

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-220/93-25 and 50-410/93-24

Docket Nos. 50-220 and 50-410

License Nos. DPR-63 and NPF-69

Licensee: Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

Facility Name: Nine Mile Point Units 1 and 2

Inspection At: Scriba, New York and at the
JAF Environmental Laboratory, Fulton, N.Y.

Inspection Conducted: October 18 - 22, 1993

Inspector: *Laurie Peluso* 11/03/93
Laurie Peluso, Radiation Specialist Date
Effluents Radiation Protection Section (ERPS)
Facilities Radiological Safety and
Safeguards Branch (FRSSB)

Approved by: *J. J. Votaw* 11-03-93
Acting Chief, ERPS, FRSSB, Date
Division of Radiation Safety and Safeguards (DRSS)

Areas Inspected: Announced safety inspection of the Radiological Environmental Monitoring Program (REMP) including: management controls, quality assurance audits, meteorological monitoring program, quality control program for analytical measurements, and implementation of the above programs and the Offsite Dose Calculation Manual (ODCM).

Results: Within the areas inspected, the licensee continued to maintain an excellent REMP. The responsible individuals were knowledgeable with respect to implementation of the above programs. However, there were weaknesses in the documentation of the REMP portion of the Safety Review Audits Board Quality Assurance Audit. See Section 3.2 of this inspection report for details. No safety concerns or violations of NRC requirements were identified.

DETAILS

1.0 Individuals Contacted

1.1 Niagara Mohawk Power Corporation

- J. Cootware, Instrument & Controls Technician, Unit 1
- * K. Dahlberg, Plant Manager, Unit 1
- * H. Flanagan, Environmental Protection Department, Supervisor,
T. Galletta, Environmental Protection Coordinator - Meteorological
- J. Kroehler, Supervisor of Quality Assurance Audits
- * R. Pasternak, Manager, Technical Services
- * J. Pavel, Licensing
- * B. Zacharek, Environmental Protection Coordinator - Radiological

1.2 New York Power Authority (NYPA)

- * R. Barrett, General Manager, Operations
- * B. Gorman, Environmental Supervisor
- * J. McCarty, Senior Quality Engineer
- * A. McKeen, Chemistry General Supervisor
- * E. Mulcahey, Operational Review Group
- * J. Sipp, Manager, Radiological Environmental Services

1.3 Nuclear Regulatory Commission (NRC) Personnel

- * W. Cook, Senior Resident Inspector, (FitzPatrick)

* Denotes those individuals present at exit interview on October 22, 1993.
Other licensee personnel were also interviewed during this inspection.

2.0 Purpose

The purpose of this inspection was to verify the licensee's capability to implement the Radiological Environmental Monitoring Program (REMP) and the Meteorological Monitoring Program (MMP), and the operations of the analytical environmental laboratory (JAF Environmental Laboratory), according to Technical Specifications (TS), the Offsite Dose Calculation Manual (ODCM), and appropriate procedures during normal and emergency operations.

3.0 Management Controls

3.1 Organization

The inspector reviewed the organization responsible for implementation of the REMP and discussed with members of the Environmental Protection Department any changes since the last inspection conducted in December 1992. There have been no significant changes in the oversight of the REMP since the previous inspection.

3.2 Quality Assurance Audits and Surveillances

The inspector reviewed the Safety Review Audits Board (SRAB) Quality Assurance Audit Report for the REMP as part of the evaluation of the implementation of the TS audit requirements. The SRAB audit was performed November 6-20, 1992 and included the Chemistry, Radiation Protection, and Environmental Monitoring Programs. The inspector noted that a technical specialist performed the REMP portion of the audit. The audit report (92012-RG/IN, "Radiation Protection/Chemistry Audit", dated December 14, 1992), identified no findings or recommendations in the REMP area.

The inspector identified weaknesses in the documentation in the REMP portion of the audit. For example, the audit scope was not clearly specified and the audit report did not adequately reflect the aspects of the REMP that were audited, such as sampling, analysis, quality assurance, and land use census. Also the audit findings lacked technical depth and detail. The inspector reviewed the associated field notes and noted that the REMP findings were not documented in the field notes. The inspector discussed with the licensee these weaknesses. The licensee stated that the audit of the REMP covered the following areas: all REMP procedures, the Annual REMP Report, and the Offsite Dose Calculation Manual. Also reviewed were the environmental sample and quality assurance results. Licensee management stated that the audit documentation will be improved in the future.

A SRAB audit of the REMP for 1993 has been scheduled for December 1993. The inspector reviewed the audit schedule and plan and noted that the REMP audit was planned according to the frequency specified in the TS and the scope of the audit plan appeared to be appropriate for the REMP. The 1993 SRAB QA Audit report of the REMP will be reviewed during a subsequent inspection to verify that the documentation has improved.

The inspector noted that several QA surveillances (not an auditing requirement) had been performed during 1992, however no QA surveillances were conducted during 1993. The 1992 QA surveillances included sample collection of milk, vegetation, and the exchange of particulate filters and charcoal cartridges. Also included was an observation of preventive maintenance work performed on meteorological equipment. The inspector

noted that the surveillances verified that REMP TS were met. There were no findings of safety significance.

The inspector also noted that members of the Environmental Protection Department performed "in-house" audits according to procedure S-ENVSP-6, listed in section 4.2 of this report. These audits included a thorough review of the contractors who collect samples and analyze environmental sample media. These audits were of very good technical depth and probed for performance or procedural weaknesses. There were no significant safety findings.

3.3 Annual REMP Report

The inspector reviewed the Annual Radiological Environmental Operating Reports for 1991 and 1992, as well as the selected analytical data for 1993. The reports provided a comprehensive summary of the analytical results of the REMP around the Nine Mile Point and FitzPatrick sites and met the TS reporting requirements. Records of the analytical results indicated that all samples were collected and analyzed as required and the lower limits of detection specified in the licensee's TS were met. No obvious omissions, trends or anomalous data were identified.

4.0 Radiological Environmental Monitoring Program

Members of the Nine Mile Point Environmental Protection Department have the responsibility of implementing the REMP in cooperation with the James A. FitzPatrick Radiological Environmental Services Department. Environmental samples were collected by the licensee and a contractor (Ecological Analysts Science and Technology) and were analyzed at the JAF Environmental Laboratory.

4.1 Direct Observations

The inspector examined selected sampling stations to determine whether samples were being obtained from the locations designated in the TS and the ODCM and whether air samplers were operable and calibrated. These sampling stations included air samplers for particulates and airborne iodines, the composite water sampling stations located in the FitzPatrick site, a milk farm, vegetation locations, and a number of thermoluminescent dosimeter (TLD) stations for measurement of direct ambient radiation. The inspector witnessed the weekly exchange of charcoal cartridges and air particulate filters at selected sampling stations. All reviewed air sampling equipment and the composite water samplers were operational at the time of the inspection. The TLDs were placed at the designated locations as specified in the ODCM. Milk and vegetation samples were obtained from the locations specified in the ODCM. Sample collection was performed according to the appropriate procedures.

4.2 Review of the REMP Procedures

The inspector reviewed the following procedures as part of the evaluation of the implementation of the REMP in accordance with TS and the ODCM.

- S-ENVSP-4.0, Environmental Monitoring Program: Sampling, Analysis and Monitoring
- S-ENVSP-4.1, TLD Preparation and Collection
- S-ENVSP-4.2, Environmental Air Monitoring Sample Collection

- S-ENVSP-4.3, Environmental Air Monitoring Station Inspection and Maintenance
- S-ENVSP-6, Environmental Program Contractor Audit Procedure
- S-ENVSP-15, Sampling and Analysis for Unmonitored Pathways
- AM-04.05, Preparation of Liquid Samples for I-131 Determination

The reviewed procedures were concise and provided the required direction and guidance for implementing an effective REMP.

In addition to the procedure review, the inspector reviewed the calibration results of the dry gas meters for the air samplers. The calibrations were performed as scheduled, the calibrations were performed using the appropriate procedure, and the results were within the licensee's acceptance criteria.

As part of this inspection, the inspector reviewed the licensee's program concerning IE Bulletin No. 80-10 (issued May 6, 1980), "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment". The inspector discussed the implementation of IE Bulletin No. 80-10 with the licensee. The inspector reviewed procedure S-ENVSP-15 listed above, records containing sampling locations (such as, sewage treatment plant effluent and sludge, perimeter drain sumps, and perimeter surveys), and the results of the sample analyses. The inspector noted that the procedure contained the steps required to effectively implement this program. Records of the analytical results indicated that samples were collected as required and the lower limits of detection specified in the TS were met. The inspector determined that the program was effective and facilitated the identification of sources of radioactive liquids and solids within and from the facility.

Based on the above review and discussions with the licensee personnel, the inspector determined that the licensee has implemented an excellent REMP.

5.0 Quality Assurance and Quality Control for Analytical Measurements

The inspector reviewed the licensee's programs for quality assurance (QA) and quality control (QC) to determine whether the licensee had adequate control with respect to sampling, analyzing, and evaluating data for the implementation of the REMP.

The quality control program for analysis of environmental samples was conducted by the NYPA's JAF Environmental Laboratory, located in Fulton, N.Y. The laboratory participated in the EPA-cross check program and has in place internal QA programs which included, spike samples, and environmental split samples, and blind samples. The inspector reviewed the JAF Environmental Laboratory Quality Assurance Report for 1992 which contained the results of the QA programs. The inspector noted that the results were in agreement, with few exceptions. The responsible person reviewed all results and investigated disagreements. The inspector also reviewed selected control charts for radioactive measurement instrumentation, such as gamma spectrometry. All reviewed results were within the licensee's acceptance criteria.

The licensee had been converting from Teledyne TLDs to Panasonic TLDs and expects to use the Panasonic system by January 1994. The inspector noted that the Environmental Laboratory was equipped with a Panasonic TLD reader Model UD-716A. The laboratory had in place procedures to perform functions such as reader calibrations, dosimeter annealing, element correction factors, and TLD calibrations. The inspector reviewed these procedures and determined them to be of sufficient depth to perform the assigned tasks. Using procedure EI 04.13, "TLD Reader-Panasonic Model UD-716A", the responsible environmental technician demonstrated a reader performance check that was performed prior to reading TLDs. The control chart associated with the performance checks was in place, and the results were within the laboratory's acceptance criteria. The inspector will review the progress of the TLD change-over during a subsequent inspection.

Based on the above reviews and discussions with the licensee, the inspector determined that the laboratory personnel have demonstrated excellent knowledge to implement the TLD program, and that the licensee has excellent QA and QC programs.

6.0 Meteorological Monitoring Program

The inspector reviewed the licensee's MMP to determine whether the instrumentation and equipment were operable, calibrated, and maintained. The licensee maintained all sensors at the main, backup, and inland towers for the Nine Mile Point/FitzPatrick site and performed the calibrations in accord with Nine Mile Point Unit 2 TS requirements.

The inspector compared the wind speed, wind direction, and delta temperature outputs of the primary and backup towers to the control room outputs. The results were in agreement. The inspector reviewed the most recent calibration results for the above parameters and noted that the calibrations were performed semiannually as required by the TS and performed according to the appropriate I&C procedures. All reviewed calibration results were within the licensee's acceptance criteria.

The inspector witnessed a portion of the temperature sensor calibration and noted that the results were in the licensee's acceptance criteria. The inspector discussed the calibration methods for the wind speed, wind direction, and temperature with the I&C

technicians who conducted the calibration and determined that the I&C technicians were very knowledgeable in this area. The inspector noted that the instruments used to calibrate the meteorological sensors were well maintained and calibrated.

Based on the above inspector observations, record review and discussions with the licensee personnel, the inspector determined that the licensee continued to implement an excellent MMP.

7.0 Exit Interview

The inspector met with the licensee representatives denoted in Section 1.1 of this inspection report at the conclusion of the inspection on October 22, 1993. The inspector summarized the purpose, scope, and findings of the inspection. The licensee acknowledged the inspection findings.