October 17, 1985

Docket No. 50-220

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Niagara Mohawk Power Corporation
Attn: Mr. C. V. Mangan
Senior Vice President
c/o Miss Catherine R. Seibert
300 Erie Boulevard West
Syracuse, New York 13202

Dear Mr. Mangan:

SUBJECT: CERTIFICATION OF POLLUTION CONTROL FACILITIES

Re: Nine Mile Point Nuclear Station, Unit No. 1

By letter dated August 13, 1985, Mr. T. E. Lempges, Niagara Mohawk Power Corporation (NMPC), requested that our office issue a Certification of Pollution Control Facilities for Nine Mile Point, Unit 1 for certain facilities described in the enclosed exhibit.

The NRC staff has reviewed the request of August 13, 1985. Based on that review, we are satisfied that the portion of Nine Mile Point, Unit 1 for which NMPC requested NRC certification is in furtherance of the purpose of abating or controlling atmospheric pollutants or contaminants or water pollutants resulting from the generation of electricity at Nine Mile Point, Unit 1. Accordingly, the enclosed certificate has been executed.

Copies of NMPC's request and this response will be available for inspection at the Local Public Document Room (Penfield Library, State University College, Oswego, New York) and at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C. 20555. A copy of the certificate has also been forwarded, per Mr. Lempges' request, to the New York State Energy Research and Development Authority.

Sincerely,

Original signed by
Darrell G. Eisenhut

for Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

*Please see previous concurrence page.

DL:ORB#2	DL:ORB#2	DL:ORB#2	OELD	DL:AD-OR	DL:DIR
SNorris:ajs*	RHermann*	DVassallo*	BBordenick	GLainas*	HThompson*
09/09/85	09/09/85	09/23/85	09/25/85	10/07/85	10/09/85

NRR-B/DIR	NRR-D/DIR
DEisenhut	for HDenton
10/17/85	10/17/85

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Mr. C. V. Mangan
Niagara Mohawk Power Corporation

Nine Mile Point Nuclear Station,
Unit No. 1

cc:
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Niagara Mohawk Power Corporation
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Albany, New York 12223

CERTIFICATE

NINE MILE POINT, UNIT NO. 1

POLLUTION CONTROL FACILITIES

The Nuclear Regulatory Commission hereby certifies as follows:

(a) that it has examined exhibits, attached hereto, which describe certain facilities which have been constructed at Nine Mile Point, Unit No. 1, a nuclear electric power generating plant located on Lake Ontario in Scriba, New York owned by Niagara Mohawk Power Corporation; and

(b) that such facilities, as designed, are in furtherance of the purpose of abating or controlling atmospheric pollutants or contaminants or water pollutants resulting from the generation of electricity at the Nine Mile Point, Unit No. 1.

FOR THE NUCLEAR REGULATORY COMMISSION

for Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Date: 10-17-85

EXHIBIT A

OFF GAS SYSTEM (cont'd)

Mixing Heater Unit

The mixing heater is a direct contact type of heater. Additional steam is introduced to supplement the discharge steam from the steam jet ejectors to superheat the mixture slightly, to reduce hydrogen concentrations, and to have adequate flow to cool the recombiners.

Recombiner

The recombiner is a vertically mounted pressure vessel. The gas/air-steam mixture enters the recombiner at the top, flows through the catalyst where the recombination of the H_2 and O_2 content takes place and leaves the recombiner at the bottom. The H_2-O_2 recombination takes place automatically. An electric heater is provided, however, to assure prompt ignition.

Condenser

The condenser is a horizontally mounted U-tube heat exchanger. The nozzles for the cooling water are welded into the water chamber which is located at one end of the condenser. The water chamber and the tube bundle can be separated from the condenser for cleaning purposes. The shell side of the condenser is equipped with a condensate trap.

After Cooler

The humidity of the gas stream is reduced in the after cooler. The gas stream in the after cooler consists of air, traces of activated gases and traces of fission gases. The after cooler is a horizontally mounted shell and tube heat exchanger. The gases flow in many passes around the tube bundle while the cooling water flows in passes through the tubes. A water separator is provided at the gas outlet to trap condensate droplets.

Chiller

The delay of the off-gas stream in the charcoal units functions best if the gas is kept as dry as technically feasible. There are three (3) chillers provided which alternate on an approximately eight (8) hour cycle. One is in operation while the other one is being deiced for one hour then idle for four (4) hours and then precooled for three (3) hours. Water droplets are mechanically removed at the chiller inlet and the remaining humidity is frozen out at -4°F.

The heat is removed by a closed cycle refrigeration system. Each chiller has its own refrigeration system. A third chiller and refrigeration system is on standby for any of the other two. The control of the chillers is automatic.

EXHIBIT A

OFF GAS SYSTEM (cont'd)

Pre Adsorber

The Preadsorber is a vertical container. The filter media is charcoal. There are two (2) installed, one operating and one standby. The gas enters the filter from the top, is carried in a center pipe to the bottom and flows in a distribution system through the filter media. The filter is located in a shielded room. The filter media fill and drain nozzles are extended through the shielded walls to the upper or lower floor, respectively.

Charcoal Units

The delay system consists of a number of tanks, filled with charcoal and connected in series. The tanks are vertically mounted and the gas flow is from bottom to top.

Absolute Filter (Mechanical Filter)

The absolute filters shall remove radioactive particles and other impurities from the off-gas system. The filter elements are removable and are contained in a vertically mounted vessel. The gas flows through the filter from bottom to top.

Water Ring Pumps

The off-gas system is operated at a vacuum to avoid leakage of radioactive gases into the areas where the components of the off gas system are located. Two water ring pumps are installed (one standby) to draw a vacuum on the system. The pumps are sufficiently over designed to cope with an increasing pressure drop of the system. The water is separated from the gas stream in a ring water storage tank and the gas is pumped to the stack.

General

The components of the off gas system are located in closed and ventilated rooms. Shielding is provided. Piping which carries the off gas stream has no flanged connections. Valves are bellow sealed.

Controls

Operations which influence the overall function of the off gas system are controlled from the control room. Minor process operations are done locally by remote manual control (e.g. extended spindles).

Activity monitors and alarms, pressure and temperature transmitters, flow- and H_2-writers and alarms assure the safe operation of the off gas system.