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Chief, Rules and Directives Branch  
Division of Administrative Services  
Office of Administration, Mailstop T-6D59  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Subject: Comments regarding NUREG-1437, Supplement 14  
R. E. Ginna Nuclear Power Plant  
Docket No. 50-244

Dear Sir:

Rochester Gas and Electric is providing comments regarding NUREG-1437, Supplement 14, issued June 2003. Please consider these comments when developing the Final Supplemental Environmental Impact Statement for the Ginna Station License Renewal Application.

Very truly yours,

  
Robert C. Mecredy

Attachments

cc: Mr. Robert G. Schaaf (Mail Stop O-11F1)  
Office of Nuclear Regulatory Regulation  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

E-RIDS=ADM-03

Adl = B. Zakeman (BXZ)

Template = ADM-013

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**Project Directorate I**  
**Division of Licensing Project Management**  
**Office of Nuclear Regulatory Regulation**  
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**U.S. NRC Ginna Senior Resident Inspector**

**Regional Administrator, Region I**  
**U.S. Nuclear Regulatory Commission**  
**475 Allendale Road**  
**King of Prussia, PA 19406**

**Ms. Julea Hovey**  
**Constellation Nuclear Services**  
**Director Environmental Services**  
**6120 Woodside Executive Court**  
**Aiken, SC 29803**

**Ms. Kimberly Merchant**  
**New York State Department of Environmental Conservation**  
**Division of Environmental Permits, Region 8**  
**6274 East Avon-Lima Road**  
**Avon, NY 14414-9519**

## **ATTACHMENT A: RG&E COMMENTS ON NUREG-1437, SUPPLEMENT 14**

- Comment 1:** There is a typographical error on page 2-1, line 29. 0.9 km should be 2.4 km.
- Comment 2:** Minor changes should be made to Figure 2-3, as provided in Attachment B.
- Comment 3:** Minor changes should be made to Figure 2-4, as provided in Attachment C.
- Comment 4:** In Section 2.2, page 2-17, line 25-27, reference is made to a land transaction. This has not occurred; therefore, this sentence should be deleted.
- Comment 5:** A modified SPDES permit is dated 7/1/03. This should be reflected in Section 2.2.3, page 2-19, line 3.
- Comment 6:** Section 2.2.5, page 2-22, line 14. Consider adding the word "as" between "changed" and "much", to be consistent with Environmental Report Figure 2.2-1.
- Comment 7:** Reference 2002b, listed in Section 2.2.8.2, page 2-31, line 25 and Section 2.2.8.3, page 2-33, line 4, should be 2002d.
- Comment 8:** Section 2.2.9.2, page 2-45, line 6. 388 acres should be 338 acres.
- Comment 9:** Section 4.1, page 4-3, line 28, and page 4-8, line 38. Based on previous applications and reading of the GEIS, Microbial Organisms (occupational health) is a Category 1 issue, that is not limited to closed-cycle cooling. Therefore, this issue and the corresponding GEIS Section (4.3.6) should be added to Table 4-1, and a brief discussion of the issue should be added to Section 4.1.
- Comment 10:** Section 4.1.1, page 4-10, line 14. The most recent modified SPDES permit dated 7/1/03, is not included in Appendix E of NUREG-1437, Supplement 14. Also, the entrainment study listed in that sentence is to be conducted in 2004, not 2003. A copy of the 7/1/03 modified SPDES permit is being provided as Attachment D.
- Comment 11:** Section 4.1.3, page 4-14, line 10 - delete the word "proposed"; line 11, delete "for review and comment"; line 13/14, delete "if incorporated into the SPDES permit"; line 14, change 2004 to 2005. Also, the reference should change to the modified SPDES permit being provided as Attachment D.
- Comment 12:** Table 4.2-1. RG&E has further reviewed historical Ginna impingement data, and we are including a slightly revised Table 4.2-1 as follows:

**Table 4.2-1**  
**Annual Percentages of Lake Ontario Alewife and**  
**Smelt Populations Impinged at Ginna Station**

<u>Year</u>	<u>Alewife (%)</u>	<u>Smelt (%)</u>
1983	0.00108	0.00080
1984	0.00492	0.00363
1985	0.00360	0.00168
1986	0.00106	0.00232
1987	0.00098	0.00045
1988	0.00366	0.00175
1989	0.00122	0.00010
1990	0.00359	0.00067
1991	0.00035	0.00083
1992	0.00262	0.00033
1993	0.00046	0.00008
1994	0.00054	0.00027
1995	0.00014	0.00013
1996	0.00163	0.00127
1997	0.00172	0.00038
1998	0.00032	0.00023
1999	0.00026	0.00018
2000	0.00014	0.00280
<u>2001</u>	<u>0.00003</u>	<u>0.00012</u>
MIN	0.00003	0.00008
AVG	0.00149	0.00095
MAX	0.00492	0.00363

Source: Ref. 4.2-5, Rev. 1

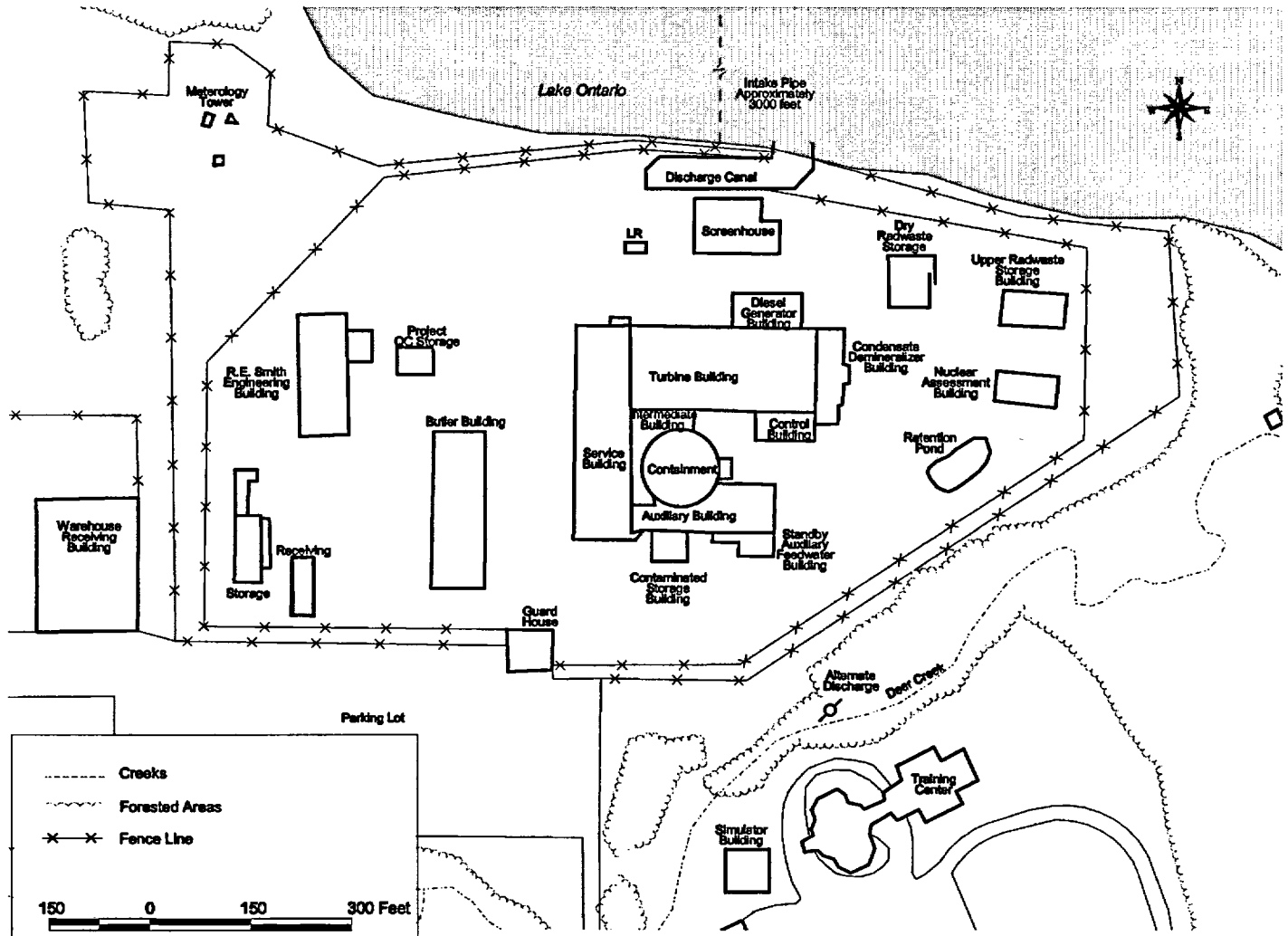
This results in the following minor changes to Section 4.1.2, page 4-12; line 2 - 0.0008 percent should be 0.0009 percent; line 4, three alewives should be five alewives.

- Comment 13:** Section 4.4.5, page 4-29, line 25, lines 31 and 32 and page 4-30, lines 27 and 28. As the owner of the Brookwood Manor House, RG&E is not aware of any party that has prepared a nomination form for listing the Brookwood Manor House on the National Register of Historic Places (NRHP) and submitted it to the New York State Review Board. Federal regulations under 36 CFR Part 60.6 require that the state notify property owners of the State's intent to bring the nomination before the State Review Board. Furthermore, owners of private property are given an opportunity to concur in or object to the nomination. Since the property has not formally been determined to be eligible for listing, RG&E suggests revising the sentence on page 4-29, line 25 to read "The Ginna site includes one undocumented structure that is potentially eligible for inclusion in the NRHP". A confirming change should also be made on Page 2-45, line 10, by including the word "potentially" between "be" and "eligible".
- Comment 14:** Section 4.4.5, page 4-30, line 28. RG&E suggests that this sentence be replaced with "Care should be taken during development projects to ensure that cultural resources are not inadvertently impacted."
- Comment 15:** Section 4.4.5, page 4-30, line 15. Add same footnote reference as on page 4-29.
- Comment 16:** Section 4.8.4, page 4-42, lines 26 and 27. For the reasons provided in comment 12, revise text to read "Related to historic resources, there is one undocumented structure potentially eligible for inclusion in the NRHP on the Ginna site, and the transmission line..."
- Comment 17:** Section 5.1.1, page 5-2, lines 21 and 22. Section 5.1.1 does not discuss the environmental impacts of the design basis accident that were evaluated during the initial licensing process as indicated by the sentence beginning on line 21. Suggest deleting words "in this section and." The revised sentence would read "The results of these evaluations are found in license documentation such as the applicant's..."
- Comment 18:** Section 8.1, page 8-2, line 8. The parenthetical reference should be NRC 1996 vs. NRC 1999.
- Comment 19:** Section 8.2.1.1, page 8-16, line 19. The parenthetical reference should be EPA 2000b.
- Comment 20:** Section 8.2.1.1, page 8-17, lines 34 and 35. The loss of workforce and receipts associated with a temporary construction project would not negatively impact a community, since after the project is completed employment levels would return at least to pre-construction levels. Although employment associated with large construction projects can stress housing and public services, as the NRC correctly states, the increased jobs and receipts normally have a positive, though temporary, economic effect. Consider revising the sentence to read, "During construction, the nearby communities would experience a temporary increase in

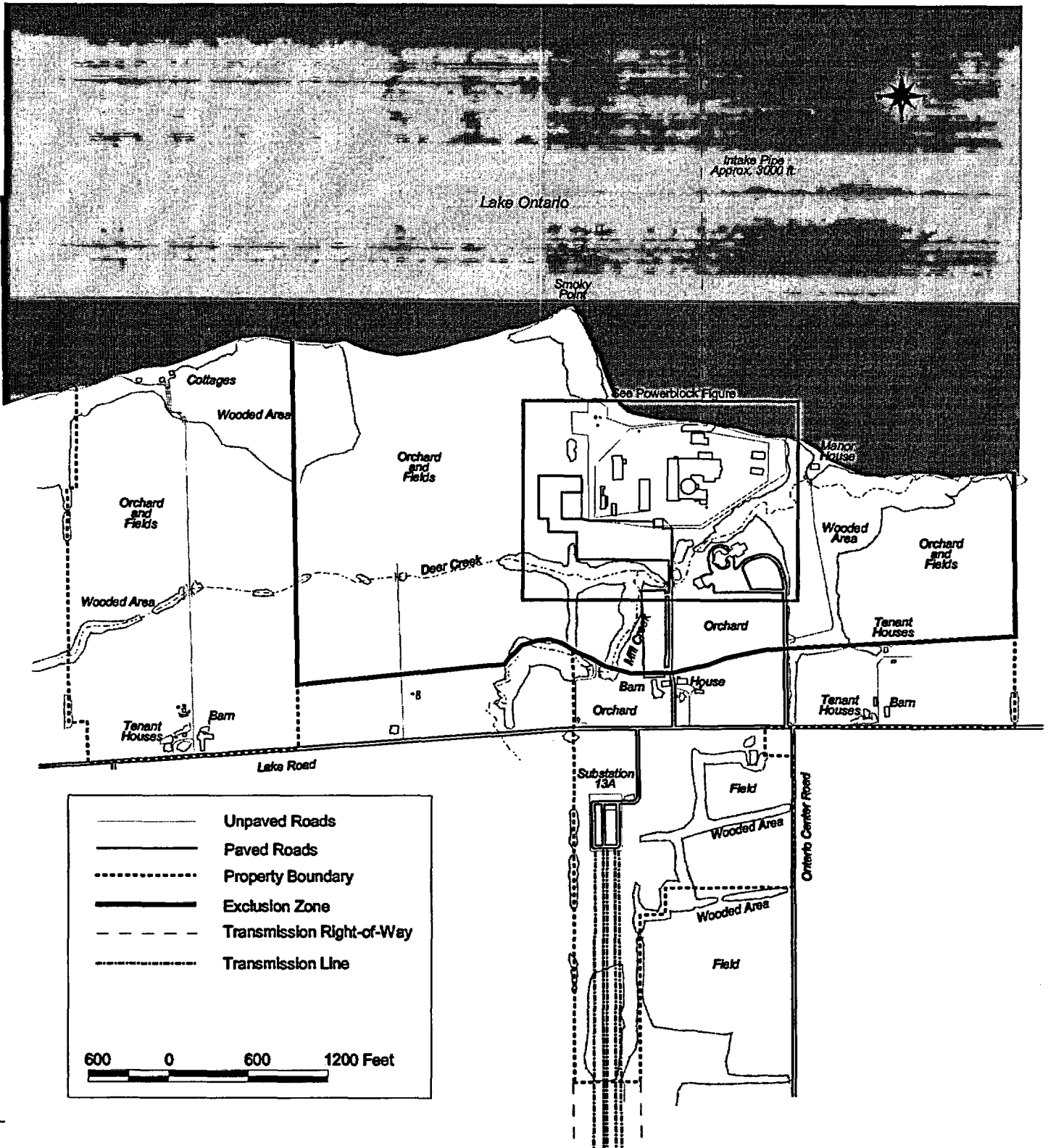
receipts and employment due to the influx of construction jobs.”

- Comment 21:** Table F-1, page F-2, line 5. Note that the NRC determined that the Category 2 issue related to microbiological organisms (public health) is not applicable to Ginna because the “issue applies only to heated effluents discharged into a small river”. This conclusion is consistent with the NRC’s analysis found in the GEIS Section 4.3.6. NRC regulations at 10CFR51.53(c)(3)(ii)(G) require an analysis of the impact of license renewal on public health from thermophilic organisms if “the applicant’s plant uses a cooling pond, lake, or canal or discharges into a river having an annual average flow rate of less than  $3.15 \times 10^{12} \text{ ft}^3/\text{year}$  ( $9 \times 10^{10} \text{ m}^3/\text{year}$ )”. For conservatism, and because Ginna was the first plant located on the Great Lakes to submit an application to renew an operating license, RG&E elected to provide an analysis of the issue in Section 4.15 of the Environmental Report.
- Comment 22:** Table F-1, page F-2, line 8. Consistent with Comment 9, Microbial Organisms (occupational health) should be removed from this table and addressed in Chapter 4.

# ATTACHMENT B



# ATTACHMENT C





**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**State Pollutant Discharge Elimination System (SPDES)**  
**DISCHARGE PERMIT**  
**Special Conditions**

PWS2.00

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

SPDES Number: NY- 0000493  
 DEC Number: 8-54-34-00010/00003-0  
 Effective Date (EDP): 2/1/03  
 Expiration Date (ExDP): 2/1/08  
 Modification Dates: 7/1/03

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. §1251 et seq.) (hereinafter referred to as "the Act").

**PERMITTEE NAME AND ADDRESS**

Name: Rochester Gas & Electric Corporation  
 Street: 89 East Avenue  
 City: Rochester

Attention: Joseph Widay, VP & Plant Manager

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)  
 Facility Address: 1503 Lake Road  
 City: Ontario  
 NYTM -E: 312.669  
 From Outfall No.: 001

County: Wayne

State: NY Zip Code: 14519

NYTM - N: 4794.248

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)

001A to 001D	Lake Ontario	Class A - Special
002, 003	Lake Ontario	Class A - Special
004, 005, 006	Lake Ontario	Class D - C

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit and 6 NYCRR Part 750.

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

Mailing Name: Ginna Nuclear Power Plant - Station 13  
 Street: 89 East Avenue  
 City: Rochester  
 Responsible Official or Agent: John Prill

State: NY Zip Code: 14649  
 Phone: 585-771-2711

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above 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 permit renewal not less than 180 days prior to the expiration date shown above.

**DISTRIBUTION:**

Bureau of Water Permits

Permit Administrator: David L. Bimber	
Address: 6274 East Avon-Lima Road Avon, NY 14414	
Signature: <i>David L. Bimber</i>	Date: 6/30/2003

# PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

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OUTFALL	WASTEWATER TYPE		RECEIVING WATER	EFFECTIVE	EXPIRING	
	This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water.		This cell lists classified waters of the state to which the listed outfall discharges.	The date this page starts in effect. (e.g. EDP or EDPM)	The date this page is no longer in effect. (e.g. ExDP)	
PARAMETER		MINIMUM	MAXIMUM	UNITS	SAMPLE FREQ.	SAMPLE TYPE
e.g. pH, TRC, Temperature, D.O.		The minimum level that must be maintained at all instants in time.	The maximum level that may not be exceeded at any instant in time.	SU, °F, mg/l, etc.		
PARA-METER	EFFLUENT LIMIT	PRACTICAL QUANTITATION LIMIT (PQL)	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE
	Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based limits, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change.	For the purposes of compliance assessment, the analytical method specified in the permit shall be used to monitor the amount of the pollutant in the outfall to this level, provided that the laboratory analyst has complied with the specified quality assurance/quality control procedures in the relevant method. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This PQL can be neither lowered nor raised without a modification of this permit.	Type I or Type II Action Levels are monitoring requirements, as defined below in Note 2, that trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, Temperature, concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly.	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

**Note 1: DAILY DISCHARGE:** The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.

**DAILY MAX.:** The highest allowable daily discharge. **DAILY MIN.:** The lowest allowable daily discharge.

**MONTHLY AVG:** The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**7 DAY ARITHMETIC MEAN (7 day average):** The highest allowable average of daily discharges over a calendar week.

**30 DAY GEOMETRIC MEAN:** The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of : the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**7 DAY GEOMETRIC MEAN:** The highest allowable geometric mean of daily discharges over a calendar week.

**RANGE:** The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

**Note 2: ACTION LEVELS:** Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards. **TYPE I:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results in excess of the stated Action Level. **TYPE II:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results that show the stated action level exceeded for four of six consecutive samples, or for two of six consecutive samples by 20 % or more, or for any one sample by 50 % or more.

**PERMIT LIMITS, LEVELS AND MONITORING**

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OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Circulating Cooling Water	Lake Ontario	EDPM	EDP + 5 yrs.

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
Chlorine, Total Residual	NA	0.1	Mg/l	Daily*	Grab	FN

\*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:

1. Each individual chlorine zebra mussel control shall be limited to a maximum of 30 days of continuous treatment.
2. 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.
3. 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.
4. The Regional Water Engineer shall be notified not less than 48 hours prior to initiation of zebra mussel control program.
5. 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 1<sup>st</sup> of the year following such treatments.
6. 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.

**PERMIT LIMITS, LEVELS AND MONITORING**

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OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Circulating Cooling Water	Lake Ontario	EDPM	EDP + 5 yrs.

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH (Range)	6.0	9.0	SU	Weekly	Grab	

PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	490				MGD	Continuous	Pump Logs	
Discharge Temperature	Monitor	102				°F	Continuous	Recorder	
*Intake-Discharge	Difference	28				°F	Continuous	Recorder	FN
Total Residual Chlorine	Monitor	0.2				mg/l	Continuous		

OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001-A	House Service Boiler Blowdown	Lake Ontario	EDPM	EDP + 5 yrs.

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH (Range)	6.0	9.0	SU	Annual	Grab <sup>b</sup>	

PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	490				GPD	Annual	Estimate	
Oil & Grease	Monitor	15				mg/l	Annual	Grab	
Suspended Solids	30	100				mg/l	Annual	Grab	
Iron	NA	4.0				mg/l	Annual	Grab	
Copper	NA	1.0				mg/l	Annual	Grab	

\*Footnotes for this outfall: 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.

**PERMIT LIMITS, LEVELS AND MONITORING**

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OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001-B	High Conductivity Waste Tank Discharge (Includes Steam Generator Blowdown)	Lake Ontario	EDPM	EDP + 5 yrs.

PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
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	

OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001-C	Radiation Waste Holdup and Treatment System (Includes Condensate Tank, A & B Monitor Tanks, Laundry Tanks)	Lake Ontario	EDPM	EDP + 5 yrs.

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH (Range)	6.0	9.0	SU	Weekly	Grab <sup>b</sup>	

PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
Flow	NA	Monitor				GPD	Quarterly	Grab	
Oil & Grease	NA	15				mg/l	Quarterly	Grab	
Suspended Solids	30	100				mg/l	Quarterly	Grab	
Boron	140	NA				lbs/day	Quarterly	Grab	

**001-D Screenwash Return Water**

(No monitoring required)

**Notes:**

- Chlorine may be discharged up to 120 minutes per day.
- 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.

## PERMIT LIMITS, LEVELS AND MONITORING

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### 002 - Storm Water Runoff & Low Volume Wastes

(No monitoring required)

OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
002-A	Retention Tank (Includes Demineralizer Regeneration Wastes and Floor Drains)	Lake Ontario	EDPM	EDP + 5 yrs.

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH (Range)*	6.0	9.0	SU	Continuous	Recorder	FN

PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor				GPD	Monthly	Instantaneous	
Oil & Grease	Monitor	15				mg/l	Monthly	Grab	
Suspended Solids	30	100				mg/l	Monthly	Grab	
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)

**PERMIT LIMITS, LEVELS AND MONITORING**

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OUTFALL NUMBER	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
006	Redundant House Service Water Testing	Lake Ontario	EDPM	EDP + 5 yrs.

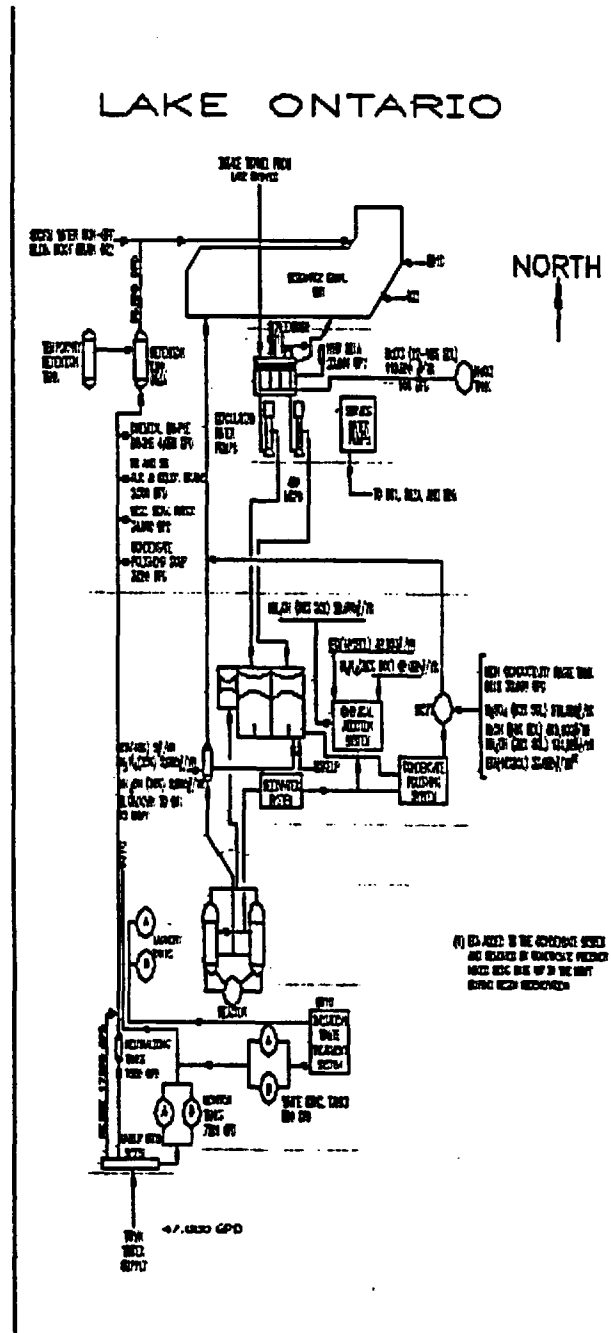
PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor				Each Discharge		Estimate	

Footnotes for this outfall: \*Where pH is continuously recorded, the permittee is allowed excursions from the designated, allowable pH range, subject to the following conditions:

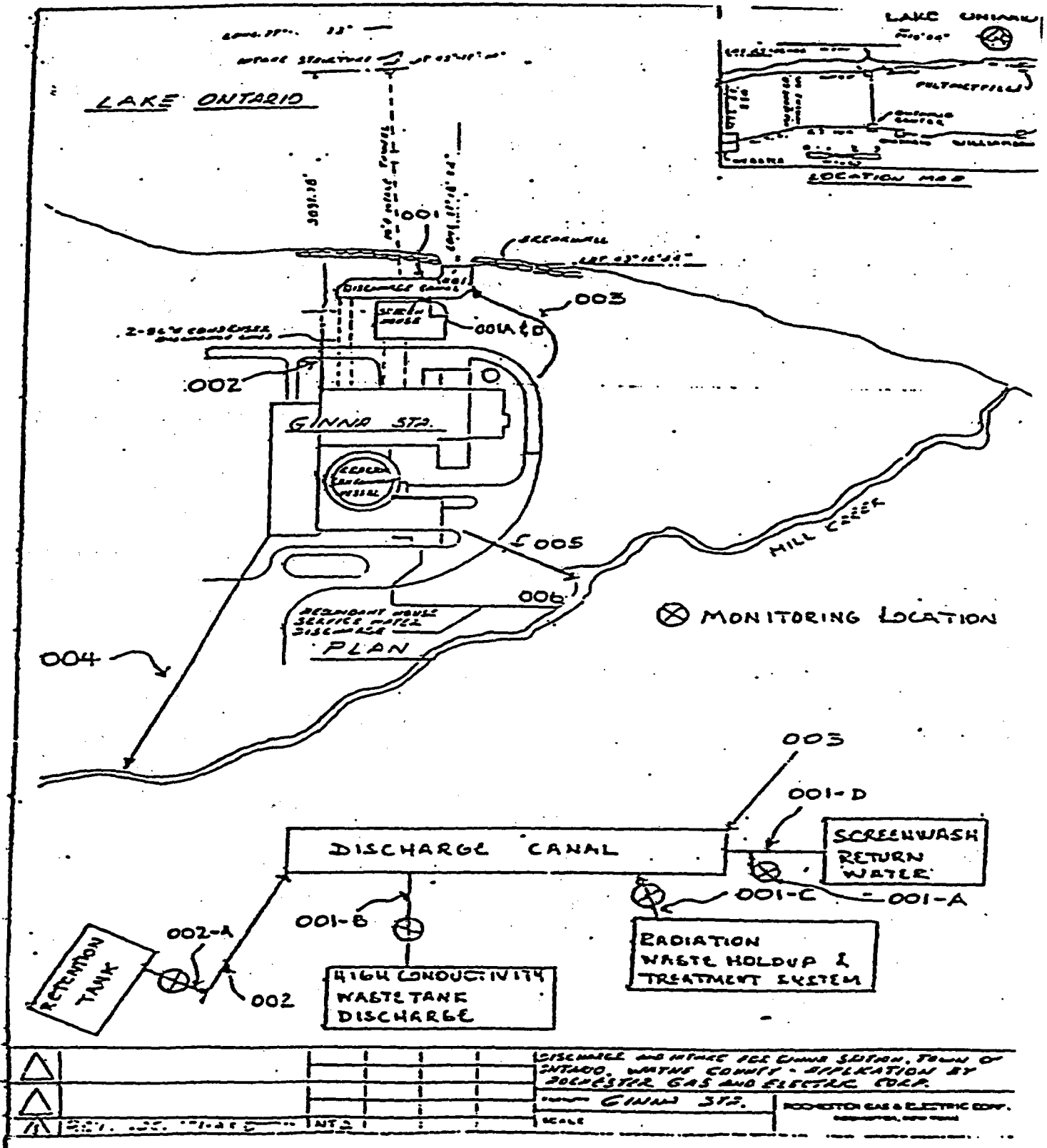
1. The total time during which the pH values of each discharge are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
2. No individual excursion shall exceed 60 minutes in duration.
3. No excursion shall cause or contribute to a contravention of water quality standards.

## MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:



UPDATED FLOW DIAGRAM REFLECTING CURRENT CONDITIONS



## Additional Requirements

1. <sup>2</sup> 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.
2. 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.
3. **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 ½ of the bar mesh of the traveling screens in order to minimize loss of organisms washed off the traveling screens.
  - 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 3.a above shall continue in effect until an alternative is approved by the DEC.
4. **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. No sampling gear or other impediments to the return of impinged fish to Lake Ontario shall be placed in the washwater sluice excepting those necessary to conduct studies approved by the DEC.
5. 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.

## 6. 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. 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.
- c. 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.

## 7. A one year study shall be conducted to monitor the entrainment of aquatic organisms in the station's cooling water flow. The goals of the study are to determine the abundance, species composition and life stage of organisms entrained, and help ascertain whether the operation of the cooling water intake system constitutes best technology available for minimizing adverse environmental impact. By EDM + 6 months, the permittee shall submit for review and approval a scope of work to conduct the study, consistent with the following guidelines.

- a. One 24 hour sample will be collected each week from April 1<sup>st</sup> through September 30<sup>th</sup>. Each collection will be scheduled to take place within the first two days of each seven day period, so that the remainder of the period is available for an alternate collection should plant operation or equipment malfunction prevent a collection on the day initially scheduled.
- a. Each sample shall be divided into four discrete 6 hour periods (sub-samples). Total daily sample volume is to be at least 200 cubic meters. The volume of water sampled is to be accurately recorded using calibrated flow meters. If a pump sampler is to be used (e.g. trash pump), excessive flow rates are to be avoided that may cause extrusion of organisms through the net mesh and loss of sample
- c. At the beginning and conclusion of each 24 hour sample, water quality measurements (temperature and dissolved oxygen) are to be taken at either the intake and cooling water discharge canal.
- d. Samples may be collected at either the intake (screenhouse) or discharge canal. Samples collected from within the screenhouse only shall be taken from multiple depths unless it can be demonstrated to the Department's Satisfaction that adequate mixing exists and organisms are not stratified within the water column at that location.
- e. Ichthyoplankton nets used for sample collection shall have a mesh size of 505 microns or less.
- f. All samples are to be analyzed for all ichthyoplankton and additionally analyze for *Mysis relicta*, and *Pontoporeia affinis*. Ichthyoplankton are to be identified by species and life stage (egg, yolk-sac larvae, post yolk-sac larvae, and juvenile). From each sample up to 30 individuals per life stage per species will be measured to the nearest 0.1 mm.
- g. All methods for sample collection and handling, sample processing, quality control and quality assurance shall be fully described in the scope of work.

8. Within 6 months after the completion of the study, a final report shall be submitted to DEC describing the results of the study. The report shall describe all methods used and present data on the density and abundance of species and life stages entrained over the diel cycle, making liberal use of tabular data. Plant operational data such as weekly cooling water flows, timing of outages etc. as well as all excursions or deviations from the approved scope of work shall also be included. All reports and all other required information shall be submitted to the following Department Offices: NYSDEC Chief, Bureau of Habitat, 625 Broadway - 5<sup>th</sup> Floor, Albany, NY 12233-4756; and a copy each to the NYSDEC Region 8 Supervisor of Natural Resources, Regional Fisheries Manager and Regional Water Engineer, 6274 East Avon-Lima Road, Avon, NY 14414.
9. DEC will review the results of the permittee's entrainment monitoring study, and any other relevant information, to determine whether the cooling water intake at the Ginna Nuclear Generating Station represents best technology available for minimizing adverse environmental impact as required under NYCRR Part 704.5, and section 316(b) of the Clean Water Act, 33 U.S.C. Section 1326(b).
  - a. If DEC determines that the cooling water intake is causing an adverse environmental impact and requires mitigative action be taken, then the permittee must, within 9 months of DEC notification, submit an intake technology report to the offices listed in No. 2. The report shall discuss the range of mitigation alternatives available for reducing impacts in terms of their engineering feasibility, reliability, cost, and the degree of mitigation likely to be achieved.
  - b. DEC shall determine, from the alternatives presented and from other relevant information available, appropriate mitigation for the facility that minimizes adverse environmental impact, consistent with the considerations listed above. Within 12 months of DEC approval, the permittee shall submit plans and a schedule for the construction, operation and maintenance of the selected alternative(s), and if determined to be necessary, a plan to verify the effectiveness of the alternative(s) to minimize adverse environmental impact.
10. Biological specimens may be required to be submitted to NYSDEC upon request if notice by the Department is given prior to collection.
11. There shall be no discharge of auxiliary boiler chemical cleaning wastes and other metal cleaning wastewaters other than those using boric acid.
12. In regards to 750-2.8(e) items 3 and 4 items shall be reported annually to NYSDEC offices in Avon.
13. The permittee shall submit on an annual 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:
  - a. Daily minimum, average, and maximum station electrical output shall be determined and logged.
  - b. Daily minimum, average, and maximum water use shall be directly or indirectly measured or calculated and logged.
  - c. Daily minimum, average, and maximum intake and discharge temperatures shall be logged.
  - d. Measurement in a,b, and c shall be taken on an hourly basis.
14. There shall be no discharge of PCB's from this facility.
15. Radioactivity: Concentrations of radioactivity in effluent are subject to the requirements of the U.S. Nuclear Regulatory Commission license conditions.
16. Ethanolamine (ETA) used for iron transport control at the Ginna secondary system through the feed-water supply shall be maintained at a concentration in Outfall 001 of less than or equal to 0.7 mg/l. Method of determination of this concentration in outfall 001 (Circulating Cooling Water) shall be calculated by the feed rate. A log shall be maintained subject to the reporting requirements of the WTCFX.

17. RG&E shall submit a review of the thermal tolerance literature for lake trout, rainbow trout, brown trout, yellow perch, American eel, alewife, rainbow smelt, spottail shiner, small mouth bass, and three-spine stickleback as a basis for assessing the potential for increased mortality to fish exposed to elevated temperatures in the station's cooling water discharge canal. By EDM + 6 months a scope of work for the report shall be submitted for the Department's review and approval. A final report is due within 12 months of the Department's approval of the scope of work. Both the scope of work and final report are to be submitted to the Chief, NYSDEC Bureau of Habitat - 5th Floor, 625 Broadway, Albany, NY, 12233-4756; and to the Fisheries Office, NYSDEC Region 8 Office, Avon, NY 14414-9519. The Department will review the results of the study and determine whether the current practice of returning fish in the station's cooling water discharge is leading to unacceptable thermal stress and likely increased levels of mortality to impinged fish. Based on this assessment and any other relevant information, the Department will determine whether additional mitigation will be required.

**RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS**

- a) The permittee shall also refer to 6NYCRR Part 750 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, monitoring information required by this permit shall be summarized and reported by submitting;

☒ (if box is checked) 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.

☐ (if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 and must summarize information for January to December of the previous year in a format acceptable to the Department.

☐ (if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:

☐ Regional Water Engineer and/or ☐ County Health Department or Environmental Control Agency specified below

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

Department of Environmental Conservation  
Division of Water  
Bureau of Watershed Compliance Programs  
625 Broadway  
Albany, New York 12233-3506

Phone: (518) 402-8177

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

Department of Environmental Conservation  
Regional Water Engineer  
Region 7  
6274 East Avon-Lima Road  
Avon, NY 14414  
Phone: (585) 226-2466 Ext. 5445

Send an additional copy of each DMR page to:

- c) Noncompliance with the provisions of this permit shall be reported to the Department as prescribed in 6NYCRR Part 750.
- d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- e) If the permittee monitors any pollutant more frequently than required by the 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 of the data on the Discharge Monitoring Reports.
- f) Calculation for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- g) 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.
- h) 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 Empire State Plaza, Albany, New York 12201.**

**Ginna Power Station Schedule of Compliance for  
SPDES Permit Additional Requirement #7 (Entrainment Monitoring) and for  
Additional Requirement #17 (Thermal Literature Review)**

**Additional Requirement #7**

<u>Entrainment Task</u>	<u>Start Date</u>	<u>End Date</u>
• SPDES Permit finalized that includes requirement to perform entrainment studies.	7/1/03	7/1/08
• Preparation and submit scope of entrainment work to DEC.	7/1/03	1/1/04
• DEC reviews scope of work/provides comments/ and approval to implement proposed entrainment program. (Est. @ 3 months)	1/1/04	4/1/04
• RGE performs entrainment program	4/1/04	9/30/04
• Within 6 months of study completion a final report is submitted	10/1/04	4/1/05
• After an unspecified amount of time DEC provides determination of any adverse env. impact (Est. 6 months).	4/1/05	10/1/05
• If DEC determines any action is required on RGE's part, then, within 9 months of DEC notification, RGE must submit an intake technology report discussing mitigative alternatives.	10/1/05	7/1/06
• After an unspecified amount of time DEC determines, from the alternatives provided, the appropriate mitigation. (est. at 6 months).	7/1/06	1/1/07
• Within 12 months of DEC approval, RGE submits plans and schedule of construction of the selected alternative(s).	1/1/07	1/1/08

**Additional Requirement #17**

<u>Thermal Study Task</u>	<u>Start Date</u>	<u>End Date</u>
• SPDES Effective Date of Modification upon acceptance	7/1/03	7/1/03
• Submittal date of Scope of Work for the Literature review report to DEC.	7/1/03	1/1/04
• Final report due to DEC within 12 months of DEC approval	1/1/04	1/1/05