

**APPENDIX B. CLEAN WATER ACT DOCUMENTATION**

**NINE MILE POINT NUCLEAR STATION  
LICENSE RENEWAL APPLICATION  
ENVIRONMENTAL INFORMATION**

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**New York State Department of Environmental Conservation**  
**Division of Environmental Permits, Region 7**  
615 Erie Boulevard West, Syracuse, New York 13204-2400  
Phone: (315) 426-7438 • FAX: (315) 426-7425  
Website: www.dec.state.ny.us



**FILE COPY**

July 21, 2003

Principal Engineer, Environmental  
Nine Mile Point Nuclear Station, LLC  
PO Box 63  
Lycoming, NY 13093

Dear Permittee:

The permit you applied for on 9/27/02 is enclosed. Note that the permit modification requested 3/24/03 for the installation of the on-line condenser cleaning system has been reviewed and found not to require a permit modification.

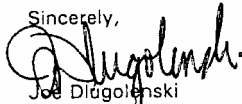
Please read the permit carefully and note the special conditions that are included in it. The permit is valid for only those activities expressly authorized therein. Work beyond the scope of the permit and the approved project plans may be considered a violation of the law and subject to appropriate enforcement action. Should you object to the permit as issued and are unable to resolve such objections with this office you may, within 30 calendar days of this transmittal, request a hearing in writing from the Regional Permit Administrator.

<b>DEC PERMIT NO:</b> 7-3556-00013
<b>FACILITY NAME:</b> Nine Mile Point Nuclear Station
<b>LOCATION:</b> Scriba (T), Oswego County

If this permit is associated with a project that will entail construction of new pollution control facilities, or is a modification to existing facilities, the plans for the system design must be approved by this Department or if indicated in the permit by either the NYS Department of Health or delegated local Health Department.

The numbers above pertain to this permit and should be referenced on all correspondence related to this permit and any future applications for permits associated with this facility/project area. If you have any questions on the extent of the work authorized, or your obligations under the permit, please feel free to contact me. Please note the expiration date of the permit. Applications for the permit renewal must be made in advance of the expiration date. Please refer to your permit and/or 6NYCRR (Uniform Procedures) for specific instructions.

Sincerely,



Joe Dlugowski

Sr. Environmental Analyst

**Enclosures**

cc: P. Kolakowski, Bureau of Water Permits  
K. Grzyb, DOW Syracuse  
EPA Region II  
Oswego Health Services  
File

**NINE MILE POINT NUCLEAR STATION  
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**FACT SHEET for INDUSTRIAL SPDES PERMITS**

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Date: 04/02/03

Permittee: Niagara Mohawk Power Corporation  
 Facility: Nine-Mile Point Nuclear Power Plant  
 Location: Scriba Oswego County  
 Industrial Segment: Steam Electric Power Generation

SPDES Permit No.: NY 000 1015  
 Prepared by: Paul Kolakowski  
 Industrial Code No.: 4911  
 40CFR Part No.: 423

Type of Processing & Production Rate:

Nuclear Power Generating Station

Basis for Technology Effluent Limitations:

PARAMETER

BASIS FOR EFFLUENT CONDITION\*

Outfall No.: 010A & 040B: Units 1&2 Cleaning/  
Sedimentation Basins

Discharge; Nominal Flow: Variable

Oil & Grease  
Total Suspended Solids

BCT/WQ  
BCT

Outfall No.: 040: Circulating Water Pumps  
Area Sumps

Discharge: Nominal Flow: Variable

Oil and Grease

BCT/WQ

Outfall No.: 040: Cooling Tower

Discharge: Nominal Flow:     

Phosphorus(as P)

BPJ

Outfall No.: 020: Storm Drainage Unit #1

Flow: Variable

Oil & Grease

BCT/WQ

\* NYS Water Quality Regulations (for surface water) are implemented by applying the Total Maximum Daily Load (TMDL) process (ref.: Section 303(c) of the Clean Water Act; 40CFR Part 130 and USEPA Guidance for Water Quality - Based Decisions: The TMDL Process) to watersheds, drainage basins or waterbody segments on a pollutant specific basis. The analysis determines if there is a "reasonable potential" that the discharge of a pollutant will result in exceedance of ambient water quality standards. The TMDL is used to establish waste load allocations for point sources and load allocations for nonpoint sources of the pollutant. For point sources, the waste load allocations are translated to Water Quality Based Effluent Limits (WQBELs) for SPDES permits. OTHER REFERENCES: For effluent conditions based on BPT, BCT, BAT OR New Source requirements, see Code of Federal Regulations (40CFR) at the Part Number listed above. For BPJ determinations see 40CFR Part 125.3.d. For Action Level (AL) requirements see the SPDES permit. For discharges to groundwater, see NYS regulations 6NYCRR, Chapter 10, Part 703.6.

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
**State Pollutant Discharge Elimination System (SPDES)  
DISCHARGE PERMIT  
Special Conditions (Part 1)**

Industrial Code:	4911	SPDES Number:	NY- 000 1015
Discharge Class (CL):	03	DEC Number:	7-3556-00013/00001
Toxic Class (TX):	T	Effective Date (EDP):	12/01/94
Major Drainage Basin:	03	Expiration Date (ExpD):	12/01/04
Sub Drainage Basin:	03	Modification Dates:	6/1995, 10/1998, 5/13/03
Water Index Number:	Lake Ontario	Attachment(s):	General Conditions (Part II) Date: 11/90
Compact Area:	IJC		

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 MAILING ADDRESS**

Name:	Nine Mile Point Nuclear Station, LLC (NMPNS)	Attention:	Principal Engineer, Environmental
Street:	P.O. Box 63		
City:	Lycoming	State:	NY
		Zip Code:	13093

is authorized to discharge from the facility described below:

**FACILITY NAME AND ADDRESS**

Name:	Nine Mile Point Nuclear Station		
Location (C,T,V):	Scriba (T)	County:	Oswego
Facility Address:	348 Lake Road		
City:	Oswego	State:	NY
		Zip Code:	13126
NYTM -E:		NYTM - N:	4
From Outfall No.:	001	at Latitude:	43 ° 31 ' 17 " & Longitude: 76 ° 24 ' 39 "
		into receiving waters known as:	Lake Ontario
			Class: A

and; (list other Outfalls, Receiving Waters & Water Classifications)  
01A, 001, 002, 007, 008, 010, 010A, 011, 020, 021, 023, 024, 026, 030, 040, 040A, 040B, 041 - Lake Ontario, Class: A  
025 - Lake Ontario, Class A, Groundwater Class GA  
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:	Nine Mile Point Nuclear Station, LLC (NMPNS)		
Street:	P.O. Box 63		
City:	Lycoming	State:	NY
		Zip Code:	13093
Responsible Official or Agent:	Principal Engineer, Environmental	Phone:	(315) 349-1364

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:  
DOW - Region 7  
BWFD  
EPA - Region II  
Oswego Co. Health Dept.

FILE

Permit Administrator:	JOHN FELTMAN	
Address:	NYS DEC REGION 7 615 ERIE BLVD. WEST SYRACUSE, NY 13204	
Signature:		Date: 7/21/03

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SPDES NO.: NY 000 1015  
Part 1, Page 2 of 18

**FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning EDM  
and lasting until ExDP  
the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Sample Effluent Parameter	Discharge Limitations		Minimum Monitoring Requirements Measurement		
	Daily Avg.	Daily Max.	Units	Frequency	Type
<u>010 - Condenser Cooling Water Unit #1<sup>h,k,s</sup></u>					
Flow <sup>i</sup>	NA	417.6	MGD	Continuous	Calculated
Discharge Temperature <sup>f</sup>	NA	115	°F	Continuous	Recorder
Intake - Discharge Temperature Difference <sup>a,f</sup>	NA	35	°F	Continuous	Recorder
Net Rate of Addition of Heat <sup>a</sup>	NA	4.405x10 <sup>9</sup>	BTU/hr.	Hourly	Calculated
Total Residual Oxidant	NA	0.2	mg/l	Batch	Grab
Copper	NA	0.25	mg/l	Monthly	Grab
<u>011 - Unit #1 Wastewater (Including Water Generated from Demineralizer, Reverse Osmosis Electrodeionization, Filtration, and Treated Radioactive Wastewater)<sup>h</sup></u>					
Flow*	Monitor	Monitor	MGD	Batch	Calculated
Oil & Grease	NA	15	mg/l	Quarterly <sup>j</sup>	Grab
Oil & Grease	NA	15	mg/l	Batch Before Discharge <sup>j</sup>	Grab
Solids, Suspended	30	50	mg/l	Quarterly <sup>j</sup>	Grab
Solids, Suspended	30	50	mg/l	Batch Before Discharge <sup>j</sup>	Grab
pH	(6.0 - 9.0 Range <sup>d</sup> )		SU	Batch Before Discharge	Grab
<u>020 - Storm Drainage Unit #1, Perimeter Drains, Condensation Water<sup>h,a</sup></u>					
Flow	NA	Monitor	GPD	Monthly	Calculated
Oil & Grease	NA	15	mg/l	Quarterly	Grab
<u>021 - Filter Backwash &amp; Makeup Demineralizer Water Supply<sup>h</sup></u>					
Flow*	Monitor	Monitor	GPD	Batch	Calculated
Oil & Grease	NA	15	mg/l	Batch Each Discharge	Grab
Solids, Suspended	30	50	mg/l	Batch Each Discharge	Grab
pH	(6.0 - 9.0 Range)		SU	Batch Each Discharge	Grab

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**FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning EDM  
and lasting until ExDP the  
discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Minimum Monitoring Requirements		
	Daily Avg.	Daily Max.	Units	Measurement Frequency	Sample Type
<u>001-002 - Storm Drainage<sup>h,q</sup></u> No Monitoring Required.					
<u>Outfall 001A - Decay Heat Cooling Tower Blowdown<sup>h,u</sup></u>					
Flow	NA	Monitor	GPD	Monthly	Calculated
Temperature <sup>p</sup>	NA	90	°F	Monthly	Grab
Total Residual Chlorine	NA	0.2	mg/l	Monthly	Grab
<u>007 - Floor and Equipment Drains<sup>a,h</sup></u>					
Flow	NA	Monitor	GPD	Monthly	Estimated
Aluminum, Total	NA	4.0	mg/l	Monthly	Grab
Oil & Grease	NA	15	mg/l	2/Month	Grab
Solids, Suspended	30	50	mg/l	2/Month	Grab
pH	(6.0 - 9.0 Range)		SU	2/Month	Grab
Iron	NA	4.0	mg/l	2/Month	Grab
<u>008 - Screen Well Fish Diversion System<sup>m,n</sup></u> No Monitoring Required.					
<u>010A &amp; 040B - Units 1 &amp; 2 Forebay Cleaning Basins<sup>h</sup></u>					
Flow	NA	Monitor	MGD	2/Month During Periods of Discharge	Calculated
Oil & Grease	NA	15	mg/l	"	Grab
Total Suspended Solids	50	100	mg/l	"	Grab
<u>040 - Cooling Tower Blowdown and Service Water (Unit #2)<sup>c,h</sup></u>					
Flow <sup>w</sup>	NA	72.0	MGD	Continuous	Calculated
Discharge Temperature <sup>f</sup>		110(43.3)	°F(°C)	Continuous	Recorder
Intake-Discharge Temperature Difference <sup>f</sup>	NA	30(16.7)	°F(°C)	Continuous	Recorder
Net Addition of Heat	NA	0.47x10 <sup>9</sup>	BTU/hr.	Daily	Calculated
Free Available Chlorine <sup>n</sup>	0.2	0.5	mg/l	Batch	Grab
Copper, Total <sup>g</sup>	NA	0.25	mg/l	Weekly	Grab
Inhibitor AZ8104	NA	8.8	mg/l	Batch	Grab
Cuprostat pf	NA	19.5	mg/l	Batch	Grab
Phosphorus (as P)	NA	0.5	mg/l	Monthly	Grab
pH	(6.0 - 9.0 Range)		SU	2/Week	Grab
Total Residual Oxidant <sup>t</sup>	NA	0.2	mg/l	Batch	Grab
<u>040A - Circulating Water Pumps - Area Sumps<sup>h,r</sup></u>					
Flow	NA	Monitor	MGD	Monthly	Calculated
Oil & Grease	NA	15	mg/l	Monthly	Grab
<u>041 - Unit #2 Wastewater (Including Demineralization Resin Reverse Osmosis Electrodeionization Filtration and Treated Radioactive Wastewater)<sup>h</sup></u>					
Flow <sup>*</sup>	Monitor	Monitor	MGD	Monthly	Calculated
Oil & Grease	NA	15	mg/l	Quarterly <sup>i</sup>	Grab
Oil & Grease	NA	15	mg/l	Batch <sup>i</sup>	Grab
Solids, Suspended	30	50	mg/l	Quarterly <sup>i</sup>	Grab
Solids, Suspended	30	50	mg/l	Batch <sup>i</sup>	Grab
pH	(6.0 - 9.0 Range <sup>d</sup> )		SU	Batch	Grab
Conductivity	Monitor	Monitor	umho/cm	Batch	Grab

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**EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning EDM

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

Outfall Number & Effluent Parameter	Discharge Limitations		Minimum Monitoring Requirements		
	Daily Avg.	Daily Max.	Units	Measurement Frequency	Sample Type
<u>023 - Unit 1 Oil Spill Retention Basin<sup>h</sup></u>					
Flow	NA	Monitor	GPD	Each Discharge	Estimate
Oil & Grease	NA	15	mg/l	Each Discharge	Grab
pH	(6.0-9.0 Range)	SU		Each Discharge	Grab
<u>024 - NMP-1 Diesel Off Loading Pad Drainage<sup>h</sup></u>					
Flow	NA	Monitor	GPD	Each Discharge	Estimate
Oil & Grease	NA	15	mg/l	Each Discharge	Grab
pH	(6.0-9.0 Range)	SU		Each Discharge	Grab
<u>025 - Unit #2 Cooling Tower Emergency Overflow<sup>h</sup></u>					
Flow	NA	Monitor	GPD	Annual	Estimate
pH	(6.0-9.0 Range)	SU		Each Discharge	Grab
Copper, Total	NA	1.0	mg/l	Each Discharge	Grab
<u>026 - Unit #2 Resin Regeneration, Demineralized Test Water, and Reverse Osmosis Wastewater<sup>h</sup></u>					
Flow	NA	Monitor	GPD	Monthly	Estimate

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**FOOTNOTES:**

\*Monitoring Requirement Only.

- a. The intake temperature for this designated outfall shall be considered that temperature existing after intake waters have been tempered. The Intake-Discharge Temperature Difference limit may be exceeded during periods when plant safety is at issue, during periods when the circulating water system (CWS) is experiencing an emergency situation that is outside the normal operating envelope or during routine maintenance of the system, such as, but not limited to, the following situations: debris blockage of a CWS component, an emergency steam release, pump breakdown, etc. In the event of such an emergency/breakdown, the permittee shall take corrective action to bring the temperature parameter within the permit limit as soon as possible. The permittee, whenever possible, should take action to avoid temperature parameter exceedance from June through September.

In the event that the facility is experiencing inlet icing conditions during the winter season, the Intake-Discharge Temperature Difference limit may be exceeded by 35%, or 12.25°F, for no more than one hour during each reverse flow or return to normal flow operation. The facility may exceed the 35% criteria for a period of fifteen (15) minutes when the facility returns to normal flow configuration. This momentary increase during return to normal flow configuration is acceptable.

The permittee shall indicate in the Discharge Monitoring Report the reason for operating outside of the permit limit, and the dates and times of the associated event. In no case shall the permit limitation be exceeded for more than 5% of the operating time during the operating year.

- b. These limits and monitoring requirements shall not apply if this wastewater is discharged upstream of the sewage treatment plant influent.
- c. There shall be no discharge of heat from the main condensers except heat may be discharged in blowdown from recirculated cooling water systems provided the temperature at which the blowdown is discharged does not exceed at any time the lowest temperature of recirculated cooling water prior to the addition of the makeup water. Outfall 040 includes cooling tower blowdown as well as service waterflow.
- d. pH range of 4.0 - 9.0 is allowable for wastewater having a conductivity of less than 10 µmho/cm.
- e. Discharge from the two switchyard oil separators will be sampled before combination with waste stream 020.
- f. Computer data, logged at least hourly, may be utilized for this parameter in order to verify compliance during normal operating conditions. During unusual operating conditions or in situations where the hourly data is near the outfall limitation, chart recorder data will be reviewed and utilized to demonstrate compliance.
- g. Total copper samples should be obtained from the CWS blowdown line or the cooling tower basin. The total copper concentration for Outfall 040 will be based on a calculated value taking into consideration the flow from the service water system. The equation and parameters for performing this calculation are as follows:

Total copper concentration at Outfall 040 =

$$\frac{[\text{CWS}]_{\text{Cu}} \times \text{CWS Blowdown Flow}}{\text{Total Flow for Outfall 040}} + \frac{[\text{CWS}]_{\text{Cu}} \times \text{Tempering Flow}}{\text{Total Flow for Outfall 040}}$$

Where:

$[\text{CWS}]_{\text{Cu}}$  = Copper concentration of Circulating Water System (CWS) Blowdown

Total Flow for Outfall 040 = CWS Blowdown Flow & Service Water Discharge Flow

Tempering Flow = The amount of service water (discharge effluent) used to temper the service water influent during winter months.

- h. Permit outfalls with this designation may include wastewater sources of HVAC condensation, chlorinated city water, fire protection water, circulating (lake) water, service (lake) water, groundwater, precipitation water, demineralized water and



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- surface runoff water. These sources are approved for discharge from the permit listed outfalls.
- i. Changes in Service Water System flowrates should be made in a manner that minimizes the rapid discharge of deposited sediments during periods of normal operation above 5% power load.
  - j. High purity wastewater discharges that have a conductivity of 10  $\mu\text{mho/cm}$  or less are permitted for an oil and grease and total suspended solids measurement frequency of once per calendar quarter.
  - k. The use of sand separators at the Unit 1 Seal Water System and associated wastewaters are approved for discharge.
  - l. Total residual oxidant applies only to treatments of Service Water System.
  - m. During tempering of service waters with cooling water, a portion of the tempering waters will be discharged via this outfall. Furthermore, during drainage of the cooling tower system, a portion of these drainage waters will also be discharged via this outfall.
  - n. The Free Available Chlorine sample shall be obtained prior to combination with Service Water.
  - o. Discharge allowed when Inhibitor AZ8104 concentration is at 8.8 mg/l or less (whole product) and CUPROSTAT PF concentration is at 19.5 mg/l or less (whole product).
  - p. In no case shall the temperature limit be exceeded more than 5% of the time during the operating year.
  - q. Permit outfalls with this designation include the discharge of uncontaminated precipitation storm water and/or groundwater from containment systems and other similar structures to the surrounding grounds, including stoned areas. Contaminated water from said structures will be managed per NMPNS spill procedures, the Spill Prevention Report (SPR) and the Spill Prevention, Control and Countermeasure (SPCC) plan.
  - r. Outfall 040A has two contributing sources, each originating from an individual sump located in the Circulating Water Pump pits.
  - s. Calculated flows are based on the "Adams Strainer" pressure reading, which is indicative of lake level. Weekend/holiday calculated flows are based on the "Adams Strainer" pressure reading from the previous surveillance. Calculated flows for Monday through Friday are based on the respective lake level for the calculation date.
  - t. The use of barley straw for pH control in the Unit 1 Oil Retention Basin is acceptable.
  - u. Decay Heat Cooling Tower Blowdown discharges into Outfall 040. Total Residual Chlorine is monitored at the discharge of Outfall 040.

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**EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning EDM  
and lasting until ExDP  
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>010.040</u>					
Spectrus CT 1300	NA	50	µg/l	Duration of chemical application and disch.	Multiple Grab*
Calgon H-13OM (Whole Product)	NA	50	µg/l	"	Multiple Grab*

\* For purpose of this authorization multiple grab is defined as individual grab samples collected on intervals not to exceed eight hours.

Special Conditions

1. Detoxification with bentonite clay or other Department approved adsorption medium is required. At least a 1:1 ratio with the initial concentration of molluscicide to detoxicant must be maintained.
2. Each individual mussel control treatment is limited up to a maximum of 24 hours addition of Molluscicide once-through treatment and limited to a maximum of 24 hours discharge of detoxified Molluscicide during a recirculation treatment.
3. Records of product use, effluent flow and concentration of product during application and discharge must be maintained.
4. The Regional Water Engineer shall be notified not less than 48 hours before initiation of zebra mussel control program.
5. Upon elimination of initial infestations, treatments are limited to not more than 4 times annually.
6. The reports describing the results of the effectiveness of the zebra mussel control program and effluent analyses for Molluscicide shall be submitted annually to Regional Water Engineer, NYSDEC.
7. 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 withdrawal any time new information becomes available which justifies such modification or withdrawal.

NOTE: For those situations where an effluent sample result is greater than the discharge limits due to suspected inadequate mixing of detoxicant, an additional sample shall be obtained as soon as possible to verify the initial result.

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**EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning EDM  
and lasting until ExDP  
the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter Type	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample
Unit #1 (010) EVAC (Whole Product)	NA	2.0**	mg/l	Duration of Chemical Application & Discharge	Multiple Grab*
Unit #2 (040) EVAC (Whole Product)	NA	1.0**	mg/l	Duration of Chemical Application & Discharge	Multiple Grab*
<u>001 Equipment Sump Storm Drain</u> EVAC - (Whole Product)	NA	.1	mg/l	One Treatment	Grab

\* For purpose of this authorization, multiple grab is defined as individual grab samples collected at eight hour grab intervals during the duration of chemical addition and discharge.

\*\* Calculated based on samples obtained before discharge.

Special Conditions

The Calgon EVAC program for zebra mussel control, application submitted by letter application dated May 29, 1998 to Paul Kolakowski and Joanne March is approved with the following conditions:

1. The concentrations at the mixing zone shall not exceed 20 ug/l (ppb) of Alkylamine or 35 ug/l (ppb) of whole product for Calgon EVAC, these limitations will be achieved by limiting whole product concentrations.
2. Each individual zebra mussel control treatment is limited to a maximum of 48 hours duration.
3. Treatments for zebra mussel control shall be limited to a maximum two treatments annually per plant. Treatments shall be separated by at least 45 days.
4. Records of product dosage concentration, effluent flow and effluent concentration of product 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.
5. The Regional Water Engineer shall be notified not less than 48 hours before initiation of a zebra mussel control program.
6. Reports describing the results of the effectiveness of the zebra mussel control program and the effluent analyses for Calgon EVAC shall be submitted to the Regional Water Engineer, NYSDEC, in an annual report to be submitted by March 1st.
7. This permit modification is issued based on the best environmental and aquatic toxicity information available at this time.

**FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

# NINE MILE POINT NUCLEAR STATION LICENSE RENEWAL APPLICATION ENVIRONMENTAL INFORMATION

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During the period beginning EDM  
and lasting until ExDP  
the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

LIMITATIONS APPLY:  All Year  Seasonal from \_\_\_\_\_ to \_\_\_\_\_  
Outfall Number 030<sup>(4)</sup>

### EFFLUENT LIMITATIONS

<input checked="" type="checkbox"/> Flow	30 day arithmetic mean <u>120,000</u> [ ] MGD	[x] GPD	
<input checked="" type="checkbox"/> BOD, 5 - Day	30 day arithmetic mean <u>25</u> mg/l and _____ lbs/day <sup>(1)</sup>		
<input type="checkbox"/> BOD, 5 - Day	7 day arithmetic mean _____ mg/l and _____ lbs/day		
<input type="checkbox"/> UOD <sup>(2)</sup>	_____ mg/l and _____ lbs/day		
<input checked="" type="checkbox"/> Solids, Suspended	30 day arithmetic mean <u>25</u> mg/l and _____ lbs/day <sup>(1)</sup>		
<input type="checkbox"/> Solids, Suspended	7 day arithmetic mean _____ mg/l and _____ lbs/day		
<input checked="" type="checkbox"/> Effluent disinfection required: [x] All Year [ ] Seasonal from _____ to _____			
<input checked="" type="checkbox"/> Coliform, Fecal	30 day geometric mean shall not exceed 200/100 ml		
<input type="checkbox"/> Coliform, Fecal	7 day geometric mean shall not exceed 400/100 ml		
<input checked="" type="checkbox"/> Chlorine, Total Residual	Daily Maximum	<u>0.5</u>	
mg/l			
<input checked="" type="checkbox"/> pH	Range	<u>6.0 - 9.0</u>	
		SU	
<input checked="" type="checkbox"/> Solids, Settleable	Daily	<u>0.1</u>	ml/l
<input checked="" type="checkbox"/> BOD, 5	Daily	<u>45</u>	mg/l as
<input checked="" type="checkbox"/> Suspended Solids	Daily	<u>45</u>	
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

### MONITORING REQUIREMENTS

Parameter	Frequency	Sample Type	Sample Location*	
			Influent	Effluent
<input checked="" type="checkbox"/> Flow, [ ] MGD [x] GPD	<u>2/Month</u>	<u>Estimated</u>	_____	<u>X</u>
BOD, 5 - Day, mg/l	<u>2/Month</u>	<u>Grab</u>	_____	<u>X</u>
Solids, Suspended, mg/l	<u>2/Month</u>	<u>Grab</u>	_____	<u>X</u>
Coliform, Fecal, No./100 ml <sup>(3)</sup>	<u>2/Month</u>	<u>Grab</u>	_____	<u>X</u>
Nitrogen, TKN (as N), mg/l	_____	_____	_____	_____
<input type="checkbox"/> Nitrogen, Ammonia (as N), mg/l	_____	_____	_____	_____
<input checked="" type="checkbox"/> pH, SU (standard units)	<u>2/Month</u>	<u>Grab</u>	_____	<u>X</u>
Solids, Settleable, ml/l	<u>2/Month</u>	<u>Grab</u>	_____	<u>X</u>
Chlorine, Total Residual, mg/l <sup>(3)</sup>	<u>2/Month</u>	<u>Grab</u>	_____	<u>X</u>
Phosphorus, Total (as P), mg/l	_____	_____	_____	_____
<input type="checkbox"/> Temperature, Deg. F	_____	_____	_____	_____

- NOTES: <sup>(1)</sup> and effluent value shall not exceed \_\_\_\_\_ % of influent values.  
<sup>(2)</sup> Ultimate Oxygen Demand shall be computed as follows:  

$$UOD = 1.5 \times CBOD_5 + 4.5 \times TKN \text{ (Total Kjeldahl Nitrogen)}$$
  
<sup>(3)</sup> Monitoring of these parameters is only required during the period when disinfection is required.  
<sup>(4)</sup> Emergency discharge of fire foam from units 1 and 2 may be routed to this treatment plant for treatment.

\* Sample shall be obtained prior to combination with roof drains and junction box sump.

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**ACTION LEVEL REQUIREMENTS (TYPE I)**

The parameters listed below have been reported present in the discharge but at levels that currently do not require water quality or technology based limits. Action levels have been established which, if exceeded, will result in reconsideration or water quality or technology based limits.

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 submission of DMR's is not required by this permit, the results shall be maintained in accordance with instructions on the RECORDING, REPORTING AND MONITORING page of this permit.

If any of the action levels is exceeded, the permittee shall undertake a short-term, high-intensity monitoring program for this parameter. Samples identical to those required for routine monitoring purposes shall be taken on each of at least three operating 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 action level was first exceeded. Results may be appended to the DMR or transmitted under separate cover to the addresses listed on the RECORDING, REPORTING AND MONITORING page of this permit. If levels higher than the actions 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 listed parameters at levels which may cause or contribute to a violation of water quality standards.

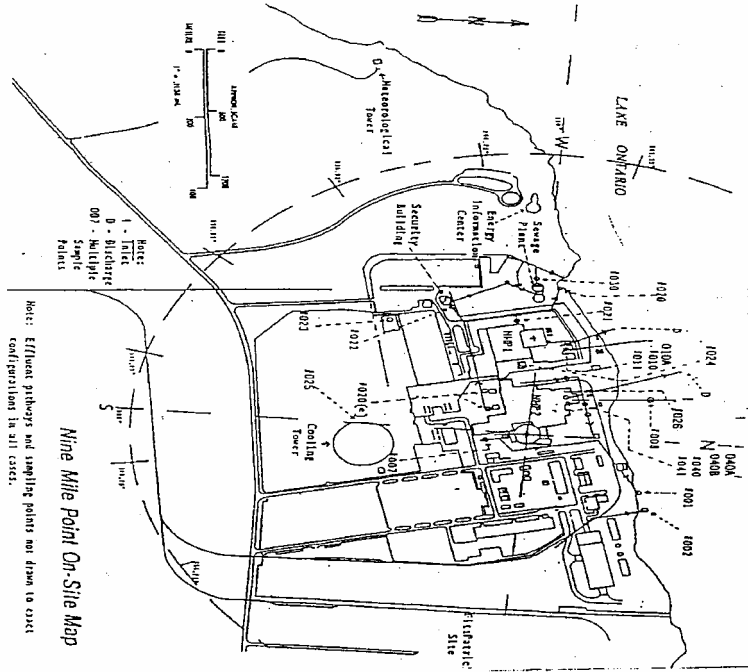
<u>Requirements</u>	<u>Minimum Monitoring</u>			
<u>Outfall Number &amp; Effluent Parameter</u>	<u>Action Level</u>	<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
<u>(1)007 - Floor and Equipment Drains</u>				
Zinc	0.2	mg/l	Quarterly	Grab
<u>040 - Cooling Tower Blowdown and Service Water (Unit 2)</u>				
Iron	1.0	mg/l	Quarterly	Grab

**NOTE:**

1. Since flow for Outfall 007 is difficult to determine, mass limits are not required for this outfall.

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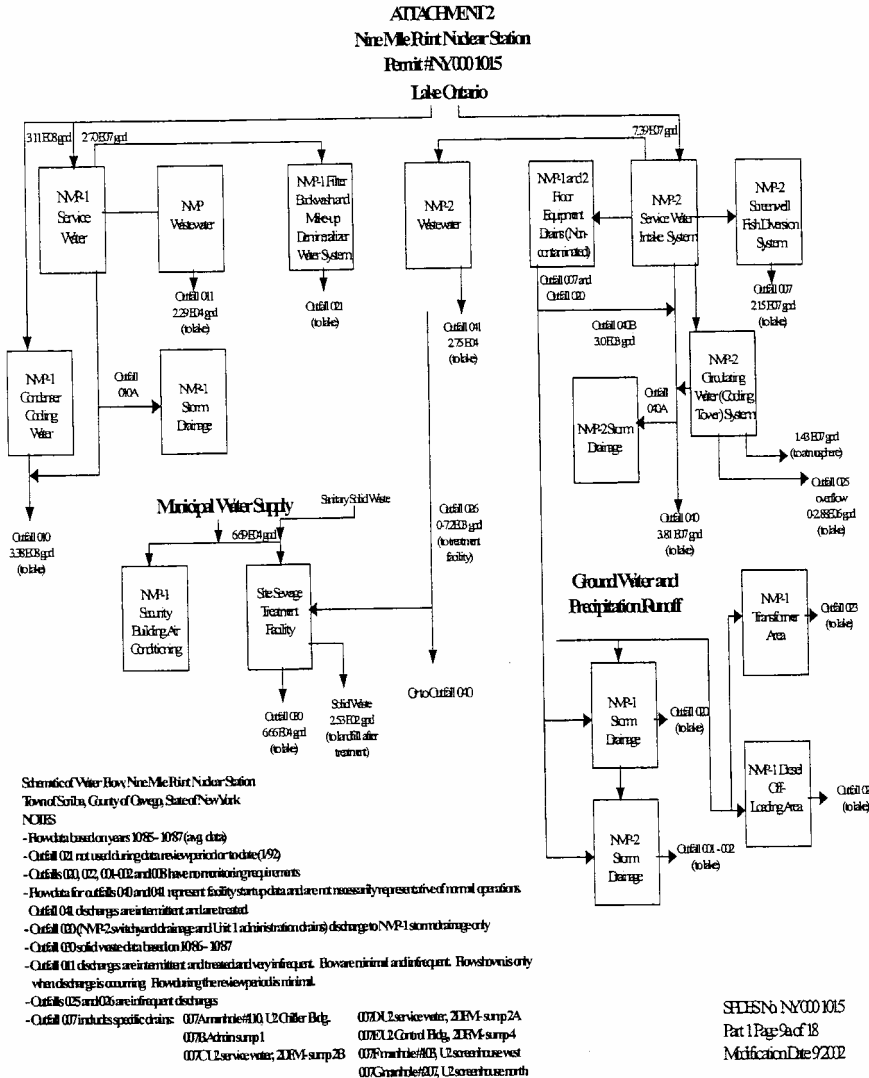
MAP 7

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## 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)



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**ADDITIONAL REQUIREMENTS:**

I. The following requirements are applicable to Units #1 and #2

1. There shall be no discharge of "PCBs" from this facility.
2. In regard to general conditions #11.5, items c and d shall be reported semi-annually to NYSDEC offices in Cortland and Albany.
3. There shall be no discharge of boiler chemical cleaning compounds, metal cleaning wastewater, or boiler blowdown from this facility.
4. Radioactivity  
  
Concentrations of Radioactivity in effluent are subject to the requirements of the U.S. Nuclear Regulatory Commission License Conditions.
5. NMPNS shall notify the Department within one week from the time of submission to the Nuclear Regulatory Commission of any requested changes to the Environmental Protection Plan requirements which could in any way affect the requirements of this permit.
6. NMPNS shall also submit concurrently to the Department any water-related report on the environment it submits to any federal, state, or local agency.
7. The permittee shall provide access to the site at any time to representatives of DEC to assess the environmental impact of its operation of the facility and to review any sampling program methodology, and the gathering and the reporting of any data.
8. No biocides, slimicides, or corrosion control chemicals are authorized for use other than those specifically authorized under this permit. Prior Department approval is required for any additional use of these chemicals as well as for the use of any new water treatment chemicals.
9. 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 in a mixing zone consisting of an area of 425 acres from the point of discharge, this temperature may be exceeded.

II. The following requirements are applicable to Unit #2

No discharge from this facility shall cause violation of the New York State Department of Health regulations contained in 10 NYCRR Part 170 at the source of intake of any water supply used for drinking, culinary or food processing purposes.



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III. Biological Monitoring and Related Matters

1. Previous Biological Monitoring Data - by EDP + 3 months, the permittee shall file with the Chief, Bureau of Environmental Protection in Albany; Fishery Section Head, Cape Vincent Fisheries Station, and with the Regional Supervisor of Natural Resources in Cortland, a report containing and/or identifying all previous reports which contain biological data relating to the ecological effects of plant operation from March 31, 1975 to the present. Previously submitted reports need not be duplicated, but title, date, and data locations must be completely identified. A copy of all unsubmitted reports and data will be sent to the above offices by EDP + 3 months. Data to be reported should include, but are not necessarily limited to, cooling water flows, dates, times, available operating and meteorological conditions, species, numbers impinged and/or entrained and other available biological information.
2. Impingement and Entrainment Abundance Studies
  - a. Impingement abundance studies, including collection efficiencies, shall be conducted at Unit 1. An entrainment abundance study shall be conducted at Unit 1.
  - b. By EDP + 6 months, an impingement and entrainment abundance study plan, of one year duration, to determine the abundance of impinged and entrained aquatic organisms at Unit 1, shall be submitted for approval to the offices listed in III.1 above.
  - c. Studies identified in the approved plan shall begin by EDP + 24 months.
  - d. A six month data summary shall be submitted by EDP + 32 months.
3. Intensity of Sampling and Protocols for Viability, Impingement and Entrainment Abundance Studies
  - a. Study plans required to be submitted for DEC approval should be comparable to previous studies and should consider improvement opportunities, as applicable, provided by protocols established in the document "Dunkirk Station Biological Studies Standard Operating Procedures 1987", prepared for Niagara Mohawk Power Corporation, January 1987, by Beak Consultants, except as modified by the following documents:
    1. January 8, 1987, Richard Koeppicus (DEC) to David Rengert (NiMo) Re: Dunkirk Biological Studies Standard Operating Procedure.
    2. February 13, 1987, Richard Koeppicus (DEC) to David Rengert (NiMo) Re: Condition for Dunkirk Steam Station Standard Operating Procedure.
    3. March 23, 1987, Richard Koeppicus (DEC) to David Rengert (NiMo) Re: Changes to Impingement Viability Studies.
    4. April 22, 1987, David Rengert (NiMo) to Richard Koeppicus (DEC) Re: Dunkirk Steam Station Biological Monitoring Studies.

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- b. The species of concern for detailed studies are white perch, smallmouth bass, yellow perch, alewife, rainbow smelt, white bass and all members of the salmonidae.
- c. Additional Requirement III.3.a. is for guideline purposes only. It is to be used as a basis in developing the study plan of Additional Requirement III.2.a.. The permittee must abide by the study plans developed by the permittee and approved by DEC which define the intensity and protocols for sampling.

4. Reporting of Entrainment and Impingement Studies

- a. A final report incorporating all the biological studies, including procedures, manner of compiling, tests, results, etc. shall be submitted to DEC by EDP + 40 months.
- b. The report shall contain a section which shall indicate the pertinent plant operating data on the days that biological monitoring collections are made and should include, but are not necessarily limited to, the units operating, intake and discharge temperatures, quantity of circulating water, number of pumps operational, amount of recirculation, generation, number of traveling screens operational, etc.
- c. The final report should be concise and rely heavily on graphic or tabular data. As applicable, it should be of similar content, format and quality as the report "Dunkirk Station Biological Studies SPDES Permit No. NY0002321, Final Report, January - December 1987".

5. Report Identification

All required submittals on Biological Monitoring and Related Matters shall be sent to the DEC offices identified in III.1 above, and shall contain the following information on the cover page:

- a. Name of facility and units to which the report pertains.
- b. Permit number.
- c. Permit condition number(s) which the report is to satisfy.
- d. Title of study.
- e. Date.

6. Reduction in Circulating Water Flow Evaluation of Units 1 and 2

The permittee shall evaluate the use of reduced circulating cooling water flow during cool or cold weather periods or under reduced station loads. A report shall be submitted to DEC by EDP + 1 year which identifies any benefits or harm to aquatic organisms from reduced circulating cooling water pump operation and whether such reduced operation of pumps (or variable speed pumps) is feasible for operating the facility.

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7. The permittee shall submit written notification, which shall include detailed descriptions and appropriate figures, to the Department of Environmental Conservation, to the Chief, Bureau of Environmental Protection, Regional Supervisor for Natural Resources and Regional Engineer at least 60 days in advance of any proposed change which would result in the alteration of the permitted operation, location, design, construction or capacity of the cooling water intake structures. 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.
8. All measurements shall use the metric system; except that BTU and degrees Fahrenheit for the thermal survey are acceptable.
9. Copies of all reports and/or studies regarding water and biological parameters related to intake and discharge conditions, or its effects on aquatic organisms, whether generated for this permit or otherwise, shall be sent to DEC offices listed in III.1 above.
10. Biological specimens may be required to be submitted to DEC upon request.
11.
  - a. Electrical output and operation of the condenser cooling water system, including intake and discharge temperature and total flows shall be recorded on a daily basis, as specified in b., below. The appropriate portions of this data set shall be reported with any biological monitoring requirement to be reported where plant operating parameters are essential to understanding the biological impacts of the facility.
  - b. The permittee shall collect and maintain at the station, the following information:
    1. Daily minimum, average, and maximum station electrical output shall be determined and logged.
    2. Daily minimum, average and maximum water use shall be directly or indirectly calculated or logged.
    3. Daily minimum, average, maximum, intake and discharge temperatures shall be logged.
    4. Measurements in 1, 2, and 3 shall be taken on an hourly basis.
  - c. The data in b. above, shall be available for the DEC's inspection at any time and shall be submitted to the DEC within one month of the receipt of a DEC request to do so.
  - d. The data in b. above shall be submitted within 60 days of the end of each calendar year.
12. Chlorine use for once-through systems shall be limited to two hours per unit per day. The treatments may include approved oxidants, i.e. bromine, chlorine, etc.

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**SPECIAL CONDITIONS - BEST MANAGEMENT PRACTICES**

1. The permittee shall develop and implement a Best Management Practices (BMP) plan, within one year of EDP to prevent, or minimize the potential for, release of significant amounts of toxic or hazardous pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; or drainage from raw material storage. If a plan exists, a letter indicating that all requirements addressed in this section must be submitted to this Department within one year of EDP.
2. The permittee shall review all facility components or systems (including material storage areas; in-plant transfer, process and material handling areas; loading and unloading operations; and sludge and waste disposal areas) where toxic or hazardous pollutants are used, manufactured, stored or handled to evaluate the potential for the release of significant amounts of such pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. For hazardous pollutants, the list of reportable quantities as defined in 40 CFR, Part 117 may be used as a guide in determining significant amounts of releases. For toxic pollutants, the relative toxicity of the pollutant shall be considered in determining the significance of potential releases.

The review shall address all substances present at the facility that are listed as toxic pollutants under Section 307(a)(1) of the Clean Water Act or as hazardous pollutants under Section 311 of the Act or that are identified as Chemicals of Concern by the Industrial Chemical Survey.

3. Whenever the potential for a significant release of toxic or hazardous pollutants to State waters is determined to be present, the permittee shall identify Best Management Practices that have been established to minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider typical industry practices such as spill reporting procedures, risk identification and assessment, employee training, inspections and records, preventive maintenance, good housekeeping, materials compatibility and security. In addition, the permittee may consider structural measures (such as secondary containment devices) where appropriate.
4. Development of the BMP plan shall include sampling of waste stream segments for the purpose of toxic "hot spot" identification. The economic achievability of technology-based end-of-pipe treatment will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology.
5. The BMP plan shall be documented in narrative form and shall include any necessary plot plans, drawings or maps. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the plan and may be incorporated by reference. A copy of the BMP plan shall be maintained at the facility and shall be available to authorized Department representatives upon request. As a minimum, the plan shall include the following BMP's:
  - a. BMP Committee
  - b. Reporting of BMP Incidents
  - c. Risk Identification and Assessment
  - d. Employee Training
  - e. Inspections and Records
  - f. Preventive Maintenance
  - g. Good Housekeeping
  - h. Materials Compatibility
  - i. Security

6. The BMP plan shall be modified whenever changes at the facility materially increase the potential for significant releases of toxic or hazardous pollutants or where actual releases indicate the plan is inadequate.

A "hot spot" is a segment of an industrial facility; including but not limited to soil, equipment, material storage areas, sewer lines etc.; which contributes elevated levels of problem pollutants to the wastewater and/or storm water collection system of that facility. For the purposes of this definition, problem pollutants are substances for which end of pipe treatment to meet a water quality or technology requirement may, considering the results of wastestream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is adequately higher than the end of pipe concentration of that same pollutant so as to allow for an economically justify removal and/or isolation of the segment and/or B.A.T. treatment of wastewaters emanating from the segment.

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**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;**

(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 Water Compliance Programs  
625 Broadway  
Albany, New York 12233-3506  
Phone: (518) 402-8154

Oswego County Dept. of Health  
70 Bunner Street  
Oswego, New York 13126

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

Department of Environmental Conservation  
Regional Water Engineer - Region 7  
615 Erie Boulevard - West  
Syracuse, New York 13204-2400

- 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 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.
- g) Calculation 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 Empire State Plaza, Albany, New York 12201.