

NUCLEAR POWER BUSINESS UNIT
OPERATING INSTRUCTIONS

OI 22A
MINOR
Revision 10
January 30, 1997

CHANGING REACTOR COOLANT MICRON FILTER
(F1)

Unit _____
Date _____
DSS _____

RECORD

PROCEDURE VERIFIED CURRENT AND CHECKED FOR TEMPORARY CHANGES IF FIELD
COPIES REQUIRED, USE PBF-0026; LAW NP 1.2.4 AND DO NOT COMPLETE THIS BLOCK.

BY: _____ DATE: _____

1.0 PURPOSE

To provide detailed instructions for changing the reactor coolant filter (F1).

2.0 REFERENCES

IR 96-006, NRC Inspection Report, NRC Commitment for Operations procedure PMT/QC reviews.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 A radiation work permit and continuous Health Physics coverage is required while changing filters as the filters are highly radioactive.
- 3.2 As much work as possible should be performed remotely through the filter access/shield plug opening, to minimize radiation exposure.
- 3.3 Review the precautions & limitations of OI-22.
- 3.4 Weight of cask - 3,850 pounds.
- 3.5 Weight of shield plug - 3,450 pounds.

4.0 INITIAL CONDITIONS

- 4.1 OI-22, section 4.0, parts have been obtained.
- 4.2 OI-22, section 4.0, conditions have been reestablished.
- 4.3 Verify the filter vessel is danger tagged out.

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4.4 Obtain the following tools:

- 1 3/4" extension wrench
- 1 replacement light bulb for inside cubicle
- 1 1/2" extension wrench
- 1 1-1/8" socket
- 1 15/16" socket
- 1 ratchet
- 1 special valve operating tool (for filter vent and drain)
- 1 " slotted socket
- 1 "S" hook and rope (use 3/8" minimum white nylon rope)
- 1 0-100 foot-pound torque wrench
- 1 filter vessel handwheel operating tool
- 3 safety harnesses
- 1 small, flat-bladed screw driver (for gasket fastening)
- Lubricant for the corer closure belts

4.5 A step-off pad at the filter cubicle entrance has been established.

4.6 A D.I. water hose is available to the filter cubicle

5.0 PROCEDURE

5.1 Open the filter vessel drain valve using the 1/2" extension wrench and special valve operating tool.

5.2 Open the filter vessel vent valve using the 1/2" extension wrench and special valve operating tool.

5.3 Allow the filter vessel to drain for at least 15 minutes.

5.4 Using the 1/2" extension wrench with a 15/16" socket attached, loosen, but do not remove, the vessel closure bolts (12 turns).

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NOTE: *Some water will come out when the filter cover is lifted due to portions of cover that do not drain.*

CAUTION **FILTER COVER MAY CONTACT SEPARATOR PLATE "T" BOLTS WHEN SWINGING COVER ASIDE. USE CAUTION TO PREVENT DAMAGE TO OPERATOR PLATE "T" BOLTS.**

5.5 Using the 3/4" extension wrench, with the filter vessel cover handwheel operating tool attached, turn the cover lifting handwheel clockwise to its stop and swing the cover aside.

5.6 Using the 1/2" extension wrench with the special one inch slotted socket attached, loosen the "T" bolts which retain the separator plate and swing the "T" bolts aside.

5.7 Suspend the large filter cask over the filter plug hole with gate open.

5.8 From the 46' El., lower a rope with attached "S" hook through the filter cask and catch the bail on the separator plate.

NOTE: *Position personnel either on El. 46' or 66' based on radiation levels.*

5.9 Lift the separator plate and attached filter assembly out of the filter room and into the filter cask and close the gate.

5.10 Suspend the filter assembly inside the cask by tying off the rope to the sling or crane hook.

5.11 Transfer the filter elements to an "empty" resin liner or designated area in accordance with the radwaste supervisor.
(Cut the rope leaving the S hook with the filter assembly when transferring to resin liner.)

5.12 HP perform survey of filter vessel.

5.13 Flush the filter vessel with demineralized water to remove any dirt left behind.

5.14 Inspect the filter vessel for damage.

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- 5.15 Replace damaged gaskets or O-rings. Wet O-rings with DI water prior to closing the filter housing. Ensure mating surfaces are clean. _____
- 5.16 Guide the assembled filter into the filter housing. _____
- 5.17 Swing the four "T" bolts into position and tighten evenly. _____
- 5.18 Clean and lubricate the cover closure bolts. _____
- 5.19 Swing the filter vessel cover into position. Turn the handwheel counterclockwise until the cover is seated and the linkage sufficiently free so as not to interfere with cover bolt torquing. _____

NOTE: *QC Inspector must witness performance of Step 5.20.*

- 5.20 Utilizing the diagonal sequence and 25 foot-pound increments, torque the cover closure bolts to 75 foot-pounds. _____

- 5.21 Filter cover bolts have been properly torqued. _____

Torque Wrench Id. No. _____ Calibration Date _____

QC

- 5.22 Put shield plug back into place. _____

5.22.1 Re-align all four wheels in north-south direction and lock them. _____

5.22.2 Put shield plug into place. _____

- 5.23 Obtain danger tag removal authorization and inform the control room of your intent to fill and vent the filter vessel. _____

PMT

- 5.24 Close the drain valve and crack open the filter inlet. When water issues from the vent, close it and check for leaks. _____

- 5.25 When the leak check is satisfactory, return the filter as directed by the DSS. _____

- 5.26 Clean up the area, check for contamination and replace light bulb in cubicle. _____

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5.27 Install thread protectors in shield plug lifting holes.

5.28 Record test equipment ID's on CHAMPS Task Sheet.

REMARKS