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TO:

Mr. James P. O'Reilly

FROM:

Niagara Mohawk Power Corporation
Syracuse, New York
R. R. Schneider

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DESCRIPTION

Ltr. w/attached....re their 2/25/75 ltr.
...furnishing corrections to previously
submitted Semi-Annual Effluent and Waste
Disposal Report for the second half of 1975.

(6-P)

PLANT NAME:

Nine Mile Point Unit #1

ENCLOSURE

ACKNOWLEDGED
DO NOT REMOVE

SAFETY

FOR ACTION/INFORMATION

ENVIRO 12/10/76

RJL

ASSIGNED AD:

☒ BRANCH CHIEF:

Lear

ASSIGNED AD:

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PROJECT MANAGER:

PROJECT MANAGER:

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Parrish

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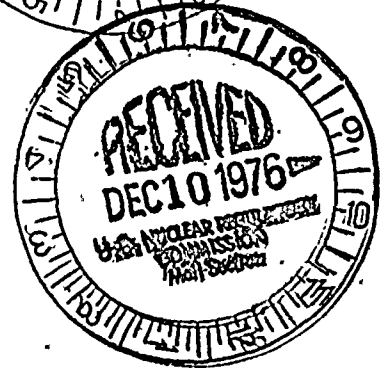
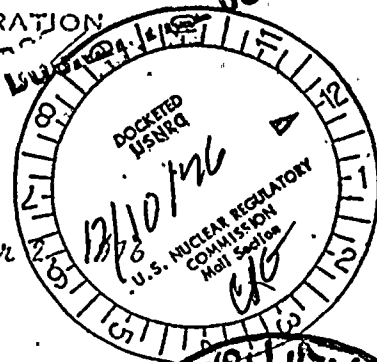
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NIAGARA MOHAWK POWER CORPORATION

NIAGARA MOHAWK

300 ERIE BOULEVARD
SYRACUSE, N. Y. 13202

December



Mr. James P. O'Reilly
Director
United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

RE: Nine Mile Point Nuclear Station #1
Facility Operating License DPR-63
Docket No. 50-220

Dear Mr. O'Reilly:

This letter is to correct our previously submitted Semi-Annual Effluent and Waste Disposal Report for the Nine Mile Point Nuclear Station Unit #1 for the second half of 1975. The report was originally submitted on February 25, 1975.

Very truly yours,

ORIGINAL SIGNED BY R.R. SCHNEIDER

R.R. Schneider
Vice President -
Electric Production

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cc: Director, Office of T&E (40 copies)
Director, Office of Management Information (2 copies)

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2. 5

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT(1975)

Supplemental InformationFACILITY: Nine Mile Point Unit #1LICENSEE: DPR-631. Regulatory Limits

- a. Fission and activation gases: $Q = 0.57/\bar{E}$ Ci/sec
- b. Iodines:
- c. Particulates, half-lives 8 days: } $= 1.5 \text{ E}+04 \times \text{MPC}; \text{ Ci/sec}$
- d. Liquid effluents: Gross Beta Activity = $1\text{E} - 07 \text{ uCi/ml}$ or controlled in accordance with Appendix B, Table II, Column 2, of 10 CFR 20 and Note 1 thereto.

2. Maximum Permissible Concentrations

Provide the MPC's used in determining allowable release rates or concentration.

- a. Fission and activation gases: $Q(\text{July-Sept}) = 0.71 \text{ Ci/sec}$
 $Q(\text{Oct-Dec}) = 0.56 \text{ Ci/sec}$
- b. Iodines:
- c. Particulates, half-lives 8 days: } 1.5 uCi/sec
- d. Liquid Effluents: Ave MPC (July-Sept) = $6.3 \text{ E}-06 \text{ uCi/ml}$
Ave MPC (Oct-Dec) = $8.1 \text{ E}-06 \text{ uCi/ml}$

3. Average Energy

$$\bar{E} \text{ (July-Sept)} = 0.80 \text{ Mev} \quad \bar{E} \text{ (Oct-Dec)} = 1.01 \text{ Mev}$$

\bar{E} is the average energy of the radionuclide mixture in releases of fission and activation gases.

4. Measurements and Approximations of Total Radioactivity

Provide the methods used to measure or approximate the total radioactivity in effluents and the methods used to determine radionuclide composition.

- a. Fission and activation gases: Stack monitor calibrated to isotopic analysis (NaI) of Off Gas samples at SJAE
- b. Iodines: Weekly analysis (NaI) of stack sampler charcoal cartridge
- c. Particulates: Isotopic analysis (GeLi, by contractor) of stack sampler filters
- d. Liquid effluents: Isotopic analysis (NaI or GeLi) of representative batches

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (1975)

Cont'd.

5. Batch Releases

Provide the following information relating to batch releases of radioactive materials in liquid and gaseous effluents.

a. Liquid

1. Number of batch releases: 381
2. Total time period for batch releases: 444 hours 30 min.
3. Maximum time period for a batch release: 15 hours 41 min.
4. Average time period for batch release: 1 hour 10 min.
5. Minimum time period for a batch release: 0 hours 25 min.
6. Average stream flow during period of release of effluent into a flowing stream: Not Applicable

b. Gaseous

Not applicable

6. Abnormal Releases

a. Liquid

None

b. Gaseous

None



100

1

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT(1975)

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	Quarter 3 75	Quarter 4 75	Est. Total Error, %
A. Fission & activation gases				
1. Total release	Ci	6.01 E+05	3.63 E+04	2.0 E+01
2. Average release rate for period	μCi/sec	7.50 E+04	4.50 E+03	
3. Percent of Technical Specification Limit	%	1.05 E+01	8.03 E-01	
B. Iodines				
1. Total iodine-131	Ci	1.45 E+00	5.15 E-01	1.4 E+01
2. Average release rate for period	μCi/sec	1.82 E-01	6.48 E-02	
3. Percent of technical specification	%	1.22 E+01	4.33 E+00	
C. Particulates				
1. Particulates with half-lives > 8 days	Ci	2.91 E-01	1.21 E-01	1.5 E+01
2. Average release rate for period	μCi/sec	3.66 E-02	1.52 E-02	
3. Percent of technical specification limit	%	2.44 E+00	9.40 E-01	
4. Gross alpha radioactivity	Ci	3.72 E-05	8.98 E-05	
D. Tritium				
1. Total release	Ci	8.02 E+00	1.54 E+00	1.6 E+01
2. Average release rate for period	μCi/sec	1.01 E+00	1.93 E-01	
3. Percent of technical specification limit	%		* E	* E

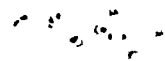
* None specified

TABLE 1B

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT(1975)

GASEOUS EFFLUENTS-ELEVATED RELEASE

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	Quarter 3 75	Quarter 4 75	Quarter	Quarter
1. Fission gases					
krypton-85m	Ci	3.41 E+04	1.20 E+03	E	E
krypton-87	Ci	7.84 E+04	4.54 E+03	E	E
krypton-88	Ci	1.15 E+05	5.01 E+03	E	E
xenon-133	Ci	5.88 E+04	8.35 E+02	E	E
xenon-135	Ci	1.79 E+05	5.70 E+03	E	E
xenon-138	Ci	8.05 E+04	1.57 E+04	E	E
Others(specifiy)	Ci	E	E	E	E
	Ci	E	E	E	E
	Ci	E	E	E	E
unidentified	Ci	5.53 E+04	3.30 E+03	E	E
Total for period	Ci	6.01 E+05	3.63 E+04	E	E
2. Iodines					
iodine-131	Ci	1.45 E+00	5.15 E-01	E	E
iodine-133	Ci	2.18 E+00	2.36 E-01	E	E
iodine-135	Ci	3.96 E-01	4.28 E-02	E	E
Total for period	Ci	4.03 E+00	7.94 E-01	E	E
3. Particulates					
strontium-89	Ci	3.64 E-02	5.3 E-04	E	E
strontium-90	Ci	2.03 E-04	<1.3 E-04	E	E
cesium-134	Ci	8.46 E-04	9.92 E-04	E	E
cesium-137	Ci	4.37 E-03	1.73 E-03	E	E
barium-lanthanum-140	Ci	7.24 E-03	1.42 E-03	E	E
Others(specify)	Ci	E	E	E	E
	Ci	E	E	E	E
manganese-54	Ci	1.43 E-03	3.31 E-03	E	E
cobalt-60	Ci	3.99 E-03	1.23 E-02	E	E
cobalt-58	Ci	2.20 E-04	6.76 E-04	E	E
zirconium-Niobium	95Ci	2.83 E-04	1.21 E-03	E	E
iodine-131	Ci	2.66 E-03	---	E	E
ruthenium-103	Ci	1.34 E-03	2.68 E-03		
ruthenium-106	Ci	4.45 E-04	2.43 E-03	E	E
cerium-144	Ci	2.54 E-04	5.25 E-03		
cerium-141	Ci	1.50 E-03	3.43 E-03	E	E
iron-59	Ci	1.21 E-04	---	E	E
zinc-65	Ci	4.67 E-05	1.98 E-04	E	E



EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. Solid Waste Shipped Off site for Burial or Disposal (Not Irradiated Fuel)

1. TYPE OF WASTE	UNIT		EST. TOTAL ERROR, %
a. Spent Resin	m ³	1.39 E+01	
	Ci	2.35 E+02	1.5 E+01
Evaporator Bottoms	m ³	1.40 E+02	
	Ci	3.44 E+02	1.8 E+01
Resin or Filter Sludges	m ³	1.23 E+01	
	Ci	8.43 E+02	2.1 E+01
Liquid Waste	m ³	NONE	
	Ci		
b. Dry Compressible Waste or Contaminated Equip.	m ³	9.59 E+01	
	Ci	3.48 E+00	2.7 E+01
c. Irradiated Components	m ³		
	Ci	NONE	

2. ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)

a. Evaporator Bottoms

Cobalt-60	4.90%
Cesium-137	47.70%
Manganese-54	1.57%
Cesium-134	40.20%
Iodine-131	1.50%
Cobalt-58	0.41%
Lanthanum-140	0.24%
Strontium-89	0.37%
Strontium-90	0.08%
Iron-59	0.25%
Sodium-24	1.90%
Tungsten-187	0.22%
Cerium-141	0.05%
Chromium-51	0.29%
Zirconium-95	0.16%
Niobium-95	0.20%
Antimony-124	0.11%
Filter Sludge	
not determined	

b. Dry Compressible Waste varies

c. Irradiated Components none

