

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 50-220, 50-410
License Nos: DPR-63, NPF-69

Report Nos: 50-220/98-04, 50-410/98-04

Licensee: Niagara Mohawk Power Corporation

Facility: Nine Mile Point, Units 1 and 2

Location: Scriba, New York

Dates: March 9-13, 1998

Inspectors: R. Ragland, Radiation Specialist
J. Furia, Sr. Radiation Specialist

Approved by: John R. White, Chief
Radiation Safety Branch
Division of Reactor Safety

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EXECUTIVE SUMMARY

Nine Mile Point Units 1 and 2
50-220/98-04 & 50-410/98-04
March 9-13, 1998

This NRC inspection report includes reviews of licensee activities in the functional area of plant support. The report covers a five-day period of inspection and review by Region-based specialist inspectors.

PLANT SUPPORT

- A generally effective program for the collection, processing and return to the plant of liquid wastes, and for the collection, processing, storage and transportation of radwaste was established.
- One violation of transportation regulations was identified involving the release of a vehicle (flat-bed trailer) for unrestricted use, that exceeded the radiation limits specified in 49 CFR 173.443.



Report Details

Nine Mile Point Units 1 and 2
50-220/98-04 & 50-410/98-04
March 9-13, 1998

SUMMARY OF ACTIVITIES

Nuclear Regulatory Commission (NRC) Staff Activities

Inspection Activities

The NRC region-based inspectors conducted inspection activities during normal hours. The results of the inspection activities are contained in the applicable sections of this report.

Updated Final Safety Analysis Report Reviews

While performing the inspections discussed in this report, the inspectors reviewed the applicable portions of the Updated Final Safety Analysis Report (UFSAR) related to the areas inspected. The inspectors verified that the UFSAR wording was consistent with the observed plant practices, procedures and/or parameters, with the exception of the following: (1) Section 12 of the Unit 1 UFSAR contains outdated information on the liquid and solid radwaste processing program and equipment; and, (2) Section 11 of the Unit 2 UFSAR contains outdated information on the liquid and solid radwaste processing program and equipment. As previously noted in NRC Inspection Report 50-220/97-07; 50-410/97-07, the licensee has identified these UFSAR deficiencies, and has a program in place to revise the UFSAR.

I. PLANT SUPPORT

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Transportation and Radioactive Waste Programs

a. Inspection Scope (86750)

The inspectors reviewed the licensee's programs for the processing of liquid and solid radioactive wastes (radwaste) and the transportation of radioactive materials, including: the Process Control Programs (PCP), scaling factor data for compliance with 10 CFR 61.55, shipping records, and system walkdowns in radwaste.

b. Observations and Findings

NMP1

The Unit 1 processing program for radwaste is contained in the Unit 1 Radwaste Process Control Program, Rev. 4, dated February 26, 1998. This document accurately reflects current Unit 1 processing systems and equipment, and is a significant improvement over Revision 2 of the PCP which was reviewed during inspection 50-220/97-07. Subsequent to the conclusion of that inspection, the



Unit 1 PCP was revised in December 1997 (Rev. 3). A subsequent revision (Revision 4) effected transfer of management oversight for the radwaste program from the Operations Department to the Health Physics Group. All personnel previously a part of the Radwaste Operations Section were transferred to the Health Physics Group.

The inspectors reviewed the licensee's program for determining difficult to measure radionuclides in its waste streams, in accordance with 10 CFR 61.55. The licensee submits, on an annual basis for pertinent waste streams, plant specific samples to a vendor laboratory for total isotopic analysis. The results of these analysis are then reviewed and incorporated into a licensee maintained computer data base. The inspectors noted that the licensee currently has only one proceduralized method for notifying the unit radwaste supervisor when plant conditions change that may affect waste stream specific scaling factors of greater than an order of magnitude. Such change could potentially invalidate the scaling factors in use in accordance with the NRC's Low-Level Waste Licensing Branch Technical Position (BTP) on Radioactive Waste Classification (May 1983). The only licensee method that has the potential of addressing interim plant condition changes that affect scaling factors relies on data collection on a quarterly basis. Such method may not be completely effective if radiological conditions changed rapidly. Due to current plant practice of storing most radioactive wastes onsite (especially spent resins) for at least one year, the impact of this current methodology is minimal since the shipments would not likely be made before the next annual reassessment of scaling factors. The inspectors discussed this issue with both unit Radwaste Managers, who indicated that this matter would be reviewed further with the unit Chemistry Managers to determine appropriate corrective action. The licensee's resolution of this matter will be examined in a future inspection. (IFI 50-220/98-04-01)

The inspectors conducted a detailed system walkdown of the radwaste facilities. The inspectors conducted direct visual observation in all but three of the radwaste facilities' cubicles. Three areas posted as airborne radioactivity areas were not entered. All areas reviewed, except as noted below, were determined to be appropriately posted and generally well maintained from the perspective of radiological housekeeping. The exception to this were the areas around the two waste collector pumps, #11 and #12, located on the 229' elevation. Both pumps were observed to be actively leaking at their seals. A review of records indicated that a work order to correct this situation was issued, but also that this is the third time since 1995 that these pumps have leaked at their seals. Although the leakage was currently being maintained within the posted contaminated area of the pump base, the inspectors noted that back the late 1980's and early 1990's these pumps had been observed spraying water from their seals, resulting in extensive contamination. At the exit meeting on March 13, 1998, the Unit 1 Plant Manager indicated that the status of these pumps and their maintenance would be reviewed. Although this issue indicates poor housekeeping in this one cubicle, the facility, as described in the UFSAR, was designed to contain leaks and spills of potentially contaminated materials. No violations of NRC requirements was identified.



The inspectors reviewed the records of three radioactive materials shipments, including a shipment of spent resins to a radwaste processor made on March 11, 1998, which was observed by the inspectors. The shipment records reviewed were determined to meet the applicable provisions of 10 CFR Parts 20, 61 and 71, and 49 CFR Parts 170-178, for waste classification and form, shipping and radwaste manifests and transportation communications.

On February 6, 1998, the licensee returned to service from Unit 1, an empty flatbed trailer. The trailer had arrived onsite previously containing boxes of radioactively contaminated equipment for use in the spent fuel pool. The empty trailer was sent to the Babcock and Wilcox (B&W) facility in Parks Township, Pennsylvania. The licensee's documentation of the vehicle survey did not identify any contamination or radiation levels on the trailer in excess of the regulatory limits. Therefore, the trailer was released for unrestricted use without the need for any additional controls or postings. On February 9, 1998, B&W conducted a receipt survey of the trailer and discovered two accessible areas on the trailer surface which had contact radiation levels in excess of Department of Transportation (DOT) limits contained in 49 CFR 173.443, i.e., [0.005 mSv/hr {0.5 mrem/hr}]. The two areas were determined to be 0.014 mSv/hr (1.4 mrem/hr) and 0.300 mSv/hr (30 mrem/hr), respectively. Upon notification by B&W, the licensee dispatched a radiation protection technician and supervisor to the B&W location and confirmed the presence of the two locations with higher than allowable radiation levels. The licensee temporarily suspended all further shipments of radioactive materials or release of vehicles for unrestricted use. It resumed these activities later in February 1998 upon establishing a more comprehensive survey methodology with a group of specially trained radiation protection technicians. The return to service of an empty vehicle that was previously used to ship radioactive materials as an exclusive use vehicle with radiation levels in excess of DOT limits, is an violation of 10 CFR 71.5. Title 10 CFR 71.5 requires that NRC licensee's comply with all applicable DOT requirements, including 49 CFR 173.443. (VIO 50-220/98-04-02)

NMP2

The Unit 2 processing program for radwaste is contained in the Unit 2 Radwaste Process Control Program, Rev. 3, dated December 18, 1997. This document accurately reflects current Unit 2 processing systems and equipment, and is an improvement over Revision 2 of the PCP which was reviewed during inspection 50-410/97-07. This version of the PCP now accurately includes references to the Thermex system which is utilized in the unit to process both waste collector and floor drain inputs.

The inspectors conducted a detailed system walkdown of the radwaste facilities. The inspectors conducted direct visual observation in all but one of the radwaste facilities' cubicles. An area posted as airborne radioactivity area was not entered. All areas reviewed, except as noted below, were determined to be appropriately posted and generally well maintained from the perspective of radiological housekeeping. The exception to this were the pipe chase located below the 309' elevation of the radwaste facility, the spent resin tank cubicle and pump room and



the sludge agitator and waste tank cubicle, where resins were observed on the floor. In the case of the spent resin tank pump and waste tank cubicles, discrete piles of spent resin were observed. In the spent resin tank cubicle, the entire floor surface was covered in resin. The inspectors discussed their findings on this matter at the exit meeting on March 13, 1998. At this meeting the Unit 2 Plant Manager indicated that this condition would be remediated. The inspector noted that though this issue indicates poor housekeeping in this one cubicle, the facility, as described in the UFSAR, was designed to contain leaks and spills of potentially contaminated materials. No violation of NRC regulatory requirements was identified.

The inspectors reviewed the records of four radioactive materials shipments, all of which were determined to meet the applicable provisions of 10 CFR Parts 20, 61 and 71, and 49 CFR Parts 170-178, for waste classification and form, shipping and radwaste manifests and transportation communications.

c. Conclusions

The licensee has established a generally effective program for the collection, processing and treatment of liquid wastes and the collection, treatment, storage and shipment of radwaste and radioactive materials. However, housekeeping concerns were identified in both unit's radwaste facilities. Further, one apparent violation of DOT requirements was identified at Unit 1.

R8 **Miscellaneous Plant Support Issues (86750, 92904)**

R8.1 (Open) Violation 1013 (EA 97-530): Shipment of Radioactive Material with Radiation Levels in Excess of DOT Limits

By letter dated February 23, 1998, Niagara Mohawk Power Corporation submitted its Reply to Notice of Violation and Proposed Imposition of Civil Penalty. In this letter, short-term corrective actions for this violation included Radiation Protection Manager review of all radioactive material shipments, and long-term corrective actions included providing radiation protection technicians with continuing training on the event and revising radiation protection survey procedures.

The inspectors verified that the short-term corrective action is currently in place, and discussed with both Training Department and Radiation Protection personnel the status of the long-term corrective actions. Training personnel indicated that they were awaiting final corrective actions, including any revised procedures development, before initiating continuing training. The Radiation Protection Managers indicated that revised survey procedures would be issued by April 30, 1998, as committed to in the response letter.



R8.2 (Closed) IFI 50-220/97-0-08: Identification of Conditions in Waste Concentrator Tank #11 and Tank Cubicle

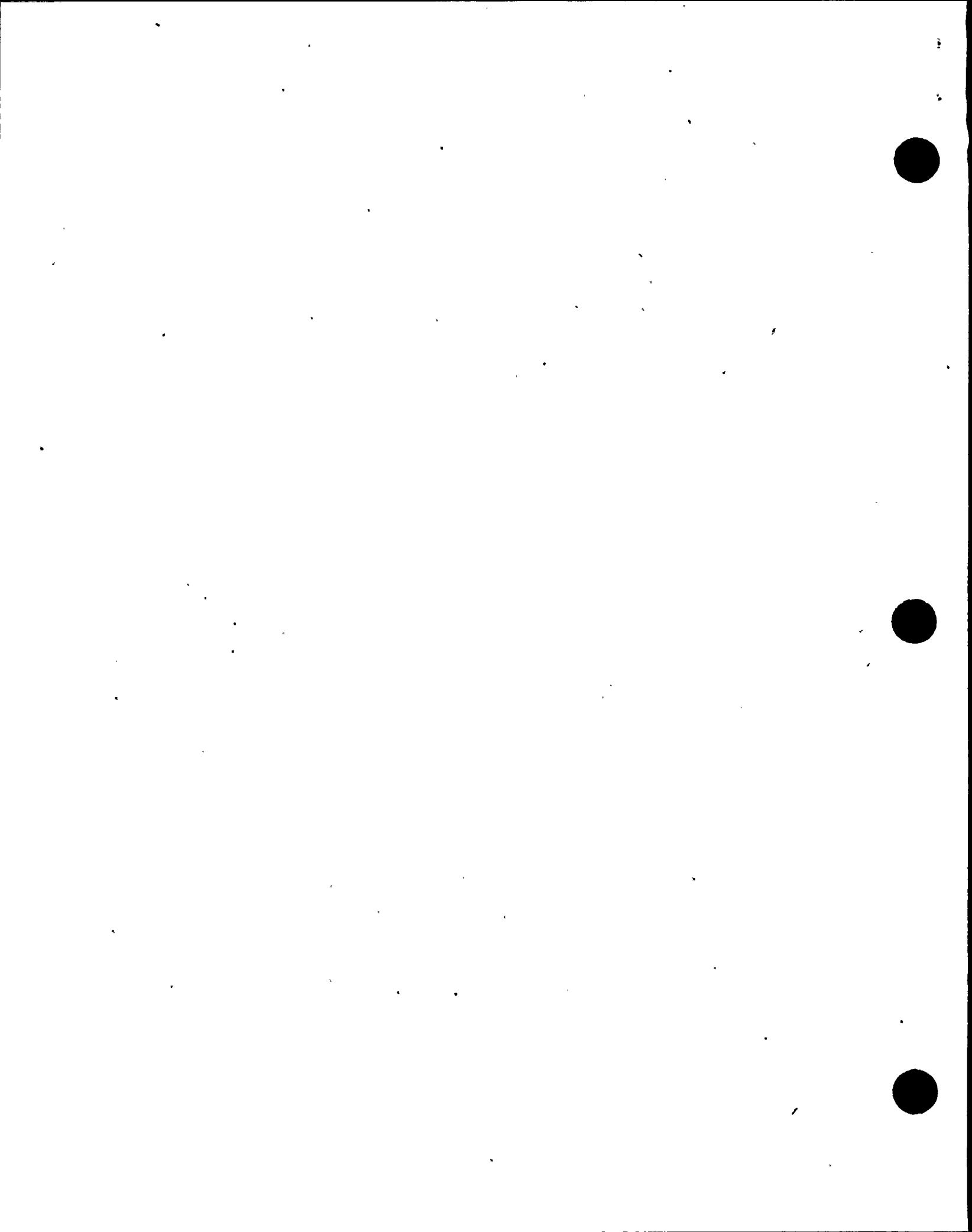
By letter dated January 5, 1998, Niagara Mohawk Power Corporation submitted its Response to Request for a Plan of Action Regarding #11 Concentrated Waste Tank. In this letter, the results of two entries into the tank and pump cubicle were documented, together with a general action plan for remediation. As part of this inspection, a review of documentation, including a videotape of the entries was made by the inspectors. At the exit meeting on March 13, 1998, the Unit 1 Plant Manager committed to complete the following actions by December 31, 1998 regarding the #11 Concentrated Waste Tank, Tank Cubicle and Pump Cubicle: (1) remove all encrusted concentrates from the floors and piping in the cubicle; (2) remove all loose debris, such as hoses, wires and paper trash from the cubicle; and, (3) remove pieces of asbestos insulation which have fallen onto the cubicle floors. The licensee did not commit to removing any of the residual concentrates from the inside of the #11 Waste Concentrates Tank or to conduct a total asbestos abatement of the cubicle at this time. Such final decontamination will be included in a site decommissioning plan.

R8.3 (Closed) Violation 1034 (EA 97-530): Improper Transfer of Licensed Material

By letter dated February 23, 1998, Niagara Mohawk Power Corporation submitted its Reply to Notice of Violation and Proposed Imposition of Civil Penalty. In this letter, short-term corrective actions for this violation included amending licensee procedures to require that all transport of radioactive materials from the site be handled by the appropriate radwaste section, and not by warehouse personnel. These procedural changes have been completed.

R8.4 (Open) Violation 1033 (EA 97-530): Shipment of Incorrect Liner of Radwaste to a Processor

By letter dated February 23, 1998, Niagara Mohawk Power Corporation submitted its Reply to Notice of Violation and Proposed Imposition of Civil Penalty. In this letter, short-term corrective actions for this violation included personnel disciplinary action, meetings with the responsible managers overseeing radioactive waste shipments and an inventory verification of the liner storage facility. The inspectors verified that all of the short-term corrective actions have been completed. The inspectors noted, however, that no long-term corrective actions were proposed, such as amending its procedure GAP-RPM-01, Interim Storage of Low-Level Radioactive Waste, or any other procedure, to include a periodic inventory of the liner storage area, in order to preclude recurrence. Discussions with the unit Radwaste Supervisors indicated that such a procedural change will be evaluated.



R8.5 (Closed) EEI 50-220/97-07-13 and 50-410/97-07-13: Failure to Verify the QA Program of Radwaste Processing Vendors

By letter dated January 22, 1998, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty (EA 97-530) to the Niagara Mohawk Power Corporation. Included in this letter was a discussion which left this item as unresolved while awaiting final review by the NRC. Subsequent review by the NRC's Office of Nuclear Material Safety & Safeguards, Division of Waste Management, has determined that such an audit is not required under NRC regulations. Although incorporated as a requirement under the Unit 1 PCP (revision 2), the requirement was not clear as to its application to off-site waste processing, and has subsequently been removed from the current revision of the PCP.

R8.6 (Closed) UNR 50-220/98-01-12: Potentially Contaminated Truck Released from Unit 1

As discussed in Section R1 of this report, this item is a cited violation. The unresolved item is therefor administratively closed.

V. Management Meetings

X1 Exit Meeting Summary

The exit meeting occurred on March 13, 1998. During this meeting, the inspectors' findings were presented. NMPC did not dispute any of the inspectors' findings or conclusions. Based on the NRC Region I review of this report, and discussions with NMPC representatives, it was determined that this report does not contain safeguards or proprietary information.



PARTIAL LIST OF PERSONS CONTACTED

Niagara Mohawk Power Corporation

R. Abbott	Vice President, Nuclear Engineering
D. Barcomb	Manager, Unit 2 Radiation Protection
D. Bosnic	Manager, Unit 2 Operations
J. Burton	Manager, Quality Assurance
J. Conway	Vice President, Nuclear Generation
R. Dean	Manager, Unit 2 Engineering
S. Doty	Manager, Unit 1 Maintenance
K. Dahlberg	Plant Manager, Unit 2 (Acting)
G. Gresock	Licensing
M. Gridley	HRD
J. Helker	WC/OMG Manager, Unit 2
T. Hogan	Radiation Protection Supervisor, Unit 1
C. Merritt	Chemistry Manager, Unit 2
B. Murtha	Operations, Unit 1
L. Pisano	Manager, Unit 2 Maintenance
N. Rademacher	Executive Staff
R. Randall	Manager, Unit 1 Engineering
K. Rowe	ALARA Supervisor, Unit 2
V. Schuman	Manager, Unit 1 Radiation Protection
R. Smith	Plant Manager, Unit 1
A. Taylor	Radwaste Supervisor, Unit 2
J. Torbitt	Radwaste Supervisor, Unit 1
M. Wallace	Radiation Protection, Unit 1
K. Ward	Technical Support Manager, Unit 2
D. Wolniak	Manager, Licensing



INSPECTION PROCEDURES USED

IP 86750 Solid Radwaste Management & Transportation of Radioactive Material
IP 92904 Follow Up - Plant Support

ITEMS OPENED, CLOSED, AND UPDATED.

Opened

50-220/98-04-01 IFI Followup on scaling factor determination relative to changing plant conditions
50-220/98-04-02 VIO Empty vehicle transport with radiation levels in excess of DOT limits [49 CFR 173.443(c)]

Closed

50-220/97-07-08 IFI Identification of conditions in waste concentrates tank #11
EA 97-530 #1034 VIO Improper transfer of licensed material
50-220 &
50-410/97-07-13 EEI Failure to verify the QA program of radwaste processing vendors
50-220/98-01-12 UNR Potentially Contaminated Truck Released from Unit 1

Updated

EA 97-530, #1013 VIO Shipment of radioactive material with radiation levels in excess of DOT limits
EA 97-530 #1033 VIO Shipment of incorrect liner of radwaste to a processor



LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
EEI	Escalated Enforcement Item
IFI	Inspector Follow-up Item
mrem/hr	millirem per hour
mSv/hr	millisieverts per hour
NMP1	Nine Mile Point Unit 1
NMP2	Nine Mile Point Unit 2
QA	Quality Assurance
PCP	Process Control Program
Radwaste	Radioactive Waste
UFSAR	Updated Final Safety Analysis Report

