United States Nuclear Regulatory Commission

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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for the following:
- Makeup of the Hypersperse MSI310 in Scale Inhibitor Dosing Tank (i.e., RO scale inhibitor dosing tank)
- Transfer of Prepared Hypersperse MSI310 to the tank or a container.

1.2 Scope

Procedure instructions provide for the addition and distribution of the scale inhibitor.

2.0 INFORMATION

2.1 Terms and Definitions
- RO – Reverse Osmosis.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

**WARNING** - Hypersperse MSI310 may irritate eyes and prolonged contact may irritate skin.

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 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Rubber gloves
- Face shield
- Chemical goggles
- Protective apron or chemical resistant coat
- 2.5 to 5-gallon bucket
- Dayton Battery Operated Pump or equivalent
- Hypersperse MSI310 SDS.

4.2 Field Preparations

4.2.1 ENSURE Verification Tank A, B, or C is in VERIFYING OPERATION.

4.2.2 CONFIRM safety shower and eye wash operational prior to working with chemicals.
5.0 PROCEDURE

Special Instructions

Sections 5.1, 5.2, and 5.3 may be performed independently of each other.

5.1 Makeup Hypersperse MSI310 in Scale Inhibitor Dosing Tank

5.1.1 ENSURE the following valves are CLOSED:
- 60H-226
- 60H-227.

5.1.2 RECORD initial tank level on Data Sheet 1.

5.1.3 DETERMINE amount of MSI310 to be added as follows:

5.1.3.1 SUBTRACT tank volume from 45.

5.1.3.2 MULTIPLY number calculated in step 5.1.3.1 by 0.143. (This is the desired MSI310 addition.)

5.1.3.3 RECORD calculated MSI310 volume on Data Sheet 1.

WARNING

Hypersperse MSI310 may irritate eyes and prolonged contact may irritate skin.

5.1.4 DON PPE as follows:
- Chemical goggles
- Face shield
- Rubber gloves
- Protective apron or chemical resistant coat.

5.1.5 OBTAIN calculated amount of MSI310 from container located near dosing tank.

NOTE - The volume of MSI310 solution made up can be adjusted. The volume of water added is 6.0 times the volume of MSI310 added.

5.1.6 TRANSFER calculated amount of MSI310 to scale inhibitor dosing tank, using Dayton Battery Operated Pump or equivalent.

5.1.7 RECORD gallons of MSI310 added on Data Sheet 1.
5.1 Makeup Hypersperse MSI310 in Scale Inhibitor Dosing Tank (Cont.)

5.1.8 DETERMINE required amount of water addition as follows:

5.1.8.1 MULTIPLY MSI310 added by 6.0.

5.1.8.2 RECORD number calculated in step 5.1.8.1 as required water addition in Data Sheet 1.

5.1.9 OPEN 60H-226 and transfer required water addition to scale inhibitor dosing tank.

5.1.10 IF no water flow is observed into the scale inhibitor tank, CHECK 60H-229 is OPEN.

5.1.11 WHEN required water addition is achieved, CLOSE 60H-226.

NOTE - Scale inhibitor dosing tank is now ready for operation.

5.1.12 RECORD final tank volume on Data Sheet 1.
5.2 Pump Scale Inhibitor Dosing Tank

5.2.1 **ENSURE** the following valves are CLOSED:
- 60H-226
- 60H-227.

5.2.2 **DETERMINE** volume of tank contents to be pumped.

5.2.3 **ENSURE** receipt container is large enough to hold the entire volume.

**WARNING**

Hypersperse MSI310 may irritate eyes and prolonged contact may irritate skin.

5.2.4 **DON** PPE as follows:
- Chemical goggles
- Face shield
- Rubber gloves
- Protective apron or chemical resistant coat.

5.2.5 **TRANSFER** determined amount of tank contents from Scale Inhibitor Dosing Tank to container using Dayton Battery Operated Pump or equivalent.
5.3 Transfer from Container to Scale Inhibitor Dosing Tank

5.3.1 ENSURE the following valves are CLOSED:
   - 60H-226
   - 60H-227.

5.3.2 ENSURE Tank Volume of Scale Inhibitor Dosing Tank is sufficient to receive full contents of Prepared Hypersperse MSI310 from container.

**WARNING**

Hypersperse MSI310 may irritate eyes and prolonged contact may irritate skin.

5.3.3 DON PPE as follows:
   - Chemical goggles
   - Face shield
   - Rubber gloves
   - Protective apron or chemical resistant coat.

5.3.4 TRANSFER volume of container to Scale Inhibitor Dosing Tank using Dayton Battery Operated Pump or Equivalent.
5.4 Records

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

5.4.1.1 **RECORD** the number of times the record was generated in applicable column

**OR**

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

5.4.1.2 **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>DATA SHEETS</td>
<td></td>
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<tr>
<td>Data Sheet 1 – MSI310 Chemical Makeup</td>
<td></td>
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<tr>
<td><strong>FWS/OE/Shift Manager SEND</strong> the completed records to the Central Shift Office for records retention.</td>
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<tr>
<td>Signature</td>
<td>Print (First &amp; Last)</td>
<td>Date</td>
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<tr>
<td>FWS/OE/Shift Manager</td>
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</tbody>
</table>

The records 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 – MSI310 Chemical Makeup

Date: ___/___/____

Initial Tank Volume: ____________ gallons

Desired MSI310 Volume: ____________ gallons

MSI310 Added: ____________ gallons

Required Water Addition: ____________ gallons

Final Tank Volume: ____________ gallons

_________________________ / _______________________ / ____________
Signature Operator  Print (First & Last)  Date

_________________________ / _______________________ / ____________
Signature SOM  Print (First & Last)  Date