

6.3.2.2.1 Refueling Water Tank

The refueling water tank is an atmospheric tank containing water borated to greater than 1720 ppm. The P&I diagram for the system is shown in Figure 6.2-28.

The refueling water tank was non-destructively tested during construction in accordance with the codes indicated in Table 6.3-2 and was given additional inspection by 100 percent radiography of the vertical joints on the first shell ring. A fiberglass reinforced vinyl ester liner was installed over the tank bottom during the 1994 refueling outage. The liner was approved by the NRC as an alternative non-code repair per 10CFR50.55a(3). NRC letter dated November 25, 1994 provided a Safety Evaluation and approved this temporary repair until the steam generator refueling outage. By NRC letter dated May 27, 1997, the use of the tank liner, along with visual or hands-on inspections during each refueling outage, was approved for the remainder of the second 10-year interval of plant operation. The use of the liner for the third 10-year interval (starting March, 1998) was approved by the NRC on 6/18/99 as relief request (RR) 7, which addresses the requirements applicable to the tank for the edition of the Code applicable to the third interval.

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The refueling water tank (RWT) is provided with a high level and a low level alarm which annunciates in the control room. The high level condition will alarm to warn personnel of an impending tank overflow condition. The low level condition alarms to warn of the minimum technical specification tank level being approached. The high level alarm is 6 inches below the tank overflow pipe which accounts for a 7350 gallon margin between alarm and spillover. Assuming that the pump with the largest capacity is being used to fill the tank (primary water pumps at 300 gpm) the operator has at least 24 minutes to shut the pump off before the tank overflows. The operation or use of this tank is limited during power operation, and any use of it would be under strict administrative control.

Should the refueling water tank overflow, the discharge would flow to a local catch basin east of the tank and eventually enter the plant storm drainage system.

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REFER TO DRAWING
8770-G-088, Sheets 1 & 2

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 1

FLOW DIAGRAM
CONTAINMENT SPRAY AND REFUELING
WATER SYSTEMS

FIGURE 6.2-28

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