10 Sump Tank 1 (20B-TK-1) Shutdown

5.10.1 IF Sump Tank 1 is in AUTO operation, **PERFORM** the following:

5.10.1.1 **SELECT** Sump Tank 1 shutdown on graphic Sump.

5.10.1.2 **CONFIRM** Sump Tank 1 Operation light turns OFF.

5.10.2 IF Sump Tank 1 is in MANUAL operation, **PERFORM** the following on graphic screen SUMP:

5.10.2.1 **SELECT** Sump Tank 1 Pump P1A to STOP.

5.10.2.2 **SELECT** Sump Tank 1 Pump P1B to STOP.

5.10.3 **CONFIRM** sump pumps P1A and P1B shut down.

5.11 Sump Tank 2 (20B-TK-2) Shutdown

5.11.1 IF Sump Tank 2 is in AUTO, **PERFORM** the following:

5.11.1.1 **SELECT** Sump Tank 2 shutdown on graphic screen Sump.

5.11.1.2 **CONFIRM** Sump Tank 2 Operation light turns OFF.

5.11.2 IF Sump Tank 2 is in MANUAL operation, **PERFORM** the following on graphic screen SUMP:

5.11.2.1 **SELECT** Sump Tank 2 Pump P2A to STOP.

5.11.2.2 **SELECT** Sump Tank 2 Pump P2B to STOP.

5.11.3 **CONFIRM** sump pumps P2A and P2B shut down.
5.12 Sump 1 and 2 Isolation

NOTE -  Sump1 feeds all originate from the 2025E facility. Isolation of Sump 1 discharges are controlled by specific plant procedures.

-  Sump 2 feeds originate from the 2025E facility and receives discharge for the outside trench which routes piping from 2025E to the Verification Berm and the SALDS line.

5.12.1 IF directed by the SOM, ISOLATE the discharge from Sump 1 by performing the following:

5.12.1.1 CLOSE valve 20B-002.

5.12.1.2 CLOSE valve 20B-007.

5.12.1.3 CLOSE valve 20B-005.

5.12.2 IF directed by the SOM, ISOLATE the discharge from Sump 2 by performing the following:

5.12.2.1 CLOSE valve 20B-018.

5.12.2.2 CLOSE valve 20B-025.

5.12.2.3 CLOSE valve 20B-020.

5.12.3 IF directed by the SOM, ISOLATE the SALDS Line by performing the following:

5.12.3.1 ENSURE no Verification Tank discharge is in progress.

5.12.3.2 ENSURE Cooling Water Blowdown Pump 95C-P-2 is SHUTDOWN.

5.12.3.3 CLOSE 60H-200.
5.13 **Pump Sump 1, Sump 2, and Surge Sump to Tote**

5.13.1 **ENSURE** tote is in place and tote drain valve is CLOSED.

**NOTE** - Submersible pump used must be rated for less than 50 feet of head and less than 40 gallons per minute maximum (i.e. LittleGiant Series 5 pump).

5.13.2 **ENSURE** hose is connected to submersible pump.

5.13.3 **ENSURE** hose is secured/connected to tote.

5.13.4 **ENSURE** submersible pump is in the surge sump or sump tank.

5.13.5 **CALL** CRO and inform pumping activities are to begin.

5.13.6 **START** submersible pump.

5.13.7 **STOP** submersible pump when surge sump or sump tank is empty or tote is full.

5.13.8 **CALL** CRO and inform pumping activities are complete.

5.13.9 **DISCONNECT** hose from tote.

5.13.10 **IF** pumping is complete AND pump is to be removed, **PERFORM** the following.

5.13.10.1 **REMOVE** pump from sump.

5.13.10.2 **BAG** pump/hose for future use (RCE)

**OR**

**DISPOSE** of as waste per procedure ETF-65D-003.

5.13.11 **IF** pumping is complete AND pump is to remain in sump, **SECURE** hose.

5.13.12 **IF** another tote is required to complete pumping of sump, **PROCEED** to Step 5.13.1.

5.13.13 **STAGE** tote for pumping per procedure ETF-65D-003 and Process Memo.

5.13.14 **DISPOSE** of waste generated during pumping activities per procedure ETF-65D-003.
5.14 Records

5.14.1 **PERFORM** the following for records identified within this procedure.

5.14.1.1 **IF** this procedure is used independent of a work package, **RECORD** the number of times the record was generated in applicable column

**OR**

**PLACE** a check mark (✓) in the N/A column.

5.14.1.2 **SUBMIT** the package for verification of completed records.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Sheets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 1 - Sump Tank 1 Valve Lineup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 2 - Sump Tank 2 Valve Lineup</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FWS/OE/Shift Manager</strong> SEND the completed records to the Central Shift Office for records retention.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>___________________________ / ___________________________ / ___________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td>Print (First &amp; Last)</td>
<td>Date</td>
</tr>
<tr>
<td>FWS/OE/Shift Manager</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
## Data Sheet 1 - Sump Tank 1 Valve Lineup

<table>
<thead>
<tr>
<th>Valve Number</th>
<th>Valve Name</th>
<th>Required Position</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>60H-123</td>
<td>Verification Water to Sump Pump 20B-P-1A/B</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60H-125</td>
<td>Verification Water to Sump Pump 20B-P-1B</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60H-127</td>
<td>Verification Water to Sump Pump 20B-P-1A</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-002</td>
<td>Sump Pump 20B-P-1A Discharge</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-007</td>
<td>Sump Pump 20B-P-1B Discharge</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-005</td>
<td>Sump Tank 20B-TK-1 Recirculation</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-013</td>
<td>Press Transmitter (PT 20B-011) Root Valve</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-029</td>
<td>Conductivity Meter (AE 20B-021) Inlet</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-031</td>
<td>Conductivity Meter (AE 20B-021) Outlet</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-055</td>
<td>Sump 1 to Surge Tk Header Vent (South of upper Evaporator platform)</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-056</td>
<td>Sump 1 to SWRTs Header Vent (South of upper Evaporator platform)</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60H-069</td>
<td>Sump Tank 20B-TK-1 Washdown Header and Boiler Water Supply</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60H-124</td>
<td>Flow Indicator (FI 60H-129) Drain Valve</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-008</td>
<td>Sump Pump 20B-P-1A Disch Line Drain Valve</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-009</td>
<td>Sump Pump 20B-P-1B Disch Line Drain Valve</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20B-015</td>
<td>Sump Pump 20B-TK-1 Sample Valve</td>
<td>CLOSED</td>
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<tr>
<td>20B-062</td>
<td>Sump 1 Cover Hose Connection Iso. Valve</td>
<td>CLOSED</td>
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<tr>
<td>45D-024</td>
<td>Sump 1 Vessel Offgas Vent Isolation</td>
<td>OPEN</td>
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<tr>
<td>60H-225</td>
<td>Sump Tank 20B-TK-1 Washdown Header</td>
<td>CLOSED</td>
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<tr>
<td>20B-064</td>
<td>Hose Connection Iso. to Sump 1 Collection Header (behind CTs)</td>
<td>CLOSED</td>
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<tr>
<td>20B-065</td>
<td>Hose Connection Iso. to Sump 1 Collection Header (in Dryer Room)</td>
<td>CLOSED</td>
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Comments:

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Signature: ___________________________ / ___________________________ / ___________________________ / ____________
Print (First & Last) Initials Date
NCO

Signature: ___________________________ / ___________________________ / ___________________________ / ____________
Print (First & Last) Initials Date
NCO

Signature: ___________________________ / ___________________________ / ___________________________ / ____________
Print (First & Last) Initials Date
SOM Completion Review
## Sump Tank/Pump System Operation

### Data Sheet 2 - Sump Tank 2 Valve Lineup

<table>
<thead>
<tr>
<th>Valve Number</th>
<th>Valve Name</th>
<th>Required Position</th>
<th>Initials</th>
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<tr>
<td>60H-130</td>
<td>Verification Water to Sump Pump 20B-P-2A/B</td>
<td>OPEN</td>
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<td>60H-132</td>
<td>Verification Water to Sump Pump 20B-P-2B</td>
<td>OPEN</td>
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<tr>
<td>60H-134</td>
<td>Verification Water to Sump Pump 20B-P-2A</td>
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<tr>
<td>20B-018</td>
<td>Sump Pump 20B-P-2A Discharge</td>
<td>OPEN</td>
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<tr>
<td>20B-025</td>
<td>Sump Pump 20B-P-2B Discharge</td>
<td>OPEN</td>
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<tr>
<td>20B-020</td>
<td>Sump Tank 20B-TK-2 Recirculation</td>
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<tr>
<td>20B-026</td>
<td>Press Transmitter (PT 20B-012) Root Valve</td>
<td>OPEN</td>
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<tr>
<td>20B-033</td>
<td>Conductivity Meter (AE 20B-024) Inlet</td>
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<td>20B-036</td>
<td>Conductivity Meter (AE 20B-024) Outlet</td>
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<td>20B-019</td>
<td>Sump Tank 2 to Pumps Discharge Isolation</td>
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<td>60H-070</td>
<td>Sump Tank 20B-TK-2 Washdown Header</td>
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<td>60H-131</td>
<td>Flow Indicator (FI 60H-136) Drain Valve</td>
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<td>20B-022</td>
<td>Sump Pump 20B-P-2A Disch Line Drain Valve</td>
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<td>20B-023</td>
<td>Sump Pump 20B-P-2B Disch Line Drain Valve</td>
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<td>20B-028</td>
<td>Sump Tank 20B-TK-2 Sample Valve</td>
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<td>20B-063</td>
<td>Sump 2 Cover Hose Connection Iso. Valve</td>
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<td>45D-051</td>
<td>Sump 2 Vessel Offgas Vent Isolation</td>
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<td>Sump Tank 2 to Surge Tank</td>
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<td>20B-058</td>
<td>Sump Tank 2 to SWRT B</td>
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<td>20B-060</td>
<td>Sump 2 to SWRT B Header Vent (west of TFD Boiler, platform level)</td>
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<td>20B-061</td>
<td>Sump 2 to SWRT B Header Drain (top of SWRT B)</td>
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### Comments:

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Signature SOM Completion Review

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