

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-220/85-08

Docket No. 50-220

License No. DPR-63

Priority -

Category C

Licensee: Niagara Mohawk Power Corporation

300 Erie Boulevard West

Syracuse, New York 13202

Facility Name: Nine Mile Point Nuclear Power Plant, Unit 1

Inspection At: Barnwell, South Carolina

Inspection Conducted: May 6 and 7, 1985

Report Prepared by:

W. Pasciak
K. Ho Sopple, Radiation Specialist

5/23/85
date

Approved by:

W. Pasciak
W. Pasciak, Chief, BWR Radiological
Protection Section, Emergency
Preparedness and Radiological
Protection Branch

5/23/85
date

Inspection Summary:

Inspection on May 6, 1985, by a Representative of the State of South Carolina
Department of Health and Environmental Control

Areas Inspected: Niagara Mohawk Power Corporation was the originator of a waste shipment which was inspected at the Chem-Nuclear Systems, Inc., burial site in Barnwell, South Carolina.

Results: One violation was identified (external non-fixed radioactive contamination was in excess of regulatory limits).

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DETAILS

On May 4, 1985, Niagara Mohawk Power Corporation shipped 2.6 curies of byproduct material, designated as Radioactive Material, LSA, n.o.s., in the form of solidified waste. The shipment was made by an Exclusive Use Carrier on a tractor-trailer containing Cask Model No. 14-215-H5. On May 6, 1985, a representative of the South Carolina Department of Health and Environmental Control (SCDHEC) inspected the shipment. The inspection consisted of a review of shipping papers, placarding, marking and labeling, radiation measurements, selective contamination surveys and examination of the packages and the vehicle. On May 7, a representative from the SCDHEC performed additional contamination surveys.

A copy of the report prepared by the representative is enclosed. The report indicates that the shipment had external contamination levels in excess of the allowable limits specified by 10 CFR 71.87(i)(2).

10 CFR 71.87(i)(2) requires that the non-fixed radioactive contamination on packages transported as exclusive use shipments by rail or highway only must not exceed ten times the levels prescribed in paragraph (i)(1). Specifically, the maximum permissible contamination limit is ten times 22 dpm/cm² or 22,000 dpm/100 cm² for beta-gamma emitting radionuclides.

According to a SCDHEC representative, radioactive contamination levels up to approximately 150,000 dpm/100 cm² were detected. This is in excess of regulatory limits and represents a violation of the regulations.

The Niagara Mohawk Power Corporation Station Superintendent was informed of this apparent violation of NRC requirements in a telephone conversation with Dr. Walter J. Pasciak of the Region I Office on May 20, 1985.



FORM 85-032

U.S. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Bureau of Radiological Health
Division of Radioactive Material Licensing and Compliance
Radioactive Shipment Inspection Report

A. General Information:

Report No. 85-032

1. Shipper Nine Mile Point Nuclear Station
 2. Carrier Niagara Mohawk Power Corp. Address Lycoming, New York
 3. Type Package/Cask 14-215-H-5 Cask Containing One (1) steel liner
 Tractor # 12 Trailer # 042 Type LowBoy

B. Shipping Documentation:

1. AS# 39915 Volume Allocation # 0585-009-A Permit # 0004-31-85-X
 2. Shipping Name & Class: Radioactive Material, LSA, n.p.a. HM Id.# UN 2912 (172.202)
 3. Total Burial Vol.: 178 fc³ (172.202(c)) Total Curies: 2,61825 (172.203)
 4. Radionuclides: Co-60, Cs-134&137, Mn-54, Co-58, H3, Cm-242, 243&244, Am-241 (172.204)
 5. Describe chem./phy. media: solidified oxides on evaporator bottoms in cement (172.203)
 6. Chelating Agents(X) None Shippers Certification: State DOT (172.204)
 7. Exclusive Use Instructions (173.425(b)) Total T.I. NA (177.842)
 8. Check for: Radiation Survey Instructions (173.441) Contamination Levels Instructions (173.443)
 9. Compare: Radionuclides w/resin analysis Instructions Rad/Contamination Levels w/CNSI/BRH Instructions

C. Shipment Inspection Check List:

<p><input checked="" type="checkbox"/> Shipment Braced/Blocked (173.425(b)(6))</p> <p><input checked="" type="checkbox"/> Visible Leakage (173.425(B)(1))</p> <p><input checked="" type="checkbox"/> Package Labeling: <u>H-I, Y-II, III</u> (172.403) (b) & (c) or <u>Radioactive LSA</u> (173.425)</p> <p><input checked="" type="checkbox"/> Waste Class. Marked <u>A-B-C (Stable/Unstable)</u></p> <p><input checked="" type="checkbox"/> Gross Weight Marked (172.310) [LBA Exclusive Use Exempt]</p> <p><input checked="" type="checkbox"/> Type <u>A</u> Type B Package Marked (172.310)</p> <p><input checked="" type="checkbox"/> Trailer/Tractor Defects</p> <p><input checked="" type="checkbox"/> Packages <u>hand</u> reinforced, palletized</p>	<p><input checked="" type="checkbox"/> Lids (Drum, box, <u>cask</u>) secure (173.425)</p> <p><input checked="" type="checkbox"/> Visible Damage (173.425)</p> <p><input checked="" type="checkbox"/> Cask Defects/Missing Parts</p> <p><input checked="" type="checkbox"/> Radiation Survey: Cab/sleeper, trailer/truck (173.441)</p> <p><input checked="" type="checkbox"/> Contamination Levels (173.443)</p> <p><input checked="" type="checkbox"/> Vehicle Placards (173.425(c)) (172.507)</p> <p><input checked="" type="checkbox"/> Tiedowns Secure/Adequate</p> <p><input checked="" type="checkbox"/> Offloading Discrepancies</p>
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D. Radiation/Contamination Survey: (transport vehicle or package)

(mR/hr) Surface: 2.0 2 meters: _____

Surface: _____	Cab/sleeper	Surface: _____
2 meters: _____	_____	2 meters: _____

Surface: 4.0 2 meters: 0.4

Highest contamination detected: Arrival 306 alpha dpm/100cm² Release _____ dpm/100cm²
40,149 beta-gamma dpm/100cm² _____ dpm/100cm²

E. Results of Inspection: Summary of violations and discrepancies upon arrival at the burial facility. It was observed that liquid had drained down the side of the cask. CNSI and Department smears revealed contamination levels in excess of the limits specified by 49 CFR 173.443(A) and (B). This constitutes a violation of Section 1.2, Department Regulation 61-83.

Date: May 6, 1985 Inspector's Signature s/Richard S. Sappington

11



SMEAR RESULTS

CNSI Results (DPM)/100 cm²

#1	11.34
#2	244.68
#3	13,493.62
#4	23.36
#5	18.47
#6	39.85
#7	32.32
#8	42.50
#9	59.20
#10	22.34
#11	3177.53
#12	7059.20
#13	13,914.6
#14	49.02
#15	2.99
#16	36,647

DHEC Results (DPM)/100 cm²

#1	2827.02
#2	3541.63
#3	320.06
#4	386.59
#5	14,745
#6	157,473.48
#7	2220
#8	65,556.63

Additional Smear Results in excess of limits obtained by CNSI are not available for confirmation. CNSI reports high results of 40, 149 dpm/100 cm².

