

## SECONDARY WATER CHEMISTRY MONITORING

### Purpose

Proper feedwater quality is necessary to maintain the operational capability of the steam generator. The secondary water chemistry monitoring program described herein lists the program requirements necessary to minimize steam generator corrosion.

### Sampling Requirements

Samples taken at the outlet of the last feedwater heater are the most accurate indicators of steam generator feedwater quality. Each feedwater train (A and B) is sampled at least once per 72 hours during normal power operation. More frequent sampling may be necessary during startups and shutdowns in order to quickly establish trends and take corrective action. In those cases sample frequency is based on plant conditions and available manpower.

### Normal Chemistry Specifications

Within 100 hours after introduction of feedwater into the steam generator. The following feedwater chemistry limits apply:

Cation Conductivity (umho)	2.0 MAX
Dissolved O <sub>2</sub> (ppb)	50 MAX
pH	8.5 - 9.5

### Analytical Procedures

Cation Conductivity is analyzed in accordance with a plant prepared procedure. The sample to be analyzed is passed through a cation

9/28/79

1108 103

7910050 307.

Exchange column, operated in the hydrogen form, which converts the dissolved salts to their corresponding acids. The resulting "acid" conductivity is measured in accordance with ASTM D 1125 - 77.

Dissolved Oxygen is analyzed in accordance with a plant prepared procedure based on ASTM D 888 - 66, Method A (Indigo Carmine).

PH is analyzed in accordance with a plant prepared procedure based on ASTM D 1293 - 78.

#### Off Normal Corrective Actions

The plant prepared procedures on Steam Generator Feedwater and Condensate System Chemistry contains provisions for off normal corrective actions. Corrective actions for off normal dissolved oxygen, cation conductivity, and pH are addressed in these procedures. Station procedures define the sequence of administrative events for deviation reporting and corrective actions.

#### Data Management

Station procedures assign responsibility for control of the steam generator feedwater chemistry. Similarly departmental and station procedures detail the requirements for record preparation, review, and management.