

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-220/86-15

Docket No. 50-220

License No. DPR-63 Category C

Licensee: Niagara Mohawk Power Corporation  
300 Erie Boulevard West  
Syracuse, New York 13202

Facility Name: Nine Mile Point Nuclear Station, Unit 1

Inspection At: Oswego, New York

Inspection Conducted: July 28, 1986 - August 1, 1986

Inspector: *P. Clemons*  
P. Clemons, Radiation Specialist

*8/19/86*  
date

Approved by: *P. Clemons for*  
W. Pasciak, Chief, Effluents Radiation  
Protection Section

*8/19/86*  
date

Inspection Summary: Inspection on July 28, 1986-August 1, 1986 (Report No. 50-220/86-15)

Areas Inspected: Routine, unannounced safety inspection of the transportation activities including: purpose, management controls, training, procedures, shipments of radioactive material, quality control, Part 61, and package selection.

Results: One violation was identified relating to the omission of Iron-55 on shipping documents (failure to indicate the radionuclide identify, quantity, and total activity on waste manifests, paragraph 3).

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## DETAILS

### 1.0 Persons Contacted

#### 1.1 Licensee Personnel

E. Leach, Superintendent, Chemistry/Radiation Management  
R. Zollitsch, Superintendent, Training Nuclear  
J. Duell, Supervisor Chemistry and Radiation Protection  
J. Blasiak, Chemistry, Unit 1 Supervisor  
H. Wagoner, Radwaste Operations, Unit 1  
M. Boyle, Nuclear Compliance and Verification

#### 1.2 NRC Personnel

C. Marshall, Resident Inspector

Other licensee personnel were contacted and interviewed during this inspection.

### 2.0 Purpose

The purpose of this routine inspection was to review the licensee's program with respect to the following areas:

- Review of management controls;
- Review of training;
- Review of procedures;
- Review of shipments of radioactive material;
- Review of quality control;
- Review of Part 61; and
- Review of package selection.

### 3.0 Management Control

The licensee had documented the management control for radioactive waste management in an administrative procedure for the Supervisor, Radwaste Operations, and a job description for the Supervisor, Chemistry and Radiation Protection. These are the two individuals who have the primary authority and responsibilities for transportation activities involving radioactive waste.

All of the activities are governed by procedures which specify methods for handling, processing, sampling, and analyses of liquid radioactive waste; directions for operating plant systems to control and process radioactive waste; and methods for control and processing of solid radioactive waste.

Within the scope of this review, no violations were identified.

#### 4.0 Shipments of Radioactive Material

The transportation of licensed material was reviewed against the criteria contained in 10 CFR 71, "Packaging and Transportation of Radioactive Material", and 10 CFR 20.311, "Transfer for disposal and manifests."

The licensee's performance relative to these criteria was determined from discussions with the Unit 1 Chemistry Supervisor, and the Supervisor, Chemistry and Radiation Protection, and by reviewing appropriate documents. Within the scope of this review, the following violation was identified.

- 10 CFR 20.311(b) requires, in part, that the manifest accompanying radwaste shipments indicate as completely as practicable the radionuclide identity and quantity, and the total radioactivity of the shipments.

The inspector determined that the licensee failed to identify the radionuclide Iron-55, and its activity, on any shipment manifests for about two years, with one exception. This exception involved a shipment of reactor components that occurred in December 1985, which will be discussed later.

The inspector determined that the licensee issued a purchase order to a vendor on May 6, 1983 requiring the vendor "... to perform analysis on various liquid, solid, and air samples for tritium, strontium 89, strontium 90 and other requested nuclides." The licensee apparently requested this vendor to analyze only the radionuclides identified in Tables 1 and 2 of 10 CFR 61.55, "Waste Classification." Iron-55, and other radionuclides, are not identified in those tables. The analytical results identified only the radionuclides identified in the tables. The licensee did not require this vendor to perform a complete radionuclide analysis, therefore the licensee did not identify the presence of Iron-55 in the various waste streams, and neither were appropriate scaling factors established.

In December 1985, the licensee shipped reactor components to a burial site in South Carolina. Prior to making this shipment, the licensee engaged another vendor to perform analytical services on these complex components. The purchase order issued for this service required the vendor to provide a full isotopic estimate of the contained radionuclides. Based on the analyses provided by this vendor, the shipping manifest for the shipment of these reactor components identified Iron-55 as representing up to 35% of the total activity identified.

This was the only shipment during the two year period in which Iron-55 was identified on the shipping manifest as required.

Since Iron-55 was not identified, and its activity determined for each shipment, the manifests accompanying each shipment contained incorrect total activities for those shipments.

Failure to identify Iron-55, determine its activity in each shipment, and include the radionuclide in the total radioactivity of the shipment constitutes a violation of 10 CFR 20.311(b) (220.86-15-01).

#### 5.0 Procedures

The adequacy and effectiveness of the licensee's procedures were reviewed against the criteria contained in Technical Specification 6.8, "Procedures".

The licensee's performance relative to these criteria was determined by discussion with the Supervisor, Radwaste Operations, and by reviewing certain procedures.

Within the scope of this review, no violations were identified.

#### 6.0 Training

Personnel training in transportation activities was reviewed against the criteria contained in 10 CFR 71.105, "Quality Assurance Program", and IE Bulletin No. 79-19, "Packaging of Low-Level Radioactive Waste for Transport and Burial."

The licensee's performance relative to these criteria was determined by discussion with training personnel, and by reviewing appropriate documents.

Within the scope of this review, no violations were identified.

#### 7.0 Selection of Packaging

The licensee's program for the selection of packages was reviewed against the requirements of 10 CFR 71.12, "General License: NRC Approved Package" and the Department of Transportation (DOT) requirements of 49 CFR 173, "Shippers - General Requirements for Shipments and Packaging."

The licensee's performance relative to the criteria was determined by interviews of the Supervisor, Radwaste Operations, examinations of documents, procedures, shipping records, and observations during plant tours.

Within the scope of this review, no violations were identified.

## 8.0 Quality Control

The licensee's program for quality control was reviewed against the requirements of 10 CFR 20.311(d)(3), "Transfer for disposal and manifests". The licensee's performance relative to these criteria was determined by discussion with Quality Assurance/Quality Control personnel and by reviewing appropriate documents. Within the scope of this review, no violations were identified.

## 9.0 Part 61

The adequacy and effectiveness of the licensee's program was reviewed against the criteria contained in 10 CFR 61.55, "Waste classification" and 10 CFR 61.56, "Waste characteristics."

The licensee's performance relative to these criteria was determined by discussion with the Unit 1, Chemistry Supervisor, and by reviewing appropriate documents. Findings related to this area are discussed in Section 4.0 of this report.

## 10.0 Exit Interview

The inspector met with the licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 1, 1986. The inspector summarized the scope of the inspection and findings as described in this report.

At no time during this inspection was written material provided to the licensee by the inspector.