





## DETAILS

### 1. Persons Contacted

#### Principal Licensee Employees

- V. Aublair, Station Shift Supervisor
- \*J. Duell, Assistant Supervisor, Radiochemistry and Radiation Protection
- R. Fortino, Chief Radiochemistry and Radiation Protection Technician
- \*\*C. Gerber, Radwaste Operations Supervisor
- M. Jones, Outage Coordinator
- \*\*E. Leach, Supervisor, Radiochemistry and Radiation Protection
- \*T. Lempges, General Superintendent - Nuclear Generation
- J. Pavel, Assistant to the General Superintendent - Nuclear Generation
- \*T. Perkins, Station Superintendent
- \*\*M. Silliman, Results Superintendent
- C. Stuart, Operations Supervisor

The inspector also interviewed approximately 15 other individuals including radiation protection technicians, operators, clerical personnel, and members of the security force.

\*denotes those present at exit interviews held on February 9 and February 23, 1979.

\*\*denotes those present at February 23, 1979 exit only.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (50-220/78-12-01): Technicians with less than 2 years experience utilized in responsible positions. The inspector reviewed classifications and job assignments of the 18 radiation protection technicians. Those personnel allowed to issue radiation work permits (RWP) without further supervisory review had greater than the required 2 years experience. The inspector examined approximately 30 RWP's to verify that they were authorized or countersigned by qualified personnel.



(Closed) Noncompliance (50-220/78-12-02): Testing of self-reading dosimeters (SRD) and alpha counting of smears. The inspector reviewed the licensee's revised method of insuring SRD's in use have been calibrated which utilizes color coding by spray paint after calibration. Approximately 40 SRD's in use were examined to verify that they had the proper color code. The licensee's alpha counting equipment was out of service and the inspector reviewed results of contractor alpha counting of plant samples.

(Closed) Noncompliance (50-220/78-12-03): Leak testing of sealed sources. The inspector reviewed results of leak tests of the licensee's PuBe source and several other sources conducted on January 10, 1979. The tests had been performed within the required interval with the required sensitivity.

(Closed) Noncompliance (50-220/78-16-02): The licensee's revised procedures, dated December, 1978 which clarified the "Step Off Pad", posting, and roping requirements for contaminated areas was reviewed. The inspector examined at least 10 contaminated areas while touring the facility for compliance with procedural requirements.

### 3. Radioactive Effluent Releases

Environmental Technical Specification (ETS) 2.4.1.a-c limits activity discharge in liquid effluents on an instantaneous, quarterly and annual basis. The licensee had no radioactive liquid effluent releases during 1978 or thru February 9, 1979. ETS 2.4.3.a-b limits noble gases, iodines and particulates in airborne effluents on an instantaneous, quarterly and annual basis. Examination of licensee analyses and records of noble gases for the periods March - May and November - December 1978, and analyses and records of iodines and particulates for the periods January - March and October - December 1978 indicated that the releases were within ETS 2.4.3 limits.

ETS 2.4.1.g limits the maximum activity in certain liquid radwaste tanks to 10 Ci. The inspector reviewed the activity in the concentrator which indicated that the radwaste tanks held less than 10 Ci (the radwaste tanks are frequently pumped into the concentrator).



A licensee representative stated that direct surveillance (rather than indirect via the concentrator) of these tanks would be performed weekly.

No items of noncompliance were identified.

4. Records and Reports of Radioactive Effluents

The inspector reviewed the licensee's Semi-Annual Effluent Release Report covering the period January through June 1978 against the criteria given in Regulatory Guide 1.21 and Environmental Technical Specification (ETS) 5.6.2. ETS sections 2.4.1.h, 2.4.3.e, 2.4.3.f and 5.6.3.1 require additional reports if releases exceed certain values. These values were not exceeded and additional reports were not required.

No items of noncompliance were identified.

5. Effluent Control Instrumentation

Calibration and Functional Tests

Environmental Technical Specification (ETS) 2.4.2.f, requires that all liquid effluent radiation monitors be calibrated at least quarterly by means of a source which has been traceable to a National Bureau of Standards source. Additionally, ETS 2.4.2.f requires that each liquid effluent monitor shall have a functional test monthly and an instrument check prior to making a release. ETS 2.4.4.d, requires that all waste gas effluent monitors be calibrated at least quarterly by means of a known radioactive source which has been traceable to a National Bureau of Standards source. ETS 2.4.4.d also requires that each gaseous effluent monitor shall have a functional test at least monthly and instrument check at least daily.

Calibration of the stack gas radiation monitor performed using the licensee's procedure N1-ISP-16-5 "Stack Gas Radiation Monitor Instrument Channel Calibration" were reviewed for the four quarters of 1978. Calibrations of the off-gas radiation monitor performed using the licensee's procedure N1-ISP-IC-6 "Off-Gas Line Radiation Monitor Instrument Channel Calibration" were also reviewed for the four quarters of 1978. Monthly functional tests performed on the stack gas and off-gas monitors using procedures N1-OP-25 and N1-ST-W9 respectively were examined for December 1978 and January 1979.





Calibration of the liquid radwaste discharge monitor performed using the licensee's procedure N1-ISP-IC-8 "Radwaste Discharge to Tunnel Radiation Monitor Instrument Channel Calibration" were examined for the four quarters of 1978. Monthly instrument channel checks of the liquid radwaste monitor performed using licensee procedure N1-OP-29 were reviewed for December 1978 and January 1979.

#### Alarm and Trip Setpoints

A monitoring point location, alarm setpoints and automatic isolation requirements are detailed in ETS 2.4.1.d, 2.4.3.d, table 2.4-3 and table 2.4-4. Alarm and trip setpoints checked during the above calibrations and checks of the off-gas monitor, stack monitor and liquid radwaste monitor were found to be set conservatively.

#### Physical Installation

During one of the facility tours, the inspector examined the liquid discharge monitor and stack monitoring system. Physical arrangement of equipment, air flow readings and background radiation levels were observed. The inspector noted that the required monitoring equipment was operable.

No items of noncompliance were identified.

#### 6. Procedures:

Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained that meet or exceed section 5.1 and 5.3 of ANSI N18.7-1972 and Appendix "A" of regulatory guide 1.33. The following licensee procedures were reviewed:

##### -- Instrument Surveillance Procedures

N1-ISP-IC-5  
N1-ISP-IC-6  
N1-ISP-IC-8

##### -- Operating Procedures

N1-OP-25  
N1-OP-29

No items of noncompliance were identified.



7. Testing of Containment Air Cleaning Systems

Technical Specification 4.4.4 requires certain surveillance tests to be performed on the Emergency Ventilation Systems including DOP tests, halogenated hydrocarbon tests, pressure drop tests and system operability. The tests were performed at the time of the inspection. Preliminary results indicated that all aspects of the Emergency Ventilation System passed. The surveillance of the Emergency Ventilation System will be reviewed at a subsequent inspection when the final test results and reports are available.

No items of noncompliance were identified.

8. Reactor Coolant Water Quality

Chemical Quality

Technical Specification 3.2.3 details the reactor coolant water quality requirements regarding chlorides and conductivity under various steaming conditions. Technical Specification 4.3.3 details the reactor coolant monitoring and sampling requirements under various conditions.

Strip charts from the continuous conductivity monitor were examined for the period October 23 through November 10, 1978 and December 24, 1978 through January 13, 1979. Results of laboratory analyses of reactor coolant for conductivity and chlorides were examined for the period October, 1978 through February, 1979.

Radioactivity Limitations

Technical Specification 3.2.4 limits total iodine activity in primary coolant to 25 microcuries per gram. Technical Specification 4.2.4 requires that samples be taken and analysed for gross gamma activity once per 96 hours and that isotopic analyses be performed once per month.

Results of the gross gamma analyses were examined for the period October 1978 through February 1979. Results of the isotopic analyses, performed weekly by the licensee, were examined for the period October 1978 through February 1979.

No items of noncompliance were identified.



9. Solid Radioactive Waste

The inspector examined licensee records and shipping documents from 14 shipments of radioactive waste shipped during the period August 14, 1978 through February 14, 1979 (this constituted over 75% of the shipments made during this period).

Estimates of curie content and isotopic composition for the shipments were reviewed. Three shipments of greater than Type A quantities of material were examined for compliance with 10 CFR 71.12.

The licensee uses several procedures and checklists as aids in maintaining and checking compliance with regulations. A licensee representative stated that the solid waste loading procedures were being updated and would be revised by June, 1979.

No items of noncompliance were identified.

10. Facility Tours

An offshift inspection of areas where work was in progress was conducted shortly after arrival at 8:30 p.m. on February 6, 1979 to review radiation safety practices. Several additional tours were conducted to review radiation work permits; work in radiologically controlled areas; control of contaminated, radiation, and high radiation areas; and to examine radiation monitoring equipment.

No items of noncompliance were identified.

11. Refueling Preparations

The inspector reviewed the licensee's radiation protection related plans for the March, 1979 refueling outage. The licensee plans to augment his radiation protection staff with additional contractor technicians who meet the ANSI N18.1-1971 qualifications criteria. The training staff has been augmented by contractor personnel to handle the additional workload in radiation worker training. The licensee's planning and schedule for several of the more radiologically significant tasks were reviewed.

No items of noncompliance were identified.



12. Exit Interview

The inspector met with licensee management representatives (denoted in paragraph 1) at the conclusions of the sections of the inspection on February 9 and February 23, 1979. The inspector summarized the purpose and scope of the inspection and the findings.

