

JANUARY 16 1979

Docket No. 50-220

Distribution

- ✓ Docket
- ORB #3
- Local PDR
- NRC PDR
- VStello
- BGrimes
- Tippolito
- PPolk
- SSheppard
- Attorney, OELD
- OI&E (3)
- DEisenhut
- TERA
- Buchanan
- ACRS (16)

Mr. Donald P. Dise  
 Vice President - Engineering  
 Niagara Mohawk Power Corporation  
 300 Erie Boulevard West  
 Syracuse, New York 13202

Dear Mr. Dise:

By letter dated September 1, 1978, as amended by letters of November 30 and December 13, 1978, you requested approval of the installation of a radwaste reduction system as required by 10 CFR 20.305. The proposed system is to be installed at the Nine Mile Point Unit 1 Nuclear Station.

In order to continue our review of your proposal, you are requested to provide written responses for the items identified in Enclosure 1 by February 16, 1979. In addition, it is our present intention to discuss these items and other items with you during the forthcoming technical meeting in Oswego, New York. This meeting has been scheduled for January 30, 1979.

If we can be of further assistance, please advise.

Sincerely,

Original Signed by  
 T. A. Ippolito

Thomas A. Ippolito, Chief  
 Operating Reactors Branch #3  
 Division of Operating Reactors

Enclosure:  
 Request for Additional  
 Information

cc w/enclosure: See next page

7902010253

OFFICE	ORB #3	ORB #3	EEB	AD:EGP
SURNAME	PPolk:mjf	Tippolito	GKnighton	BGrimes
DATE	1/2/79	1/16/79	1/12/79	1/15/79



Mr. Donald P. Dise

- 2 -

January 16, 1979

cc:

Mr. Herbert Van Schaach  
Oswego County Building  
46 E. Bridge Street  
Oswego, New York 13125

Ms. Andria Dravo  
Subcommittee on Energy and  
Environment  
1327 Longworth Avenue  
Washington, D. C. 20515

Mr. Frank R. Church  
Town of Scriba  
Scriba Municipal Building  
R. D. #2, Creamery Road  
Box 76  
Oswego, New York 13126

Mr. James Best, Chairman  
R. D. 7  
Bestview Drive  
Fulton, New York 13069

Mr. Thomas C. Elsasser  
State Liaison Officer  
U. S. Nuclear Regulatory Commission,  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Mr. Robert D. Vessels  
Director, Office of Environmental Planning  
New York State Public Service Commission  
New York State Empire Plaza  
Albany, New York 12223

Mr. Thomas Cashman  
Environmental Conservation Department  
50 Wolf Road  
Albany, New York

Mr. T. K. DeBoer  
Director, Technical Development Programs  
State of New York Energy Office  
Agency Building 2  
Empire State Plaza  
Albany, New York 12223

2

Mr. Donald P. Dise

- 3 -

January 16, 1979

cc:

Mr. Robert Deyle  
County Planning Board  
County Building  
46 E. Bridge Street  
Oswego, New York 13126

Mr. Paul Merges  
New York State Department of  
Environmental Conservation  
44 Holland Avenue  
Western New York Service Group  
Albany, New York 12208

Mr. Jay Dunkelberger  
New York State Energy Office  
2 Rockefeller Plaza  
Albany, New York 12223

Mr. Thomas B. Cochran  
Natural Resources Defense Council, Inc.  
917 15th Street, N. W.  
Washington, D. C. 20005

Mr. Richard I. Goldsmith  
Syracuse University College of Law  
E. I. White Hall, Campus  
Syracuse, New York 13210

Eugene B. Thomas, Jr., Esquire  
LeBoeuf, Lamb, Leiby & MacRae  
1757 N Street, N. W.  
Washington, D. C. 20036

Anthony Z. Roisman  
Natural Resources Defense Council  
917 15th Street, N. W.  
Washington, D. C. 20005

Oswego County Office Building  
46 E. Bridge Street  
Oswego, New York 13126

3

REQUEST FOR ADDITIONAL INFORMATION

TO

NIAGARA MOHAWK POWER CORPORATION  
ON  
PROPOSED RADWASTE VOLUME REDUCTION SYSTEM  
AT  
NINE MILE POINT UNIT 1 NUCLEAR POWER PLANT

4



REVIEW OF RADWASTE REDUCTION SYSTEM  
NINE MILE POINT UNIT 1  
DOCKET NO. 50-220  
EFFLUENT TREATMENT SYSTEMS BRANCH

1. Provide estimates of the expected volumetric generation rates ( $\text{Ft}^3/\text{yr}$ ) and specific activities ( $\text{Ci/g}$ ) by radionuclide, including transuranics, of the wastes (filter sludges, deep bed and powdered demineralizer resins, concentrated waste, and contaminated filters, paper, wood, etc.) input to the Radwaste Reduction System. To the maximum extent practicable, you should base your estimates on the previous operating experience of the plant.
2. Describe any deviations or variations of the design of the Radwaste Reduction System to be installed at Nine Mile Point, Unit No. 1, from the scope and design of the system described in the Newport News Topical Report, RWR-1<sup>TM</sup> Radwaste Volume Reduction System.
3. Provide an estimate of the annual volume and radionuclide distribution of the scrub liquid which is to be recycled to the liquid waste system. Describe the processing which the scrub liquid will undergo, including all alternative methods of handling, and provide justification that the liquid waste system has the capability of handling the waste volumes anticipated. Provide a flow schematic of all pathways for disposition of scrub liquid. Indicate the size of the day tank incorporated to feed the radwaste reduction system.

5

4. Provide an updated evaluation of the expected releases of radioactive materials in liquid effluents from the modified radioactive waste management system, including those indirect effluents due to the operation of the Radwaste Reduction System, and show how the proposed radioactive waste management system meets the requirements of Appendix I to 10 CFR Part 50.
  
5. Provide the bases for the maximum feed rates (Ci/year) and distribution of radionuclides input to the Radwaste Reduction System (see Table 1 of Attachment A to letter from D. Dise, NMPC, to T. Ippolito, NRC, September 1, 1978).
  
6. Describe in detail the manner in which calcined material/ash from the Radwaste Reduction System will be transferred to the proposed solidification and handling system, including the provisions for controlling "dusting" or the spread of airborne contamination.
  
7. Provide the type, number, and locations of the continuous air monitors which are intended to detect leakage from the Radwaste Reduction System. Describe the treatment, if any, provided for the ventilation in the building which houses the Radwaste Reduction System.
  
8. Describe in detail the stack monitoring system which will monitor off-gases from the Radwaste Reduction System.

6

9. Describe the means of controlling the input of materials (plastics, PVC, rubbers, etc.) which could generate corrosive or toxic materials if incinerated in the radwaste reduction system.
  
10. Provide an analysis indicating the radionuclide concentrations which could occur in both 1) the nearest potable water supply and 2) the nearest surface water in an unrestricted area as a result of leakage based on the single failure of the scrub liquor tank. Assume 1% of the operating fission product inventory is released to the primary coolant, the failed tank releases 80% of its design capacity, and all liquid from the failed component enters the ground water (i.e., do not assume liquids are retained by building foundations). Credit for radionuclide removal by the plant process systems, consistent with the decontamination factors in NUREG-0017 should be assumed. List all parameters and provide justification for the values assumed in your calculations, including liquid dispersion and transit time based on distance, the hydraulic gradient, permeability and effective porosity of the soil, and the assumed decontamination due to ion exchange by the soil.

7