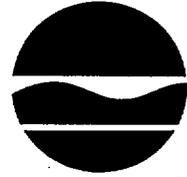


**New York State Department of Environmental Conservation  
Division of Environmental Permits, Region 8**

6274 East Avon-Lima Road, Avon, New York 14414-9519

Phone: (716) 226-2466 • FAX: (716) 226-2830

Website: www.dec.state.ny.us



Erin M. Crotty  
Commissioner

May 1, 2002

Mr. Paul Sawyko  
Environmental Quality Coordinator  
Rochester Gas and Electric Corporation  
89 East Ave.  
Rochester, N.Y. 14649-0001

Re: Operating License Renewal  
RG&E Ginna Nuclear Power Plant  
SPDES NY-0000493, Permit # 8-5454-00010/00003  
Ontario (T), Wayne (C)

Dear Mr. Sawyko:

I would like to thank you, Mr. Money, Mr. Wrobel and all involved RG&E staff for the informative presentation to DEC staff on March 14, 2002 and the site tour on April 22, 2002 provided to assist the Department in the review process for relicensing of the Ginna Nuclear Power Station. Your efforts will assist the Department in participating in this important process.

The Department appreciates the opportunity to provide input for your consideration in preparing the Environmental Report (ER) required for your application to the U.S. Nuclear Regulatory Commission (NRC). It is our understanding that RG&E plans to submit the application package, including the ER and technical reports, to the NRC on July 1, 2002.

The Department's comments on the RG&E Ginna License Renewal Environmental Review Process are enclosed. The comments are focused on the issues identified by the NRC as Category 2 issues requiring site specific environmental review to supplement the Generic Environmental Impact Statement (GEIS). These issues were identified in RG&E's handout entitled, "An Overview of the License Renewal Environmental Review Process for the Ginna Nuclear Power Plant; GEIS Issues to Be Included Within Ginna License Renewal Environmental Report". In addition, we have commented on the environmental aspects of the plant which are associated with the State Pollutant Discharge Elimination System (SPDES) Permit, Part 373 Hazardous Waste Facility Storage Permit, and/or state environmental regulations.

Please consider the following comments for inclusion in to the Environmental Report. It is our understanding that the Department will have the opportunity to comment on the Environmental Report and subsequent National Environmental Policy Act (NEPA) submittals and to participate in the public scoping process.

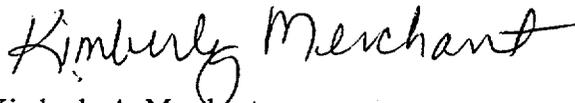
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Mr. Sawyko  
RG&E  
Page 2

Concurrently with commenting on the Environmental Report, the Department is evaluating the need for a 401 Water Quality Certification to be issued prior to the license renewal. Because the NRC may be renewing the federal operating permit for 30 years, New York State may have 401 jurisdiction to certify that this federal action will not violate the state's water quality standards. I have attached the 401 Water Quality Certification that was issued to RG&E in 1974 for the initial federal operating permit. Department staff are evaluating the applicability of the state's 401 Water Quality Certification procedures to the Ginna license renewal and will continue to discuss this issue with RG&E staff and the NRC.

Please contact me directly if you have any questions about the enclosed comments and I will direct you to the appropriate staff.

Sincerely,



Kimberly A. Merchant  
Environmental Analyst 1

Enclosure: NYSDEC Comments on RG&E Ginna Nuclear Power Plant License Renewal .  
Environmental Review Process  
401 Water Quality Certification Issued to RG&E in 1974

cc with *NYSDEC Comments on RG&E Ginna Nuclear Power Plant License Renewal Environmental Review Process* only:

W. Sarbello, Bureau of Habitat, NYSDEC, C.O.  
M. Calaban, Bureau of Habitat, NYSDEC, C.O.  
E. Radle, Bureau of Habitat, NYSDEC, C.O.  
W. Abraham, Fisheries, NYSDEC Region 8  
W. Pearsall, Fisheries, NYSDEC, Region 8  
L. Kuwik, Environmental Permits, NYSDEC, C.O.  
F. Ricotta, Division of Water, NYSDEC, C.O.  
P. Schmied, Division of Water, NYSDEC, C.O.  
J. Kelleher, Division of Water, NYSDEC, C.O.  
D. Persson, Division of Water, NYSDEC, C.O.  
P. D'Amato, Legal Division, NYSDEC Region 8  
W. Little, Legal Division, NYSDEC, C.O.  
J. Abunaw, Radiation Section, NYSDEC, C.O.  
D. Rollins, Division of Solid and Hazardous Materials, NYSDEC, R8  
G. Wrobel, RG&E  
D. Money, RG&E  
V. Barr, NYSDOS  
S. Ressler, NYSDOS  
U.S. Fish and Wildlife Service  
U.S. Environmental Protection Agency

Mr. Sawyko  
RG&E  
Page 3

cc with all enclosures:

Document Control Desk, U. S. Nuclear Regulatory Commission ←  
R. Schaff, U.S. Nuclear Regulatory Commission

# NYSDEC Comments on the RG&E Nuclear Power Plant License Renewal Environmental Review Process

## **Entrainment**

Staff have determined that the existing entrainment study (conducted in 1977) is out of date and should be updated as part of the application for NRC license extension of the Ginna facility. The initial study was conducted to meet the requirements of the 401 Water Quality Certification issued by the Department in 1974. The existing data is more than twenty years old and Lake Ontario conditions have changed considerably in this time period - including changes in populations of zebra and quagga mussels (*Dreissena sp*), alewives, gobies, smallmouth bass, climate, etc.. In addition, the 1977 study was for a very limited period of the year. More recent entrainment studies required by the Department have included studies over longer periods of time, some of which have demonstrated entrainment impacts at Lake Ontario cooling water intakes. Therefore, an updated study must be conducted in order for the Department to evaluate the impacts of the facility due to entrainment.

Excerpts from what are referred to as entrapment studies from the Somerset Generating Station are enclosed for your review. Entrapment at this facility refers to those organisms small enough to be impinged on the 1.0 mm mesh intake traveling screens, but which would pass through 3/8 inch square mesh screens. Based on the size of your intake screens, we would be interested in smaller fish, with lengths up to 2 inches, as likely subject to entrainment through your intake screens. Based on Table 3.3.4-1 of the Somerset report, the period from April through December appears to be of major importance and the period from January through March of minor importance from an entrainment perspective. Periods of major importance should be the focus of any entrainment sampling; periods of minor importance can be subject to less intensive sampling.

As part of the information to support your NEPA documentation for the license renewal, the Department requests you prepare a plan of study for an entrainment program at the Ginna Nuclear Station, and submit the plan for staff review and comment. We recommend that the Environmental Report include a brief summary on the 1977 entrainment study results and the proposal to conduct an updated study of in-plant entrainment. The requirement to conduct an updated entrainment study is supported by the 401 Water Quality Certification issued in 1974. In addition, the Department will consider modifying the SPDES permit to include a new condition to require an entrainment study.

## **Impingement**

The Department State Pollutant Discharge Elimination System (SPDES) permit requires annual impingement sampling and reporting (Additional Condition 4 of the SPDES Permit). We recommend that RG&E use the impingement reports to summarize the facility's potential impact to fish populations in Lake Ontario in the Environmental Report. The Department has determined that the population of gobies will be increasing in Lake Ontario over the next few years. Therefore, the Department requires that this

species be added as a target species to the impingement study. In addition, RG&E has requested that yellow perch be eliminated as a target species. However, the Department requires that yellow perch remain a target species in the impingement study due to increased numbers of this species in area bays off Lake Ontario.

Impingement mitigation is required in Additional Condition #5 of the SPDES permit. The facility has met these conditions. For example, RG&E meets Condition 5.a, which requires that the traveling screens be washed for approximately 15 minutes per hour on a daily basis. In addition, the facility has made improvements to the screen washwater/fish and debris sluice as required to improve protection of impinged fish.

Department staff attended a site visit on April 22, 2002 and inspected the traveling screens. The facility utilizes four traveling screens, each with 48 baskets. The original basket mesh material is galvanized wire. An evaluation of the four traveling screens by Ginna Station personnel revealed a need to upgrade their efficiency to better manage impinged algae. The amount of algae impinged from the lake has increased to the degree where the existing screens can no longer efficiently remove the algae before it either reaches the plant's circulating pumps (and travels through the plants circulating water system) or clogs the traveling screens.

Two of the four screens have been replaced within the last few years with new stainless steel mesh. Future plans schedule a yearly replacement for each of the remaining two traveling screens. The modifications made to the "A" and "D" traveling screens are as follows:

- The screen mesh is now made of stainless steel and has a "crimped fit" construction, resulting in a smoother texture. This texture will help to enhance fish survival, as the fish will experience fewer traumas.
- The configuration of each individual clear mesh opening has been changed from 3/8" x 3/8" clear opening to 3/16" x 1" clear opening, purchased from Screening Systems International. This change results in an overall reduction of the clear open area of 3% based, on the increase in the amount of wire used within the length of the traveling screens.
- The screens have been coated with an anti-fouling material called Wearlon Super F3 Hydro. This foul-release coating is the same coating previously used on the Ginna plant's intake structure's trash bars (previously submitted June 13, 2000 letter per Additional Requirement #2). Wearlon has been used by numerous organizations including Niagara Mohawk, the University of Buffalo and the city of Oswego Water Authority. The new screens are more protective of impinged fish.

The Department concurs that these two new screens are a significant improvement and agrees that RG&E's schedule to replace the two additional older screens with the newer screens over the next two year period is acceptable to meet Best Technology Available (BTA) standards.

#### **Heat Shock for Plants with Once-through Cooling**

David Persson, Division of Water Engineer, inspected the facility on March 20, 2002 and issued an Annual Inspection report to the facility on March 22, 2002. This report, which incorporated a review of the facility's Discharge Monitoring Reports, indicated that the facility is in compliance with the SPDES

permit. The permit limits include a maximum discharge temperature at the outfall of 102 degrees Fahrenheit, with a temperature difference of 28 degrees Fahrenheit. Additional requirement #6 of the SPDES Permit requires that the thermal discharge from the facility assure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in and on Lake Ontario. In this regard, the Department has approved the permittee's request for alternative effluent limitations pursuant to Section 316(a) of the Clean Water Act and 6 NYCRR Part 704 for the 5 year life of the permit (these limits have been rolled over at each permit renewal since 1974). The effluent limitation in the SPDES permit reflect this approval. The water temperature at the surface of Lake Ontario shall not be raised more than three Fahrenheit degrees over the temperature that existed before the addition of heat of artificial origin, with the exception of the mixing zone consisting of an area of 320 acres from the point of discharge, in which this temperature may be exceeded. The permit limits of maximum discharge temperature of 102 degrees Fahrenheit and temperature difference of 28 degrees Fahrenheit were established by a modeling study of the mixing zone.

Department staff have recommended that the Environmental Report include a brief discussion of the consequence of exposing impinged fish to the elevated temperatures in the discharge canal.

### **Threatened or Endangered Species**

In a letter dated February 25, 2002, the United States Department of the Interior Fish and Wildlife Service indicated that there are no federally listed or proposed endangered or threatened species under their jurisdiction known to exist in the project area. The Department researched New York State's Natural Heritage Database and determined that no threatened, endangered, rare, or protected species are known to exist in the project area.

No new construction is proposed as a part of this application. Therefore, undisturbed areas will not be impacted by the renewal of the facility license. Therefore, the Department does not recommend a field verification of the project site to confirm the results of the federal and state database searches.

### **Electromagnetic fields (Acute Effects) - No comments**

### **Public Services - No comments**

### **Off-site Land use - No comments**

### **Public services - No comments**

### **Historic and archeological resources -**

No new construction is proposed as a part of this application. Therefore, additional historic or archeological resources will not be impacted by the renewal of the facility license. No literature or field

studies are recommended.

### Severe Accidents -

**Department staff requested information which may be relevant to this Category. The Department does not have jurisdiction over this aspect of the facility operations. However, the questions and answers are listed below because the information may be relevant to this category. We suggest these issues be addressed in the Environmental Report, as these types of questions may come up in the public scoping sessions.**

Question 1) "What are the current high range radiation, temperature and pressure levels in the containment buildings and the containment building vents at Ginna (e.g. tritiated water vapor)?"

1) The current high range radiation monitors, temperature and pressure levels in containment are off scale low. The high range monitor does not operate unless the dose rate is in excess of 1 rem/hr, (1000 millieme/hr). One of the current containment monitors indicates the dose to be 3.5 mrem, (millieme)/hr. Surveys by technicians who have been in containment at power indicate the average dose rate in containment to be less than 5 mrem/hr total for both neutron and gamma contributors.

Current temperatures in containment range from 70 F to 100 F, depending on location within the containment. This temperature is monitored to insure (*sic*) that conditions are safe for workers who enter the containment at power for inspections and minor maintenance. Current pressure in containment is 14.7 psia.

There is no ventilation of containment during operation. During shutdown, tritium will be released as a result of the venting of containment. This occurs during the refueling of the reactor. The total activity released during a shutdown is reported in the annual Radiological Effluent Release Report. In 2000, 42 Curies total of tritium were released as gaseous effluents by all sources from Ginna; approximately 14 of the total Curies were released from the containment during shutdown.

Additionally, 531 Curies of radionoble gases were released in 2000, most of this was released during the September 2000 shutdown. The majority of this was Xe-133. (Note: limit is 25,000).

Question 2) "What is the proportion of proton, alpha particulate radiation to X/Gamma-rays A) during a controlled release, B) expected during a radiological emergency"?

A) During controlled releases to the environment, (Note: There are no proton-emitting radioisotopes at Ginna), the alpha particulate radiation to X/Gamma-rays ratio, based on a Curie to Curie ratio can not be calculated for the year 2000. There was no measurable alpha released to the environment via airborne pathways or liquid pathways. (The sensitivity of measurement for the alpha values indicated that there were less then  $1.6E-7$  Curies released in 2000.) The total activity release to the environment from all sources is reported annually to the NRC in the Radioactive Effluent Release Report, as part of the technical requirements for the operation of the plant.

For shallow land burial, the ratio of alpha emitters to X/Gamma ray emitters is less than approximately 1:21,000, e.g. less than one curie of alphas is disposed via shallow land burial for more than 21,000 curies of beta/gamma emitters. In 2000, 327 Curies total were disposed of in shallow land burial, at the Barnwell, South Carolina facility, 0.016 Curies were alpha emitters.

B) During a radiological incident, there would be no planned releases to the environment. However, in the event of an inadvertent release either to the lake or the atmosphere, estimates of activities and the mixture of radioisotopes are based on Westinghouse documentation. This is based on the type of incident, as well as the severity. The majority of activity released to the environment during a radiological incident would be noble gases such as Xe-133 and Kr-85m. The radionoble gas to radio-iodine ratio would be greater than 10,000:1, based on Westinghouse data. Results from the TMI reactor accident in 1979 indicate that this ratio would be greater than radioisotopes, which would be located within the fuel, would not be carried with the steam releases based on transport mechanisms. Therefore it is not possible to calculate this ratio.

Question 3) "What is the current build up in the reactor vessel of Fe-55, Ni-59, Co-60 and Ni-63"

3) The reactor vessel is not sampled for activation products. However, the radioisotopes in question, Fe-55, Ni-59, Co-60, Ni-63 are routinely analyzed and are included as part of the annual New York State Low Level Radioactive Waste Report, required per the New York State Energy Research and Development Agency, (N.Y.S.E.R.D.A.), located in Albany, N.Y. In 2000, the activity disposed of was:

Ni-59 0.04 Curies  
Co-60 34.6 Curies  
Fe-55 36.3 Curies  
Ni-63 96.5 Curies

Question 4) "What are the quantities and status of the 36 elements and 200 isotopes stored as waste on site?"

4) The total quantity of radioisotopes disposed of at shallow land burial is provided to New York State via the report to the N.Y.S.E.R.D.A.. A copy of this report may be obtained by contacting Alyce Peterson of NYSERDA, or will be provided to you upon your request to R.G and E. Additionally, an up-to-date inventory of radioisotopes is maintained at Ginna for all radioactive waste stored on site. When material is shipped for disposal, this inventory is adjusted. All radioactive materials currently stored on site are in approved containers, maintained in controlled areas and inspected prior to shipment for disposal. At the time of this report, there are approximately 250 Curies of radioactive low level waste stored on site. This material will be shipped for shallow land burial by July, 2202.

Additionally, approximately 1,100 fuel assemblies are located in the spent fuel pool. These are maintained within a security area, under more than 14 feet of water, within borated stainless steel racks.

The reactor vessel is subject to neutron irradiation from the core. This irradiation results in some embrittlement of the reactor vessel materials. There are three analyses that must be performed to determine that reactor vessel material properties remain acceptable...upper shelf energy; pressurized thermal shock; and RCS pressure-temperature operating limits for heat up and cooldown.

## **Upper Shelf Energy**

Acceptable reactor vessel toughness is determined by testing and analysis to meet the requirements of 10 CFR 50, App. G. This appendix requires that the reactor vessel beltline materials maintain an upper shelf energy (a measure of fracture toughness) greater than 50 ft-lb.

Appendix G provides an alternative analysis in the event the Upper Shelf Energy goes below 50 ft-lb. RG&E can perform an "Equivalent Margin Analysis" demonstrating acceptable fracture toughness at the calculated fluence level. RG&E plans to have this analysis completed as a contingency before the end of the current license period.

## **Pressurized Thermal Shock (PTS)**

The PTS Rule is defined in 10 CFR 50.61. The concern is that a sudden transient could cool down the reactor vessel, while maintaining the pressure high. 10 CFR 50.61 has established a screening criteria of 300 F (called the adjusted reference temperature) for the vessel beltline materials (i.e., there is no embrittlement danger as long as the reactor vessel temperature is maintained above 300 F during high pressure transient conditions - note that normal average temperature for the RCS is about 560 F). As long as the adjusted reference temperature is maintained below 300 F for the fluence projected at the end of the period of extended operations, the reactor vessel embrittlement is acceptable.

RG&E has calculated this adjusted reference temperature to 60 years, and it remains well below 300 F.

## **Pressure-Temperature Limits for Heat up and Cooldown**

When the plant heats up and cools down during startups and shutdowns, stresses are exerted at the reactor vessel. Because the vessel is six-inch thick carbon steel, the stresses on the inside and outside surfaces are opposite during these evolutions (compressive vs. tensile). Plant operators must control the rate of heat up and cooldown, accounting for the fluence in the vessel walls, to ensure that excessive stress is not imposed. These heat up and cooldown curves are closely controlled by the plant Technical Specifications. Currently these curves have been drawn out to 2019. Prior to 2009, these curves will be extended to 2029.

## **Environmental Justice:**

Environmental Justice has been identified by NRC as being required for the Environmental Review Process for the License Renewal. Therefore, an environmental assessment will be prepared which will identify and address disproportionately high adverse human health or environmental effects on minority and low-income populations as required by Title V of the Civil Rights Act of 1964, the National Environmental Policy Act (NEPA) and related laws. The Department is currently in the process of developing a draft Environmental Justice Policy which will not be formally implemented prior to the preparation of the Environmental Report. We will review the Environmental Justice section of the Environmental Report and comment if necessary at that time.

## **Issues Not Identified as Category 2:**

### **A) 6 NYCRR Part 373 Hazardous Waste Facility Permit**

Because RG&E Ginna managed mixed low level radioactive/hazardous waste prior to the promulgation of the current regulation, the company was eligible for Interim Status pursuant to 6 NYCRR Part 373-3. This allows the continued storage of this waste beyond hazardous waste generator time limits. RG&E does not currently have any mixed low level radioactive/hazardous waste at the facility; however, they wish to retain the 373 permit for potential future needs. During the Interim Status period, a complete permit application is typically required to be submitted by a facility in order to obtain Final Status pursuant to Part 373-2. USEPA has recently changed the permit requirements for mixed low level radioactive/hazardous waste. This type of storage is now exempt from a federal Resource Conservation and Recovery Act (RCRA) permit as long as the facility complies with NRC rules see 40 CFR Part 266). New York State is a delegated state under RCRA, but has not yet adopted this exemption. Staff have been advised that New York is evaluating the acceptance of the exemption. Due to the potential exemption from 373 jurisdiction, the Department will not require RG&E to submit a complete permit application. However, RG&E will need to continue to pay regulatory fees in order to retain Interim Status. Fees will be eliminated if the permit exemption is adopted by DEC. Department staff will continue to inspect the facility on an approximately annual basis in the interim.

### **B) State Pollutant Discharge Elimination System (SPDES) Permit Compliance**

David Persson, Division of Water Engineer, inspected the facility on March 20, 2002 and issued an Annual Inspection report to the facility on March 22, 2002. This report, which incorporated a review of the facility's Discharge Monitoring Reports indicated that the facility is in compliance with the SPDES permit (enclosed).

The Department is currently processing an applicant-initiated modification to incorporate the Reverse Osmosis (RO) Water Treatment System and to add ethanolamine (ETA) to the secondary system associated with the discharges. This system was previously approved by a Department letter; however, Division of Water are formally modifying the permit to add the RO system and ETA.

### **C) Shoreline Protection**

Department staff request that RG&E provide an evaluation of the on-site and neighboring properties, with respect to coastal erosion, to the Environmental Report or in the NEPA review documentation.

**Enclosures: SPDES Permit  
Somerset Entrapment Report**

6

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
State Pollutant Discharge Elimination System (SPDES)

**DISCHARGE PERMIT**  
Special Conditions (Part I)

Industrial Code: 4911  
 Discharge Class (CL): 03  
 Toxic Class (TX): T  
 Major Drainage Basin: 03  
 Sub Drainage Basin: 02  
 Water Index Number: Ontario  
 Compact Area: \_\_\_\_\_

SPDES Number: NY-0000493  
 DEC Number: 8-5434-00010/00003-0  
 Effective Date (EDP): 02/01/98  
 Expiration Date (ExDP): 02/01/03  
 Modification Date(s): \_\_\_\_\_  
 Attachment(s): General Conditions (Part II) Date: 11/90

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act as amended, (33 U.S.C. Section 1251 et. seq.)(hereafter referred to as "the Act").

**PERMITTEE NAME AND ADDRESS**

Attention: Manager Environmental Health & Safety

Name: Rochester Gas & Electric Corporation  
 Street: 89 East Avenue  
 City: Rochester State: NY Zip Code: 14649

is authorized to discharge from the facility described below:

**FACILITY NAME AND ADDRESS**

Name: Ginna Nuclear Power Plant - Station 13  
 Location (C,T,V): Ontario (T) County: Wayne  
 Facility Address: 1503 Lake Road  
 City: Ontario State: NY Zip Code: 14519

NYTM - E: \_\_\_\_\_ NYTM - N: 4  
 From Outfall No.: 001 at Latitude: 43° 16' 44" & Longitude: 77° 18' 34"  
 into receiving waters known as: Lake Ontario Class: A Special

and; (list other Outfalls, Receiving Waters & Water Classifications)

<u>001A to 001D</u>	<u>Lake Ontario</u>	<u>Class A - Special</u>
<u>002, 003</u>	<u>Lake Ontario</u>	<u>Class A - Special</u>
<u>004, 005, 006</u>	<u>Mill Creek</u>	<u>Class D - C</u>

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in Special Conditions (Part I) and General Conditions (Part II) of this permit.

**DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS**

Mailing Name: Ginna Nuclear Power Plant - Station 13  
 Street: 89 East Avenue  
 City: Rochester State: NY Zip Code: 14649  
 Responsible Official or Agent: Jeffrey L. Williams Phone: (716) 724-8129

This permit and the authorization to discharge shall expire on midnight of the expiration date shown and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for a permit renewal no less than 180 days prior to the expiration date shown above.

**DISTRIBUTION:**

Permit Administrator:	<u>Robert K. Scott</u>
Address:	<u>6274 EAST AVON - LIMA ROAD</u> <u>AVON, NEW YORK 14414</u>
Signature:	<u>Robert K. Scott</u> Date: <u>1/9/98</u>

## FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 1, 1998  
and lasting until February 1, 2003  
the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type
<u>001 Circulating Cooling Water</u>					
Flow	Monitor	490	MGD	Continuous	Pump Logs
Discharge Temperature	Monitor	102	°F	Continuous	Recorder
*Intake-Discharge Temperature	Difference	28	°F	Continuous	Recorder
Total Residual Chlorine	Monitor	0.2	mg/l	Continuous during period <sup>a</sup> of chlorination	
pH (Range)	6.0 - 9.0		SU	Weekly	Grab
<u>001-A House Service Boiler Blowdown</u>					
Flow	Monitor	Monitor	GPD	Annual	Estimate
Oil & Grease	Monitor	15	mg/l	Annual	Grab
Suspended Solids	30	100	mg/l	Annual	Grab
pH (Range)	6.0 - 9.0		SU	Annual	Grab <sup>b</sup>
Iron	NA	4.0	mg/l	Annual	Grab
Copper	NA	1.0	mg/l	Annual	Grab
<u>001-B High Conductivity Waste Tank Discharge (Includes Steam Generator Blowdown)</u>					
Flow	NA	Monitor	GPD	Quarterly	Instantaneous
Oil & Grease	Monitor	15	mg/l	2/year	Grab
Suspended Solids	NA	50	mg/l	Quarterly	Grab
Chromium, Total	NA	1.5	mg/l	Monthly	Grab
Copper	NA	1.0	mg/l	Monthly	Grab
Zinc	NA	0.3	mg/l	Monthly	Grab
Boron	NA	20	mg/l	Monthly	Grab
Iron	NA	4.0	mg/l	Monthly	Grab
Arsenic	NA	0.15	mg/l	Monthly	Grab

\* One second temperature readings of untempered intake and discharge water will be used to compute the hourly average temperature difference. Twenty four hourly average temperatures would be used to compute the daily average temperature difference. The highest hourly temperature difference recorded during the day would be the maximum reported.

**FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning February 1, 1998  
 and lasting until February 1, 2003  
 the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type
<u>001-C Radiation Waste Holdup and Treatment System (Includes Condensate Tank, A&amp;B Monitor Tanks, Laundry Tanks)</u>					
Flow	NA	Monitor	GPD	Quarterly	Grab
Oil & Grease	NA	15	mg/l	Quarterly	Grab
Suspended Solids	30	100	mg/l	Quarterly	Grab
pH (Range)	6.0 - 9.0		SU	Quarterly	Grab <sup>b</sup>
Boron	40	NA	lbs/day	Quarterly	Grab

001-D Screenwash Return Water

(No monitoring required)

NOTES:

- a. Chlorine may be discharged up to 120 minutes per day.
- b. The pH limit may be exceeded when conductivity is less than 10 micro mhos per cm<sup>2</sup>. Conductivity monitoring is only required when the pH limit is exceeded.

## FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 1, 1998and lasting until February 1, 2003

the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type
<u>002 - Storm Water Runoff &amp; Low Volume Wastes</u>					
(No monitoring required)					
<u>002-A Retention Tank (Includes Demineralizer Regeneration Wastes and Floor Drains)</u>					
Flow	Monitor	Monitor	GPD	Monthly	Instantaneous
Oil & Grease	Monitor	15	mg/l	Monthly	Grab
Suspended Solids	30	100	mg/l	Monthly	Grab
pH*	6.0 - 9.0 (Range)		SU	Continuous	Recorder
Copper	NA	1.0	mg/l	Monthly	Grab
Iron	NA	4.0	mg/l	Monthly	Grab

003 - Storm Water Runoff

(No monitoring required)

004 - Storm Water Runoff

(No monitoring required)

005 - Storm Water Runoff

(No monitoring required)

006 - Redundant House Service Water Testing

Flow	Monitor	Monitor	Each Discharge	Estimate
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\*Where pH is continuously recorded, the permittee is allowed excursions from the designated, allowable pH range, subject to the following conditions:

- (1) The total time during which the pH values of each discharge are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
- (2) No individual excursion shall exceed 60 minutes in duration.
- (3) No excursion shall cause or contribute to a contravention of water quality standards.

## EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 1, 1998  
and lasting until February 1, 2003

the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type
<u>Outfall 001</u>					
Chlorine, Total Residual	N/A	0.1	mg/l	Daily*	Grab

\* Samples shall be collected and analyzed daily for Total Residual Chlorine during periods of chlorine addition for Zebra Mussel control.

Special Conditions

The chlorine program for zebra mussel control, approved by letter dated June 24, 1993 to J. Williams of RG&E, is allowed with the following conditions concerning circulating cooling water:

- Each individual chlorine zebra mussel control shall be limited to a maximum of 30 days of continuous treatment.
- Chlorine treatments for zebra mussel control shall be limited to a maximum of four treatments annually. Treatment shall be separated by at least 30 days.
- Records of chlorine dosage concentration, effluent flow and effluent concentration of total residual chlorine during addition and discharge must be maintained. The flow shall be measured at the frequency specified for flow elsewhere in this permit or at the frequency of the parameter specified above, whichever is more frequent.
- The Regional Water Engineer shall be notified not less than 48 hours prior to initiation of zebra mussel control program.
- The reports describing the results of the effectiveness of the zebra mussel control program and effluent analysis for total residual chlorine shall be submitted to the Regional Water Engineer, NYSDEC, by March 1st of the year following such treatments.
- This permit modification is issued based on the best environmental and aquatic toxicity information available at this time. This authorization is subject to modification or revocation any time new information becomes available which justifies such modification or revocation.

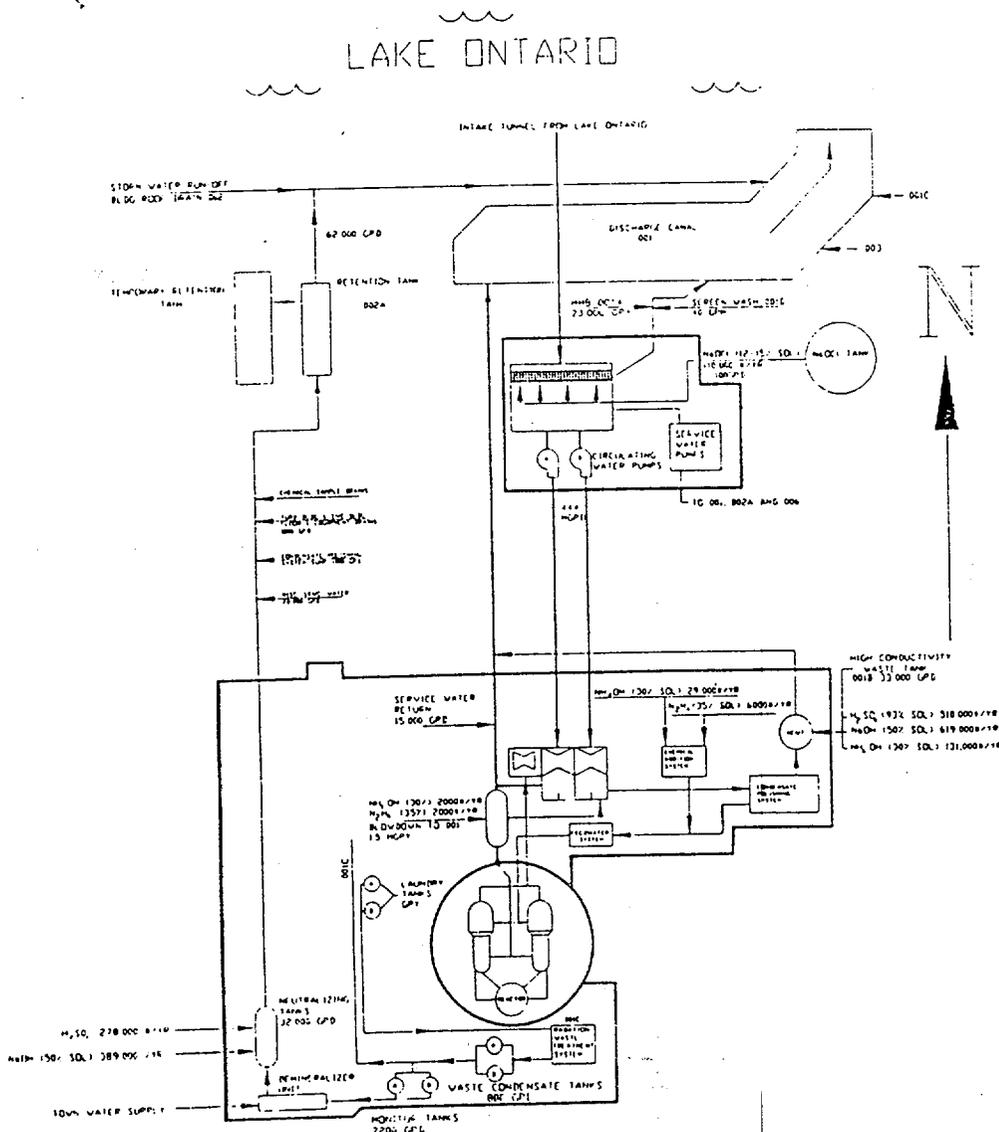
**DEFINITIONS OF DAILY AVERAGE AND DAILY MAXIMUM**

The daily average discharge is the total discharge by weight or in other appropriate units as specified herein, during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges in appropriate units as specified herein divided by the number of days during the calendar month when measurements were made.

The daily maximum discharge means the total discharge by weight or in other appropriate units as specified herein, during any calendar day.

**MONITORING LOCATIONS**

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) indicated below: (Show sampling locations and outfalls with sketch or flow diagram as appropriate) (see page 7 of 13)





## Additional Requirements

1. The Department has tentatively approved the permittee's request pursuant to Section 316(b) of the Clean Water Act for the 5-year life of this permit. A Biological monitoring program to evaluate future compliance with this section is outlined in Additional Requirement #4.
2. The permittee shall submit written notification, which shall include detailed descriptions and appropriate figures, to the DEC Chief, Bureau of Environmental Protection, Regional Fisheries Manager and Regional Engineer at least 60 days in advance of any change which results in the alteration of the location, design, construction, operations or capacity of the cooling water intake structure. The permittee shall submit, with its written notification a demonstration that the change reflects the best technology currently available for minimizing adverse environmental impact. Prior DEC approval is required before initiating such change. A permit modification may be required.
3. Each impingement report submitted during this permit period shall include figures and a complete description of the cooling water intake system including trash racks; traveling screen type, size, mesh, and standard operating procedures; screen washwater discharge sluice configuration and disposition of screen washings, and the nature and estimated quantities of debris collected at this facility.
4. Impingement Monitoring Program.
  - a. An annual impingement monitoring program is required in order to document the impact of this facility on the aquatic environment of Lake Ontario. The methodologies described in Ginna Nuclear Power Station Impingement Plan of Study, RG&E Report No. B-13-293 (July 1985) are required with the following modification:
    - i. The wire mesh collection basket that fits into the screenwash sluiceway shall be constructed of mesh that is approximately 1/2 of the bar mesh of the traveling screens in order to minimize loss of organisms washed off the traveling screens.

ii. By October 1, 1997 the permittee shall submit to the offices noted in Additional Requirement 2, for review and approval, a plan to conduct a special study to quantify the loss of impinged organisms through the standard impingement collection device. The study shall be implemented within 2 months of approval of the study plan.

b. At the permittee's option a modified impingement abundance program may be submitted for DEC review and approval. The goal of the modified program would be to reduce the cost of impingement monitoring while continuing to provide adequate information for the department's determination to 6NYCRR 704 and the Clean Water Act Section 316. The impingement program identified in 4.a above shall continue in effect until an alternative is approved by the DEC.

#### 5. Impingement Mitigation

- a. During any time when a circulating pump is operational each traveling screen shall be washed for approximately fifteen (15) minutes each hour, excepting when a screen is inoperable due to required maintenance.
- b. By January 1, 1998 the permittee shall submit a plan for review and approval to those individuals indicated in Additional Requirement 2, that provides for the resurfacing of the screen washwater/fish and debris sluice in order to minimize any additional trauma imposed on viable fish washed from the intake traveling screens and being returned to Lake Ontario. By July 1, 1998. the permittee shall report to the offices noted in Additional Requirement 2, either compliance with the plan approved by DEC, or provide an estimate of the additional time and efforts needed to achieve compliance.
- c. No sampling gear other impediments to the return of impinged fish to Lake Ontario shall be placed into the washwater sluice excepting those necessary to conduct studies approved by the DEC.

- d. By January 1, 1998, the permittee shall provide the offices noted in 2 above a plan for minimizing water use at this facility. The plan must consider options such as increased recirculation of cooling water and/or operation on one circulating water pump (CWP) during winter months, installation of variable speed CWP's complete cessation of CWP operation during outages lasting more than a few days, and other possible means of reducing the use of cooling water. It is understood that special studies may be needed to establish suitable operational parameters under reduced flow conditions. Once completed, those elements of this plan acceptable to both the permittee and the DEC shall become condition of this permit.
6. The thermal discharge from this facility shall assure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in and on Lake Ontario. In this regard, the Department has approved the permittee's request for alternative effluent limitations pursuant to Section 316(a) of the Clean Water Act for the 5 year life of the permit. The effluent limitations in this permit reflect this approval. The water temperature at the surface of Lake Ontario shall not be raised more than three Fahrenheit degrees over the temperature that existed before the addition of heat of artificial origin except that in a mixing zone consisting of an area of 320 acres from the point of discharge, this temperature may be exceeded.
7. Reporting
- a. A copy of all reports pertaining to environmental impacts on water resulting from this facility, which the applicant submits to any federal, state or local agency, shall also be submitted to the Department of Environmental Conservation offices in Avon and Albany. The permittee shall also notify the Department within one week from the time of submission to the Nuclear Regulatory Commission of any requested change in the environmental technical specifications which could effect the requirements of this permit.
- b. Copies of all reports regarding water and biological parameters related to intake and discharge considerations, whether generated for this permit or otherwise, shall be sent to the offices in Section 2 above.

- c. Report(s) submitted in fulfillment of permit conditions shall clearly identify on the title page the permit number and the specific section(s) by character and number that the report(s) fulfill. Each section of the text of such report shall identify the section(s) of the permit that it fulfills.
- d. The annual impingement monitoring report shall be submitted by July 1 of the following year. The analyses, content and appendices shall follow that provided in previous impingement abundance reports as in RG&E Report No. B-13-357- Rochester Gas and Electric Corporation Fish Impingement Program Analysis Report.
8. Biological specimens may be required to be submitted to NYSDEC upon request if notice by the Department is given prior to collection.
9. There shall be no discharge of auxiliary boiler chemical cleaning~~ing~~ wastes and other metal cleaning wastewaters other than those using boric acid.
10. In regards to general condition #11.5 items c and d shall be reported annually to NYSDEC offices in Avon.
11. The permittee shall submit on a quarterly basis a report to the Department's offices in Albany and Avon by the 28th of the month next following the end of the period:
- Daily minimum, average, and maximum station electrical output shall be determined and logged.
  - Daily minimum, average, and maximum water use shall be directly or indirectly measured or calculated and logged.
  - Daily minimum, average, and maximum intake and discharge temperatures shall be logged.
  - Measurement in a,b, and c shall be taken on an hourly basis.
12. There shall be no discharge of PCB's from this facility.
13. Radioactivity: Concentrations of radioactivity in effluent are subject to the requirements of the U.S. Nuclear Regulatory Commission license conditions.

**SCHEDULE OF COMPLIANCE**

a) The permittee shall comply with the following schedule.

Action Code	Outfall Number(s)	Compliance Action	Due Date
50008	001D	Special study to quantify the loss of impinged organisms through standard impingement collection device.	10/1/97
34599	001D	Annual impingement monitoring report on the program required in Additional Requirement #4 of this permit.	July 1 of the following year from data collection
01299	001D	Submit plan for resurfacing of screen washwater/fish debris sluice (as required A.R. #5b)	1/1/98
59499	001D	Construction schedule to achieve compliance with Item above (A.R. #5b)	7/1/98
01299	001	Water use minimization plan (A.R. #5d)	1/1/98
030MS	002, 003, 004, 005	Stormwater pollution prevention plan	9/98

b) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice under terms of the General Conditions (Part II), Section 5. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance;
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
3. A description or any factors which tend to explain or mitigate the non-compliance; and
4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

c) The permittee shall submit copies of any document required by the above schedule of compliance to NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS, unless otherwise specified in this permit or in writing by the Department.

**RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS**

- a) The permittee shall also refer to the General Conditions (Part II) of this permit for additional information concerning monitoring and reporting requirements and conditions.
- b) The monitoring information required by this permit shall be summarized, signed and retained for a period of three years from the date of the sampling for subsequent inspection by the Department or its designated agent. Also;
- [X] (if box is checked) monitoring information required by this permit shall be summarized and reported by submitting completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

Send the **original** (top sheet) of each DMR page to:

Department of Environmental Conservation  
 Division of Water  
 Bureau of Watershed Compliance Programs  
 50 Wolf Road  
 Albany, New York 12233-3506  
 Phone: (518) 457-3790

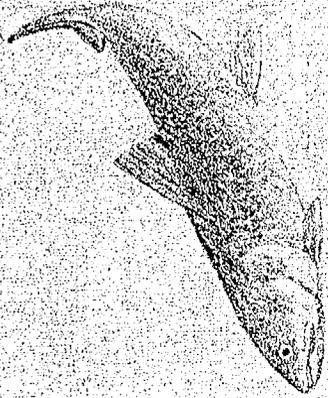
Send the **first copy** (second sheet) of each DMR page to:

Department of Environmental Conservation  
 Regional Water Engineer  
 Region 8  
 6274 East Avon-Lima Road  
 Avon, New York 14414

- c) A monthly "Wastewater Facility Operation Report..." (form 92-15-7) shall be submitted (if box is checked) to the [ ] Regional Water Engineer and/or [ ] County Health Department or Environmental Control Agency listed above.
- d) **Noncompliance** with the provisions of this permit shall be reported to the Department as prescribed in the attached General Conditions (Part II).
- e) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- f) If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording on the Discharge Monitoring Reports.
- g) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- h) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- i) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section five hundred two of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be sent to the Environmental Laboratory Accreditation Program, New York State Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockefeller State Plaza, Albany, New York 12201.

# Aquatic Monitoring Program

1986 ANNUAL REPORT



**NYSSEG**

Table 3.3.4-1. Estimated total monthly entrapment of fish species, by life stages, at Somerset Station, 1986.

Species	Life Stage	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
								11305	661					11966
Alewife	egg							688	9166	7778	8051	58		25741
Alewife	larva								97		1913			2010
Alewife	juvenile					534								534
Burbot	egg								5200		132			5332
Emerald shiner	larva							216	1496	502	6217	413	6822	15895
Emerald shiner	juvenile	229									728	58	710	1553
Emerald shiner	adult	57									65			65
Gizzard shad	juvenile										66			123
Lake chub	juvenile	57							91	127	131	176	55	580
Mottled sculpin	juvenile				894	108				338	394	354	366	2654
Mottled sculpin	adult	57	134				8186							31789
Rainbow smelt	egg				10109	13494		231	616	3444	297	1985	57	6630
Rainbow smelt	larva					536				869	3648	473201	99907	409542
Rainbow smelt	juvenile	3911	133								127	1122		991774
Rainbow smelt	adult	57												512
Rock bass	juvenile													171
Slimy sculpin	juvenile										61			61
Spottail shiner	juvenile									127	3776	354	3624	8128
Spottail shiner	adult	57		190							862	59	118	1096
Spottail shiner	adult	57							119	2431	1523	295	622	7161
Tessellated darter	juvenile	57			510	1604					392	118		1533
Tessellated darter	adult	57				748			91	127				117
Three spine stickleback	adult												338	338
White perch	juvenile													
Darters	larva						109	96						205
Salmon/trout	eggs	286		208								7464	5427	13385
Sculpins	larva						510				262			510
Unidentified	larva													262
Unidentified	juvenile								96					96
Total		4882	267	398	11513	17024	9036	12921	21350	15502	500881	109256	428481	131491

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were emptied onto a glass slide, covered with a second glass slide and secured with masking tape. The slide was then labelled with sample number, replicate, and fish identification number. Ages were determined from scales with the aid of a microfiche projector with a magnification of 32X. Whole alewife otoliths (without sectioning) were read under a dissecting scope on a glass slide after removal from their bottles of alcohol, using a magnification of 25X. In denoting age, a birthdate was given to fish collected after January 1 which did not yet form an annulus for the growth season.

#### 3.2.1.4 Fine Mesh Entrapment

The objective of fine mesh entrapment monitoring was to quantify the fish and fish eggs that can pass through a 9.5-mm mesh screen, yet were impinged (entrapped) on the existing 1.0-mm mesh travelling screens. Sampling days coincided with scheduled days for impingement collections whenever possible. Effective on 1 February 1986, the sampling schedule was modified from that of October 1984-January 1986, when there were three sampling days per week and one 10-min sample was taken in each of six 4-hr time blocks daily (NYSEG 1986a). The 1986 sampling schedule followed a stratified design using months as strata, and two to 13 sampling days per month. There were a total of 69 sampling days during February-December 1986 under this design (Table 3.2.1.4-1), as well as 14 days during January under the previous design, for a total of 83 sampling days during 1986. Following the modified design, one sample was obtained during each of four 2-hr collection periods within a designated 8-hr collection interval. The 8-hr interval coincided with the timing of impingement sampling (Section 3.2.1.1). Sampling duration lasted 15 min.

*Giulia Sta. Schuyler*  
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HENRY L. DIAMOND  
COMMISSIONER

STATE OF NEW YORK  
DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION  
ALBANY

April 26, 1974

Dear Mr. Koprowski:

We have reviewed your application of November 2, 1973, pursuant to Section 401 of the Federal Water Pollution Control Act Amendments of 1972 (the "Act"). In your application, Rochester Gas and Electric Corporation (RGEC) requested certification pursuant to Section 401 of the Act for its R. E. Ginna Nuclear Power Plant Unit No. 1. This certificate is required before the Atomic Energy Commission can convert the present provisional operating license for Unit 1 to a full-term operating license. The R. E. Ginna Nuclear Power Plant Unit No. 1 is located on the shore of Lake Ontario in the Town of Ontario, Wayne County, New York.

Based upon the foregoing, and that public notice was duly given pursuant to Part 602.16 of the Official Compilation of Codes, Rules and Regulations of the State of New York, the Department of Environmental Conservation, (the "Department") hereby certifies that the applicant will comply with all applicable provisions of sections 301, 302, 306, and 307 of the Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, provided that:

(1) There are no future changes in any of the following that would result in non-compliance with sections 301, 302, 306, and 307 of Public Law 92-500:

- (A) The proposed construction and operation of the facility,
- (b) The characteristics of the waters into which discharges are made,
- (c) The water quality criteria applicable to such waters, or
- (D) Applicable effluent limitations or other requirements;

(2) The applicable provisions of State law and regulation are complied with;

and

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(3) Pursuant to Section 401(d) of the Act, the following effluent limitations and other limitations, and monitoring requirements, which shall become conditions on any federal license or permit for the heretofore described proposed activity of RGEC, are complied with:

1. The present design and operation of the Ginna Unit #1 intake system has resulted in large fish kills. Therefore, the present design and/or operation of this system is unacceptable. RGEC must alter the present Unit #1 intake system and/or operation in a manner which must have the approval of the Department of Environmental Conservation. By July 1, 1975, RGEC must submit to the Department for approval, proposed intake system modifications and/or modes of operation which will significantly reduce or eliminate entrapment and/or fish mortality resulting from the present system as operated. A schedule for implementation of the proposed modifications and/or modes of operation must also be submitted by RGEC to the Department by July 1, 1975. By January 1, 1976, the Department will approve the intake system design and implementation schedule submitted by RGEC and/or impose its own conditions for operation and implementation schedule. RGEC will subsequently implement this approved intake system or operating conditions at its own expense, and in a manner to assure compliance to the approved implementation schedule.

If, anytime before July 1, 1975, RGEC believes it has accumulated information which can clearly demonstrate that the operation of the Ginna facility with the present intake system will not result in an unacceptable damage to aquatic biota, RGEC may submit such information to the Department of Environmental Conservation for its review. The Department of Environmental Conservation will take appropriate action to ascertain the extent of intake system modifications following a review of this information.

2. Within three (3) months of this date, the RGEC shall file for approval with the Department at its offices in Aven, N. Y., and in Albany, N. Y., a report on all water treatment, corrosion inhibitor, anti-fouling, slimeicide, bio-cide and boiler cleaning chemicals or compounds. Such report shall identify each product by chemical formula and/or composition, annual consumption, frequency of use, maximum use per incident, effluent concentration, bioassay and toxicity limits and procedures for use. Approval shall only be granted for those circumstances and use which do not contravene New York State Water Quality Standards. No substitutions will be

allowed without prior approval. Wastewaters containing chemicals and cooling water in facilities which shall be approved by the Department. Within two (2) months of this date, the RWC shall file for approval with the Department at its offices in Avon, N.Y., and in Albany, N.Y., a report on chlorine use and chlorination practice. Approval shall only be granted for practices which minimize the impact of chlorine on water resources and shall provide, as possible, there shall not be simultaneous chlorination of separable portions in a single unit or of more than one (1) unit in a multi-unit complex. A maximum effluent concentration of 0.5 mg/l residual chlorine is imposed upon any discharge.

4. Within three (3) months of this date, the RWC shall file for approval with the Department at its offices in Avon, N.Y., and in Albany, N.Y., a report containing a tabulation of all fish impingement data collected to date. Previously submitted reports need not be duplicated, but data location must be completely identified. Reported data shall specify cooling water flow, dates, times, available operating and meteorological conditions, and species, numbers and other available biological information.

5. Within five (5) months of this date, the RWC shall file for approval with the Department at its offices in Avon, N.Y., and in Albany, N.Y., a report containing a tabulation of all entrainment data collected to date. Previously submitted reports need not be duplicated, but data location must be completely identified. Reported data shall specify cooling water flow, dates, times, available operating and meteorological conditions, and species, numbers and other available biological information.

6. Within four (4) months of this date, the RWC shall file for approval with the Department at its offices in Avon, N.Y., and in Albany, N.Y., a detailed biological monitoring program designed to determine effects of facility operation on aquatic organisms. As a result of such monitoring program, as determined necessary by the Department, the RWC shall implement appropriate methods and procedures to reduce to the fullest extent possible the effects of facility operation on aquatic organisms. Segments of such monitoring program shall be implemented as approved by the Department. A summary progress report shall be submitted every two (2) months following implementation of the first segment and every two (2) months thereafter. An annual report shall be submitted by February 15 of each year. Additional reporting requirements may be imposed for certain segments of the program as necessary.

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7. Starting two (2) months from this date, the RGEC shall submit to the Department at its offices in Avon, N.Y., and in Albany, N.Y., a monthly report of daily operating data by the 15th of the month following:

- a. Daily minimum, maximum, and average station electrical output shall be determined and logged.
- b. Daily minimum, maximum and average water use shall be directly or indirectly measured or calculated and logged.
- c. Temperature of the intake and discharge shall be measured and recorded continuously. Daily minimum, maximum, and average intake and discharge temperatures shall be logged.

8. Within two (2) months of this date, the RGEC shall file for approval with the Department at its offices in Avon, N.Y., and in Albany, N.Y., a report for monthly tri-axial isothermal measurements, in the waters receiving the discharge. The program will be implemented within four (4) months of this date, and provide for temperature measurements in increments of 1°F down to a level of 1°F temperature excess above addition of heat of artificial origin. Such report shall be due the 20th of the month following that in which the survey was conducted.

9. The RGEC shall file with the Department at its offices in Avon, N.Y., and in Albany, N.Y., concurrent with filing with the U.S. Environmental Protection Agency, copies of any applications, reports and supporting data filed pursuant to Sections 316(a) and 316(b) of the Federal Water Pollution Control Act Amendments of 1972.

10. Should any limitation or condition of this certification or any permit issued require construction in or on waters of the state or the banks or bed thereof, such construction and associated excavation, fill or disturbance shall require prior approval of the Department under stream protection regulations.

11. Oil and floating substances

No residue attributable to sewage, industrial wastes or other wastes nor visible oil film nor globules of grease.

12. Taste and odor-producing substances, toxic wastes and deleterious substances

None in amounts that will be injurious to fishlife or which in any manner shall adversely affect the flavor, color or odor thereof,

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or impair the waters for any best usage as determined for the specific waters which are assigned to each class.

13. Thermal discharges

No discharge which will be injurious to fishlife or make the waters unsafe or unsuitable for any best usage determined for the specific waters which are assigned to each class.

14. Suspended, colloidal or settleable solids

None from sewage, industrial wastes or other wastes which will cause deposition or be deleterious for any best usage determined for the specific waters which are assigned to each class.

15. A copy of any other reports for R. E. Ginna Unit No. 1 pertaining to the environment which RGEC submits to any federal, state or local agency, shall also be submitted to the Department.

16. This certification with conditions shall not be deemed to modify, extend, or affect in any manner any order of the Commissioner of Environmental Conservation against Rochester Gas and Electric Corporation; does not constitute a condonation of any violation of any order or release, compromise, or waiver of any rights or any course of action which the Commissioner of Environmental Conservation has or may have against RGECC because of any violation of any order; and does not preclude compliance of the discharge from R. E. Ginna Unit No. 1 with any permit with respect to such discharge which may be hereafter issued by the Commissioner.

This certification with conditions is issued with the full understanding and acknowledgement by RGEC that the State of New York, in cooperation with the U.S. Environmental Protection Agency, is in the process of promulgating revised General criteria in order to bring such criteria into conformity with the Act.

This certification with conditions is issued solely for the purpose of Section 401 of the Act.

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A copy of this certification with conditions is being forwarded to the Director of Regulations, U.S. Atomic Energy Commission, and the Regional Administrator of the Environmental Protection Agency.

Sincerely,

Commissioner

Mr. Robert R. Koprowski  
Vice President  
Rochester Gas and Electric Corporation  
89 East Avenue  
Rochester, New York 14604

PJM:ng

cc: T. Curran  
Director of Regulation, U.S. AEC  
Regional Administrator, EPA  
T. K. DeBoer (Commerce)  
P. Skinner (Attorney General's Office)  
J. Hanna  
T. Cashman  
H. Doig ✓  
E. Seebald  
J. Spagnoli  
T. Quinn  
R. Cronin

JLB File