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Sterling Environmental Engineering, P.C.

NORLITE CORPORATION

REVISED ENGINEERING REPORT AND SPDES PERMIT MODIFICATION APPLICATION

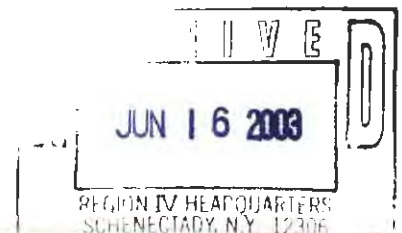
Prepared For:

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July 24, 2001
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NORLITE CORPORATION
REVISED
ENGINEERING REPORT
AND SPDES PERMIT MODIFICATION APPLICATION

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1.0 INTRODUCTION

Sterling Environmental Engineering, P.C. (STERLING) is submitting this Engineering Report and application to modify the existing State Pollutant Discharge Elimination System (SPDES) Permit (Permit ID #0004880) on behalf of Norlite Corporation (Norlite) for the design and operation of a storm water treatment unit. The treatment unit has been designed to treat runoff from the Tanker Staging Area and from the Specification Used Oil Fuel Storage Area, located at the Low Grade Fuel Storage Facility at Norlite. Norlite is located in the City of Cohoes, Albany County, New York. Figure 1, "Site Location Map," shows the general location of the subject property. The New York State Department of Environmental Conservation (NYSDEC) has requested the addition of this storm water treatment unit operation, which will necessitate the modification to the existing SPDES Permit for the Norlite facility.

This Engineering Report contains all of the requirements for a modification to the existing SPDES Permit. The SPDES Permit Application is for discharge of treated storm water from the Tanker Staging Area and from the Specification Used Oil Fuel Storage Area at the Low Grade Fuel Storage Facility to an area that indirectly discharges to the Salt Kill, which is a Class D tributary of the Hudson River. The SPDES Permit Application form is presented as Appendix A. A completed Short Environmental Assessment Form (EAF) is presented as Appendix B.

The Norlite facility is located on the southern boundary of the City of Cohoes, Albany County. The subject property is approximately 220 acres in size, and consists of a shale quarry and an industrial facility that produces lightweight aggregate for construction industries. The subject property has variable topography, however generally slopes downward from west to east.

2.0 PURPOSE AND OBJECTIVES

This Engineering Report has been prepared for the purpose of modifying Norlite's SPDES Permit to manage storm water from the Tanker Staging Area and the Specification Used Oil Fuel Storage Area at the Low Grade Fuel Storage Facility to an area that indirectly discharges to the Salt Kill. This report describes the general features of the existing subject property and proposed improvements, the basis of the unit operation design, and the general operation of the treatment unit. This report also discusses the potential environmental impacts of the proposed design.

3.0 BASIS OF DESIGN

The storm water treatment system has been designed in accordance with the standards set forth in the T.O.G.s 1.2.1 Industrial Permit Writing, 5.1.8 Stormwater Management Guidelines for New Development, and the 1988 NYSDEC publication, "Design Standards for Wastewater Treatment Works".

The storm water treatment system will need to treat an estimated 315,000 gallons per year. This estimate is based on an average precipitation rate of approximately 36 inches per year (not adjusting for evaporation) for Albany, New York. The area of the Tanker Staging Area is approximately 12,000 square feet (ft²) and the area of the Specification Used Oil Fuel Storage Area is approximately 2,000 ft². Thus, the total area collecting precipitation is approximately 14,000 ft². Storm water will be pumped into the Batch Equalization/Preliminary Treatment Tank (Batch Tank) after each significant storm event until the Batch Tank is filled.

The treatment system consists of a 20,000-gallon Batch Tank for settling and a pair of Activated Carbon Vessels as described in more detail in Section 4.0.

The Tanker Staging Area has an impermeable membrane liner and the Specification Used Oil Fuel Storage Area has concrete secondary containment beneath the steel tanks within the area. Both of these are designed to contain 100% of the capacity of the largest tank and to contain precipitation from a 25-year, 24-hour rainfall event. For the 14,000 ft² combined collection area, the volume of precipitation from such a storm would be approximately 35,000 gallons. As the Batch Tank is 20,000 gallons, there will be events when it will take more than one batch to treat the contained volume of precipitation. The containment systems of both the Tanker Staging Area and the Specification Used Oil Fuel Storage Area are designed to accommodate this temporary storage.

4.0 PROPOSED FACILITIES

The proposed treatment system will be located in the approximate location shown on Plate 1 and will consist of a batch-settling tank and a pair of Activated Carbon Vessels. The schematic arrangement of these treatment steps is shown in Figure 2. The batch-settling tank will be used for primary settling. Also the batch-settling tank will contain oil absorbent floats. The Activated Carbon Vessels are designed for the removal of trace organic components. These components are described in more detail in the following sections.

4.1 Storm Water Intake Devices

The Specification Used Oil Fuel Storage Area has a designated sump area equipped with a pump. The Tanker Staging Area has one corner that is the lowest point in that area. A pump attached to a flexible hose will be placed in a standard sump can with a filter fabric wrap at this low point.

4.2 Batch Equalization/Preliminary Treatment Tank

The Batch Tank is designed to provide chemical equalization, flow equalization, and primary treatment of storm water runoff for settleable solids and floating oils.

The Batch Tank is cylindrical in shape with hemispherical ends and is approximately 40 feet long by 10 feet in diameter with a capacity of approximately 20,000 gallons. The Batch Tank is constructed of steel of approximately ½-inch thickness and is epoxy-lined.

The Batch Tank will be supported to distribute the weight of the tank and its contents along its long axis.

The outlet of the tank will be approximately 18 inches above the bottom. The volume of the tank beneath the 18-inch level will function as a quiescent volume in which settleable material will accumulate. Periodically, the tank will be emptied, the port removed, and the solids in the bottom will be removed for proper disposal according to local, State and Federal requirements.

Preliminary treatment of floating oils will be provided by the placement of oil absorbent booms.

Oil absorbent booms will provide primary treatment to the storm water by absorbing floating and dissolved oils and petroleum.

The oil absorbent booms will be periodically removed for proper disposal according to local, State and Federal requirements, and additionally replaced at the same time that the accumulated solids are removed from the tank.

4.3 Carbon Treatment

On a batch basis, storm water from the Batch Tank will be passed through the Activated Carbon Vessels for treatment. This treatment will provide secondary and tertiary treatment of the storm water.

4.3.1 Loading Rate

The design normal loading rate for the treatment system will be 2,500 gallons per hour (gph) with a maximum loading rate of 5,000 gph.

4.3.2 Batch Treatment Sessions

The volume of accumulated storm water in the Batch Tank, up to 20,000 gallons per batch, will be treated by pumping through the Activated Carbon Vessels. On average, the treatment of storm water will take place in approximately 15 to 18 batch treatment sessions during the year. The system has the capability to treat individual batches in eight (8) hours at the design flow rate.

4.3.3 Capacity of Carbon Adsorbent

Each Activated Carbon Vessel would last 3.3 years based on the storm water characteristics identified by an analysis (see Appendix C).

4.4 Activated Carbon Vessel

The Activated Carbon Vessel, as shown in Figure 2, is approximately 80 inches tall in the cylindrical portion and 48 inches in diameter. This provides approximately 1,810 square inches or 12.57 ft² of cross-sectional surface area. The loading rate will be 3.3 gallons per minute/square foot (gpm/ft²) of storm water from the Batch Tank. The surface area of the Activated Carbon Vessel is sufficient to handle the total design flow.

The proposed carbon treatment vessel has been evaluated with respect to the following components of typical design standards.

4.4.1 Distribution

Storm water will enter the influent pipe at one end of the Activated Carbon Vessel.

4.4.2 Carbon Media

The activated carbon media will be supplied by Calgon Carbon Corporation or will be an equivalent material. Approximately 2,400 pounds of granular carbon media will be added to the Activated Carbon Vessel. Each pound of carbon media can absorb approximately one tenth of a pound of petroleum. The carbon media will provide tertiary treatment to the storm water by adsorbing oils, petroleum and organics.

4.4.3 Replacement of Carbon Adsorbent

Each year the carbon adsorbent in the Activated Carbon Vessel will be replaced with new materials. The adsorbent will be removed for proper disposal according to local, State and Federal requirements.

4.4.4 Effluent Collection and Discharge

The treated effluent will drain through perforated collection pipes inside the vessel and will be discharged to the existing storm water drainage swale on the west side of the closed landfill via a force-main. The outlet will be anchored such that the outfall discharges onto a fan of riprap approximately four (4) feet in length to dissipate the velocity of effluent and minimize erosion. This outfall will also serve as the compliance monitoring point for sampling. The existing drainage swale on the west side of the landfill flows from north to south and enters the Salt Kill via existing outfall 007.

4.5 Flow Measurement

Flow measurement will be accomplished through use of a totalizer meter.

5.0 UNIT OPERATIONS AND MAINTENANCE

The system proposed is simple in its design and operation, and requires minimal operator attention. The system will undergo two (2) inspections per year; once following system start-up and once following initial shakedown of operations.

Monitoring will be for the following parameters:

- Temperature (°F);
- pH;
- Total Suspended Solids; and
- Oil and Grease.

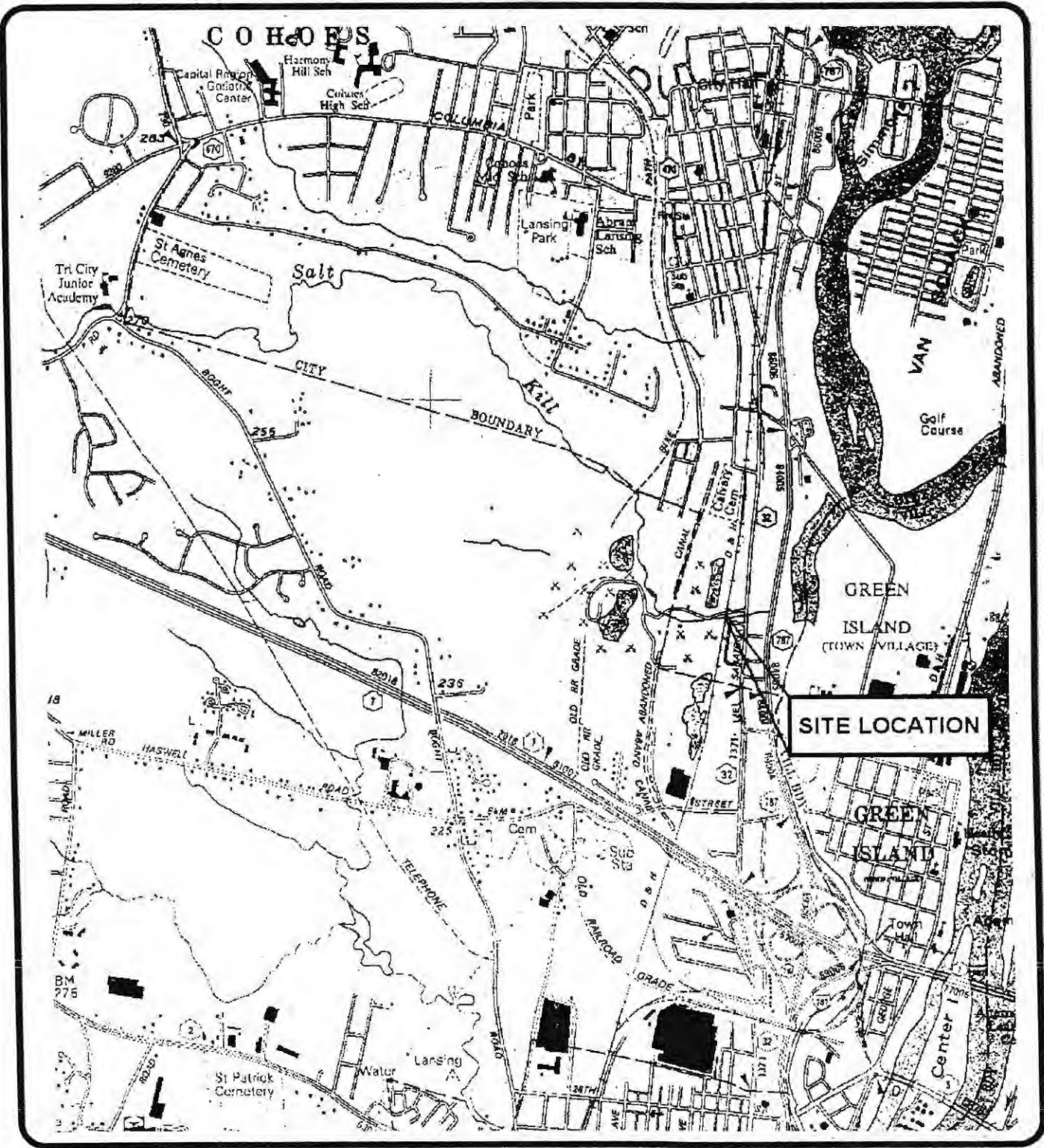
6.0 ENVIRONMENTAL CONDITIONS

A completed Short Form EAF is attached as Appendix B. The proposed project is expected to have a positive impact upon the surrounding environment in that it provides for the treatment of storm water.

The proposed project is consistent with the prevailing land use in the vicinity of the property, which is industrial in nature. There are no significant habitats, historic or aesthetic resources on the subject property that would be affected by the project.

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FIGURES



SITE LOCATION

GREEN ISLAND (TOWN VILLAGE)

STERLING

Sterling Environmental Engineering, P.C.

One Columbia Circle, Albany, New York 12203

Figure 1

Site Location

NORLITE FACILITY

COHOES, NY

PROJ. No.: E21033

Date: 6/02/03

SCALE: 1" = 2,000'

Dwg. No.: 21033001

FIGURE 1

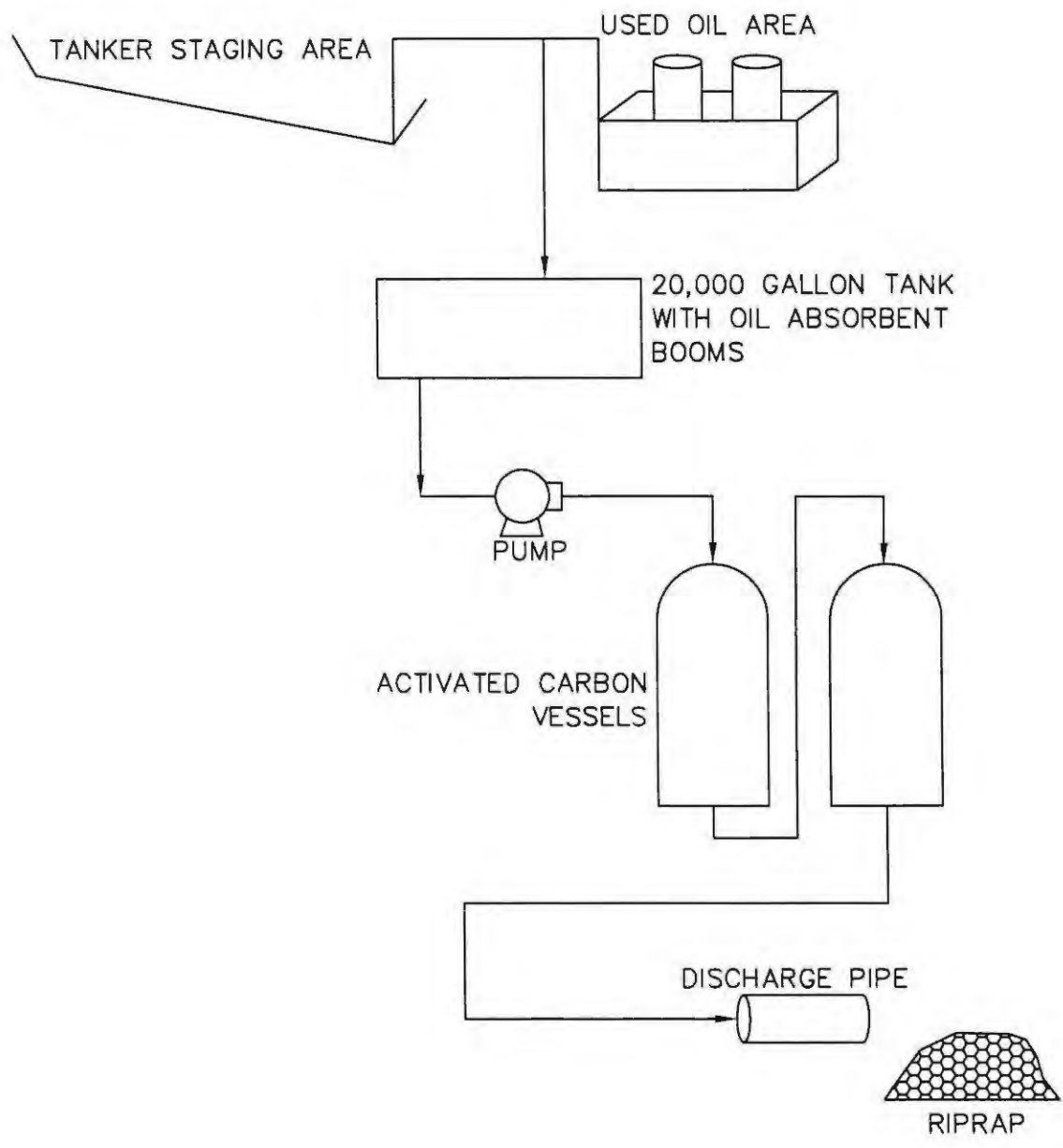


FIGURE 2

STERLING

Sterling Environmental Engineering, P.C.
 One Columbia Circle • Albany, New York 12203

TREATMENT SYSTEM SCHEMATIC
 NORLITE CORPORATION

VILLAGE OF COHOES

ALBANY CO., N.Y.

APPENDIX A

**STATE POLLUTANT DISCHARGE ELIMINATION
SYSTEM (SPDES) PERMIT APPLICATION FORM**

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C
 For New Permits and Permit Modifications to Discharge Industrial Wastewater and Storm Water
Section I - Permittee and Facility Information

Please type or print the requested information.

1. Current Permit Information (leave blank if for new discharge)

SPDES Number: NY-0004880	DEC Number: 4-0103-16/00020
-----------------------------	--------------------------------

2. Permit Action Requested: (Check applicable box)

<input type="checkbox"/> A NEW proposed discharge	<input type="checkbox"/> An EBPS INFORMATION REQUEST response	<input type="checkbox"/> A RENEWAL of an existing SPDES permit
<input checked="" type="checkbox"/> A MODIFICATION of the existing permit	<input type="checkbox"/> An EXISTING discharge currently without permit	

Does this request include an increase in the quantity of water discharged from your facility to the waters of the State?

YES - Describe the increase:

NO - Go to Item 3. below.

The new discharge of storm water from the Tanker Staging Area and the Specification Used Oil Fuel Storage Area at 315,000 gallons per year.

3. Permittee Name and Address

Name Norlite Corporation		Attention William Morris	
Street Address 628 South Saratoga Street			
City or Village Cohoes		State NY	ZIP Code 12047

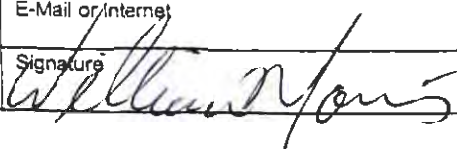
4. Facility Name, Address and Location

Name Norlite Corporation			
Street Address 628 South Saratoga Street		P.O. Box	
City or Village Cohoes		State NY	ZIP Code 12047
Town		County Albany County	
Telephone 518/235-0401	FAX 518/235-0233	NYTM - E	NYTM - N 4
Tax Map Info (New York City, Nassau County and Suffolk County only)			
Section	Block	Subblock	Lot

5. Facility Contact Person

Name Timothy F. Lachell		Title Plant Manager	
Street Address 628 South Saratoga Street		P.O. Box	
City or Village Cohoes		State NY	ZIP Code 12047
Telephone 518/235-0401	FAX 518/235-0233	E-Mail or Internet	
ext. 4037			

6. Discharge Monitoring Report (DMR) Mailing Address

Mailing Name Norlite Corporation			
Street Address 628 South Saratoga Street		P.O. Box	
City or Village Cohoes		State NY	ZIP Code 12047
Telephone 518/235-0401	FAX 518/235-0233	E-Mail or Internet	
Name and Title of person responsible for signing DMRs William Morris		Signature 	

INDUSTRIAL APPLICATION FORM NY-2C
Section I - Permittee and Facility Information

Facility Name: <p align="center">Norlite Corporation</p>	SPDES Number: <p align="center">NY-0004880</p>
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7. Summarize the outfalls present at the facility:

Outfall Number	Receiving Water	Type of discharge
003	Salt Kill Creek	Quarry Water
004	Salt Kill Creek	Shale Fines, Leachate & Stormwater Runoff from Landfill area
006	Mohawk River	Scrubber blowdown, non-contact cooling water, and boiler blowdown wastewater treatment discharges
007	Salt Kill Creek	Storm runoff

8. Map of Facility and Discharge Locations:

Provide a detailed map showing the location of the facility, all buildings or structures present, wastewater discharge systems, outfall locations into receiving waters, nearby surface water bodies, water supply wells, and groundwater monitoring wells, and attach it to this application. Also submit proof, either by indication on the map or other documentation, that a right of way for the discharges exists from the facility property to a public right of way.

See Figure 2 in Engineering Report.

9. Water Flow Diagram:

See Figure 2 in Engineering Report.

INDUSTRIAL APPLICATION FORM NY-2C
Section I - Permittee and Facility Information

Facility Name: Norlite Corporation	SPDES Number: NY-0004880
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15. Facility Ownership: (Place an "X" in the appropriate box)

Corporate Sole Proprietorship Partnership Municipal State Federal Other

Are any of the discharges applied for in this application on Indian lands? Yes No

16. List information on any other environmental permits for this facility:

Issuing Agency	Permit Type	Permit Number	Permit Status		
			Active	Applied for	Inactive
NYSDEC	Mining	4-103-16/19-0	X		
NYSDEC	373	4-0103-16/16-0	X		
NYSDEC	Air Title V	4-0103-16/00048	X		
NYSDEC	PBS	4-052574	X		
NYSDEC	SW	4-0103-16/24-0			X
NYSDEC	Haz. Blk. Storage	4000198	X		

17. Laboratory Certification:

Were any of the analyses reported in Section III of this application performed by a contract laboratory or a consulting firm?

YES - Complete the following table.

NO - Go to Item 18 below.

Name of laboratory or consulting firm	Address	Telephone (area code and number)	Pollutants analyzed
Adirondack Environmental Services, Inc.	314 North Pearl Street Albany, NY 12207	518/434-4546	TSS Total Settleable Solids O&G TPH TOC

18. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title (type or print) William Morris		Date signed <i>6/11/03</i>
Signature <i>William Morris</i>	Telephone number 518/235-0401	FAX number 518/235-0233

INDUSTRIAL APPLICATION FORM NY-2C

Section I - Permittee and Facility Information

Facility Name: Norlite Corporation	SPDES Number: NY-0004880
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19. Industrial Chemical Survey (ICS)

Complete all information for those substances your facility has used, produce, stored, distributed, or otherwise disposed of in the past five (5) years at or above the threshold values listed in the instructions. Include substances manufactured at your facility, as well as any substances that you have reason to know or believe present in materials used or manufactured at your facility. Do not include chemicals used only in analytical laboratory work, or small quantities of routine household cleaning chemicals. Enter the name and CAS number for each of the chemicals listed in Tables 6-10 of the instructions, and the table number which lists the chemical. You may use ranges (e.g. 10-100 lbs., 100-1000 lbs., etc) to describe the quantities used on an annual basis as well as for the amount presently on hand. For those chemicals listed in Tables 6, 7, or 8 which are indicated as being potentially present in the discharge for one or more outfalls at the facility, indicate which outfalls may be affected in the appropriate column below, and include sampling results in Section III of this application for each of the potentially affected outfalls.

Make additional copies of this sheet if necessary.

Name of Substance	Table	CAS Number	Average Annual Usage	Amount Now On Hand	Units (gallons, lbs, etc)	Purpose of Use (see codes in Table 2 of instructions)	Present in Discharge? (Outfall(s)?)
1,1,1-trichloroethane	6	71-55-6	327,871.25	Varies	lbs	OTH ²	NA ³
1,1,2-trichloro-1,2,2-trifluoroethane	9	76-13-1	77,416.13	Varies	lbs	OTH ²	NA ³
1,1,2-trichloroethane	6	79-00-5	20,018.81	Varies	lbs	OTH ²	NA ³
2,4,5-TP Silvex	NL ¹	93-72-1	0.10	Varies	lbs	OTH ²	NA ³
2,4,5-trichlorophenol	8	95-95-4	14,344.18	Varies	lbs	OTH ²	NA ³
2,4,6-trichlorophenol	NL ¹	88-06-2	14,344.18	Varies	lbs	OTH ²	NA ³
2,4-dichlorophenoxyacetic acid (2,4-D)	7	94-75-7	12.85	Varies	lbs	OTH ²	NA ³
acetic acid	10	64-19-7	40,339.39	Varies	lbs	OTH ²	NA ³
acetone	7	67-64-1	602,455.34	Varies	lbs	OTH ²	NA ³
acetonitrile	8	75-05-8	1,041,708.91	Varies	lbs	OTH ²	NA ³
acrylonitrile	6	107-13-1	104.56	Varies	lbs	OTH ²	NA ³
aniline	7	62-53-3	15,721.99	Varies	lbs	OTH ²	NA ³
anthracene	6	120-12-7	442.67	Varies	lbs	OTH ²	NA ³
benzene	6	71-43-2	178,455.74	Varies	lbs	OTH ²	NA ³
benzo(a)pyrene	6	50-32-8	1,059.63	Varies	lbs	OTH ²	NA ³
benzo(ghi)perylene	6	191-24-2	0.00	Varies	lbs	OTH ²	NA ³
benzo(k)fluoranthene	6	207-08-9	101.45	Varies	lbs	OTH ²	NA ³
benzoic acid	10	65-85-0	11,502.53	Varies	lbs	OTH ²	NA ³
bomyl	10	122-10-1	0.04	Varies	lbs	OTH ²	NA ³
butyl acetate	10	123-86-4	364,990.09	Varies	lbs	OTH ²	NA ³
butylbenzyl phthalate	6	85-68-7	12,987.00	Varies	lbs	OTH ²	NA ³
carbon disulfide	8	75-15-0	69,423.97	Varies	lbs	OTH ²	NA ³
carbon tetrachloride	6	56-23-5	25,034.58	Varies	lbs	OTH ²	NA ³
chlordane	6	57-74-9	332.64	Varies	lbs	OTH ²	NA ³
chlorobenzene	6	108-90-7	23,760.21	Varies	lbs	OTH ²	NA ³
chloroform	6	67-66-3	60,946.17	Varies	lbs	OTH ²	NA ³
chrysene	6	218-01-9	782.41	Varies	lbs	OTH ²	NA ³
creosote	10	8001-58-9	25,351.05	Varies	lbs	OTH ²	NA ³
cresol	NL ¹	108-39-4	63,081.69	Varies	lbs	OTH ²	NA ³
cumene	NL ¹	98-82-8	12,344.52	Varies	lbs	OTH ²	NA ³
cyclohexane	10	110-82-7	155,127.07	Varies	lbs	OTH ²	NA ³
cyclohexanone	10	108-94-1	24,579.79	Varies	lbs	OTH ²	NA ³

This completes Section I of the SPDES Industrial Application Form NY-2C. Section II, which requires specific information for each of the outfalls at your facility, and Section III, which requires sampling information for each of the outfalls at your facility, must also be completed and submitted with this application.

INDUSTRIAL APPLICATION FORM NY-2C
Section I – Permittee and Facility Information

Name of Substance	Table	CAS Number	Average Annual Usage	Amount Now On Hand	Units (gallons, lbs, etc)	Purpose of Use (see codes in Table 2 of instructions)	Present in Discharge? (Outfall(s)?)
dibenzo(ah)anthracene	6	53-70-3	0.00	Varies	lbs	OTH ²	NA ³
dichlorobenzene	NL ¹	106-46-7	22,209.30	Varies	lbs	OTH ²	NA ³
dimethyl formamide	9	68-12-2	54,561.61	Varies	lbs	OTH ²	NA ³
di-n-octyl phthalate	NL ¹	117-84-0	26,173.20	Varies	lbs	OTH ²	NA ³
dinoseb	7	88-85-7	31.59	Varies	lbs	OTH ²	NA ³
dodecylbenzenesulfonic acid	10	25155-30-0	10,613.00	Varies	lbs	OTH ²	NA ³
ethanol	NL ¹	64-17-5	887,003.68	Varies	lbs	OTH ²	NA ³
ethyl acetate	10	141-78-6	265,873.19	Varies	lbs	OTH ²	NA ³
ethyl acrylate	10	140-88-5	32,667.01	Varies	lbs	OTH ²	NA ³
ethyl ether	10	60-29-7	102,801.04	Varies	lbs	OTH ²	NA ³
ethylbenzene	6	100-41-4	93,819.25	Varies	lbs	OTH ²	NA ³
ethylene glycol	7	107-21-1	23,958.25	Varies	lbs	OTH ²	NA ³
ethylene glycol monoethyl ether	NL ¹	110-80-5	22,776.96	Varies	lbs	OTH ²	NA ³
fluoranthene	6	206-44-0	1,534.74	Varies	lbs	OTH ²	NA ³
formaldehyde	8	50-00-0	21,817.92	Varies	lbs	OTH ²	NA ³
guthion	10	86-50-0	0.10	Varies	lbs	OTH ²	NA ³
heptachlor	6	76-44-8	332.54	Varies	lbs	OTH ²	NA ³
heptane	NL ¹	142-82-5	390,031.18	Varies	lbs	OTH ²	NA ³
hexachlorobenzene	6	118-74-1	1,513.43	Varies	lbs	OTH ²	NA ³
hexachlorobutadiene	6	87-68-3	1,693.60	Varies	lbs	OTH ²	NA ³
hexachloroethane	6	67-72-1	901.97	Varies	lbs	OTH ²	NA ³
hexane	NL ¹	110-54-3	540,692.75	Varies	lbs	OTH ²	NA ³
isobutanol	NL ¹	78-83-1	159,415.99	Varies	lbs	OTH ²	NA ³
isophorone	NL ¹	78-59-1	15,200.06	Varies	lbs	OTH ²	NA ³
isopropanol	NL ¹	67-63-0	839,991.66	Varies	lbs	OTH ²	NA ³
m-cresol	NL ¹	108-39-4	22,802.29	Varies	lbs	OTH ²	NA ³
mercury	6	7439-97-6	6.33	Varies	lbs	OTH ²	NA ³
methanol	10	67-56-1	2,259,631.38	Varies	lbs	OTH ²	NA ³
methoxychlor	7	72-43-5	0.10	Varies	lbs	OTH ²	NA ³
methyl acetate	10	79-20-9	460,731.36	Varies	lbs	OTH ²	NA ³
methyl ethyl ketone	NL ¹	78-93-3	559,998.20	Varies	lbs	OTH ²	NA ³
methyl isobutyl ketone	10	108-10-1	284,864.48	Varies	lbs	OTH ²	NA ³
methyl methacrylate	7	80-62-6	27,218.29	Varies	lbs	OTH ²	NA ³
methylene chloride	6	75-09-2	523,985.94	Varies	lbs	OTH ²	NA ³
naphthalene	6	91-20-3	24,897.06	Varies	lbs	OTH ²	NA ³
n-butanol	NL ¹	71-36-3	385,282.99	Varies	lbs	OTH ²	NA ³
nitrobenzene	6	98-95-3	10,403.90	Varies	lbs	OTH ²	NA ³
o-cresol	NL ¹	95-48-7	22,802.90	Varies	lbs	OTH ²	NA ³
o-toluidine	7	95-53-4	11,994.69	Varies	lbs	OTH ²	NA ³
PCB's	NL ¹	1336-36-3	0.00	Varies	lbs	OTH ²	NA ³
p-cresol	NL ¹	106-44-5	22,802.88	Varies	lbs	OTH ²	NA ³
pentachlorophenol	NL ¹	87-86-5	14,345.60	Varies	lbs	OTH ²	NA ³
phenanthrene	6	85-01-8	1,660.02	Varies	lbs	OTH ²	NA ³
phenol	6	108-95-2	504,097.96	Varies	lbs	OTH ²	NA ³
pyrene	6	129-00-0	0.02	Varies	lbs	OTH ²	NA ³
pyridine	7	110-86-1	175,665.60	Varies	lbs	OTH ²	NA ³

This completes Section I of the SPDES Industrial Application Form NY-2C. Section II, which requires specific information for each of the outfalls at your facility, and Section III, which requires sampling information for each of the outfalls at your facility, must also be completed and submitted with this application.

INDUSTRIAL APPLICATION FORM NY-2C
Section I – Permittee and Facility Information

Name of Substance	Table	CAS Number	Average Annual Usage	Amount Now On Hand	Units (gallons, lbs, etc)	Purpose of Use (see codes in Table 2 of instructions)	Present in Discharge? (Outfall(s)?)
styrene	7	100-42-5	92,690.59	Varies	lbs	OTH ²	NA ³
tetrachloroethylene	6	127-18-4	331,320.37	Varies	lbs	OTH ²	NA ³
tetrahydrofuran	9	109-99-9	567,803.47	Varies	lbs	OTH ²	NA ³
thallium	6	7440-28-0	0.36	Varies	lbs	OTH ²	NA ³
toluene	6	108-88-33	2,993,148.45	Varies	lbs	OTH ²	NA ³
trichlorobenzene	NL ¹	120-82-1 / 108-70-3 / 87-61-6	1,710.13	Varies	lbs	OTH ²	NA ³
trichloroethylene	NL ¹	79-01-6	425,656.72	Varies	lbs	OTH ²	NA ³
trichlorofluoromethane	7	75-69-4	17,030.20	Varies	lbs	OTH ²	NA ³
triethylamine	10	121-44-8	18,989.65	Varies	lbs	OTH ²	NA ³
xylene	NL ¹	1330-20-7	791,835.83	Varies	lbs	OTH ²	NA ³
zinc bromide	10	7699-45-8	24,959.54	Varies	lbs	OTH ²	NA ³
zinc phosphide	10	1314-87-7	0.06	Varies	lbs	OTH ²	NA ³

FOOTNOTES

NL¹ – “Not Listed” in Tables 6-10.

OTH² – Incineration Process.

NA³ – “Not Applicable”, The list of chemicals contained in this section was derived from the profiles of the wastestreams that have been accepted for disposal through the years 1997 up to and including 2002. The potential exists, although highly unlikely, for any one of the above chemicals to be present in the influent due to stormwater coming into contact with the truck that are parked in the truck staging area. All influent will be processed through the carbon filters removing the chemicals before being discharged, as described in the application.

This completes Section I of the SPDES Industrial Application Form NY-2C. Section II, which requires specific information for each of the outfalls at your facility, and Section III, which requires sampling information for each of the outfalls at your facility, must also be completed and submitted with this application.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C
 For New Permits and Permit Modifications to Discharge Industrial Wastewater and Storm Water
Section II - Outfall Information

Please type or print the requested information.

Facility Name: Norlite Corporation	SPDES Number: NY-0004880
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1. Outfall Number and Location

Outfall No.: 008			Receiving Water: Salt Kill Creek
Latitude: ° ' "	Longitude: ° ' "		

2. Type of Discharge and Discharge Rate (List all information applicable to this outfall)

	Volume/Flow	Units				Volume/Flow	Units		
		MGD	GPM	Other (specify)			MGD	GPM	Other (specify)
a. Process Wastewater					f. Noncontact Cooling Water				
b. Process Wastewater					g. Remediation System Discharge				
c. Process Wastewater					h. Boiler Blowdown				
d. Process Wastewater					i. Storm Water				
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):	Storm Water - Membrane-lined Tanker Storage Area					740		GPD	
l. Other discharge (specify):	Storm Water - Specification Used Oil Fuel Area					120		GPD	

3. List process information for the Process Wastewater streams identified in 2.a-d above:

a. Name of the process contributing to the discharge			Process SIC code:
Describe the contributing process	Category	Quantity per day	Units of measure
	Subcategory		
b. Name of the process contributing to the discharge			Process SIC code:
Describe the contributing process	Category	Quantity per day	Units of measure
	Subcategory		
c. Name of the process contributing to the discharge			Process SIC code:
Describe the contributing process	Category	Quantity per day	Units of measure
	Subcategory		
d. Name of the process contributing to the discharge			Process SIC code:
Describe the contributing process	Category	Quantity per day	Units of measure
	Subcategory		

4. Expected or Proposed Discharge Flow Rates for this outfall:

a. Total Annual Discharge 0.315 MG	b. Daily Minimum Flow 0 MGD	c. Daily Average Flow 860 GD	d. Daily Maximum Flow 30,000 GD	e. Maximum Design flow rate 30,000 GD
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**INDUSTRIAL APPLICATION FORM NY-2C
Section II - Outfall Information**

Facility Name: <p align="center">Norlite Corporation</p>	Outfall No.: <p align="center">008</p>
SPDES Number: <p align="center">NY-0004880</p>	

5. Is this a seasonal discharge?

YES - Complete the following table.
 NO - Go to Item 6 below.

Operations contributing flow (list)	Discharge frequency		Flow				
	Batches per year	Duration per batch	Flow rate per day		Total volume per discharge	Units	Duration (Days)
			LTA	Daily Max			

6. Water Supply Source (indicate all that apply)

	Name or owner of water supply source	Volume or flow rate	Units (check one)		
Municipal Supply			MGD	GPD	GPM
Private Surface Water Source			MGD	GPD	GPM
Private Supply Well			MGD	GPD	GPM
Other (specify)			MGD	GPD	GPM

7. Outfall configuration: (Surface water discharges only)

A. Where is the discharge point located with respect to the receiving water?

In the streambank:
 In the stream:
 Within a lake or ponded water:
 Within an estuary: Attach Supplement C, MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES.
 Discharge is equipped with diffuser: Attach description, including configuration and plan drawing of diffuser, if used.

B. If located in a stream, approximately what percentage of stream width from shore is the discharge point located?

10% 25% 50% Other:

C. If located in a stream, describe the stream geometry in the general vicinity of the discharge point, under low flow conditions:

Stream width	Stream depth	Stream velocity
Feet	Feet	Feet/Sec

Are the results of a mixing/diffusion study attached? YES
 NO

INDUSTRIAL APPLICATION FORM NY-2C
Section II - Outfall Information

Facility Name: <p align="center">Norlite Corporation</p>	Outfall No.: <hr/> SPDES Number: <p align="center">NY-0004880</p>
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11. Is the discharge from this outfall treated to remove process wastes, water treatment additives, or other pollutants?

- YES - Complete the following table. Treatment codes are listed in Table 4.
- NO - Go to Item 12 below.

Treatment process	Treatment Code(s)	Treatment used for the removal of:	Design Flow Rate (include units)
Sedimentation (skimming)	1 U	Floating oils, settleable solids	5,000 gallons/hr
Sorption	1 X	Oils	5,000 gallons/hr
Carbon Adsorption	2 A	Oils	5,000 gallons/hr

12. Does this facility have either a compliance agreement with a regulating agency, or have planned changes in production, which will materially alter the quantity and/or quality of the discharge from this outfall?

- YES - Complete the following table.
- NO - Go to Section III on the following page.

Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

This completes Section II of the SPDES Industrial Application Form NY-2C. Section I, which requires general information regarding your facility, and Section III, which requires sampling information for each of the outfalls at your facility, must also be completed and submitted with this application.

INDUSTRIAL APPLICATION FORM NY-2C
Section III - Sampling Information

Facility Name: Norlite Corporation	SPDES No.: NY-0004880
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Outfall No.: 008

1. Sampling Information - Conventional Parameters

Provide the analytical results of at least one analysis for every pollutant in this table. If this outfall is subject to a waiver as listed in Table 5 of the instructions for one or more of the parameters listed below, provide the results for those parameters which are required for this type of outfall.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (using the same format) instead of completing this page.

Pollutant	Effluent data						Units		Intake data (optional)			
	a. Maximum daily value		b. Maximum 30 day value		c. Long term average		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		b. Number of analyses
	1. Concentration	2. Mass	1. Concentration	2. Mass	1. Concentration	2. Mass				1. Concentration	2. Mass	
a. Biochemical Oxygen Demand, 5 day (BOD)												
b. Chemical Oxygen Demand (COD)												
c. Total Suspended Solids (TSS)	81/25				36/25			mg/l				3
d. Total Dissolved Solids (TDS)	81/500				36/500			mg/l				3
e. Oil & Grease	62/15				28/15			mg/l				3
f. Chlorine, Total Residual (TRC)												
g. Total Organic Nitrogen (TON)												
h. Ammonia (as N)												
i. Flow	Value		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value		Value		Value					Value		
l. pH	Minimum	Maximum	Minimum	Maximum						Minimum	Maximum	

***NOTE:** ENTRIES CONSIST OF INFLUENT CONCENTRATION CONFIRMED BY GRAB TESTING/ESTIMATED EFFLUENT CONCENTRATION.

2. Sampling Information - Priority Pollutants, Toxic Pollutants, and Hazardous Substances

a. Primary Industries: i. Does the discharge from this outfall contain process wastewater?

Yes - Go to Item ii. below.
 No - Go to Item b. below.

ii. Indicate which GC/MS fractions have been tested for: Volatiles:

Acid: Base/Neutral: Pesticide:

b. All applicants:

i. Do you know or have reason to believe that any of the pollutants listed in Tables 6, 7, or 8 of the instructions are present in the discharge from this outfall?

Yes - Concentration and mass data attached.
 No - Go to Item ii. below.

ii. Do you know or have reason to believe that any of the pollutants listed in Table 9 or Table 10 of the instructions, or any other toxic, harmful, or injurious chemical substances not listed in Tables 6-10, are present in the discharge from this outfall?

Yes - Source or reason for presence in discharge attached
 Yes - Quantitative or qualitative data attached
 No

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

Facility Name: Norlite Corporation	SPDES No.: NY-0004880
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Outfall No.: 008

3. Projected Effluent Quality - Priority Pollutants, Toxic Pollutants, and Hazardous Substances

Provide analytical results of at least one analysis for each pollutant that you know or have reason to believe is present in this discharge, as well as for any GC/MS fractions and metals required to be sampled from Section III Forms, Item 2.a on the preceding page.

Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data d. Number of analysis	Believed present, no sampling results available (see disclaimer)	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value				
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass			
1,1,1-trichloroethane CAS Number: 71-55-6											<5 ug/l		1	
1,1,2-trichloro-1,2,2-trifluoroethane CAS Number: 76-13-1														X
1,1,2-trichloroethane CAS Number: 79-00-5											<5 ug/l		1	
1,1-dichloroethylene CAS Number: 75-35-4														X
1,1,2-trichloroethane CAS Number: 79-00-5														X
1,2-dibromobenzene CAS Number: 583-53-9														X
1,1-diphenyl CAS Number: 92-52-4														X
1,2-dichloroethane CAS Number: 107-06-2											<5 ug/l		1	
1,2-dichlorobenzene CAS Number: 95-50-1											<10 ug/l		1	
1,2-dichloropropane CAS Number: 78-87-5											<5 ug/l		1	
1,2-dichloroethylene CAS Number: 540-59-0														X
1,3,5-trimethylbenzene CAS Number: 108-67-8														X
1,2,4-trimethylbenzene CAS Number: 95-63-6														X
1,4-dichloro-2-butene CAS Number: 764-41-0														X
1,3-dichlorobenzene CAS Number: 541-73-1											<10 ug/l		1	
1,4-dioxane CAS Number: 123-91-1														X

INDUSTRIAL APPLICATION FORM NY - 2C

Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.i. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 2 of 12
Pollutant and CAS Number	Effluent Data						Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analysis	a. Concentration	b. Mass	a. Long term average value			d. Number of analysis
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
1,4-dichlorobenzene CAS Number: 106-46-7										<10 ug/l		1	
2-(methyl-4-chlorophenoxy)propionic acid CAS Number: 93-65-2													X
1-naphthylamine CAS Number: 134-32-7										<10 ug/l		1	
2,4,5-trichlorophenol CAS Number: 95-95-4										<10 ug/l		1	
2,4,5-TP Silvex CAS Number: 93-72-1										<1 ug/l		1	
2,4-dichlorophenol CAS Number: 120-83-2										<10 ug/l		1	
2,4,6-trichlorophenol CAS Number: 88-06-2										<10 ug/l		1	
2,4-dimethylphenol CAS Number: 105-67-9										<10 ug/l		1	
2,4-dichlorophenoxyacetic acid (2,4-D) CAS Number: 94-75-7													X
2-chlorophenol CAS Number: 95-57-8										<10 ug/l		1	
2,6-dichlorophenol CAS Number: 87-65-0										<10 ug/l		1	
2-nitropropane CAS Number: 79-46-9													X
2-methyl-pyridine CAS Number: 109-06-8													X
3,6-dichloro-o-anisic acid (dicamba) CAS Number: 1918-00-9													X
3,3'-dichlorobenzidine CAS Number: 91-94-1										<20 ug/l		1	
4-chloro-o-toluidine, hypochloride CAS Number: 95-69-2													X
4,4'-methylene bis-(2-chloro-aniline) CAS Number: 101-14-4													X
acenaphthene CAS Number: 83-32-9										<10 ug/l		1	
4-isopropyltoluene CAS Number: 99-87-6													X
acetaldehyde CAS Number: 75-07-0													X
acenaphthylene CAS Number: 208-96-8										<10 ug/l		1	

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.i. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: <u>3</u> of 12
Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data d. Number of analysis	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value			
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
acetic anhydride CAS Number: 108-24-7													X
acetic acid CAS Number: 64-19-7													X
acetonitrile CAS Number: 75-05-8										<100 ug/l		1	
acetone CAS Number: 67-64-1										<10 ug/l		1	
acetyl chloride CAS Number: 75-36-5													X
acetopenone CAS Number: 98-86-2										<10 ug/l		1	
acrylic acid CAS Number: 79-10-7													X
acrylamide CAS Number: 79-06-1													X
allyl alcohol CAS Number: 107-18-6													X
acrylonitrile CAS Number: 107-13-1										<25 ug/l		1	
ammonia CAS Number: 7664-41-7													X
aluminum CAS Number: 86-50-0													X
ammonium thiosulfate CAS Number: 7783-18-8													X
ammonium hydroxide CAS Number: 1336-21-6													X
aniline CAS Number: 62-53-3													X
amyl acetate CAS Number: 628-63-7													X
anthracene CAS Number: 120-12-7										<10 ug/l		1	
antimony CAS Number: 7440-36-0										<0.06 mg/l		1	
avermectin CAS Number: 71751-41-2													X
arsenic CAS Number: 7440-38-2										<0.005 mg/l		1	
benzal chloride CAS Number: 98-87-3													X

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.1. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 4 of 12
Pollutant and CAS Number	Effluent Data						Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analysis	a. Concentration	b. Mass	a. Long term average value			d. Number of analysis
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
barium CAS Number: 7440-39-3											0.06 mg/l	1	
benzene CAS Number: 71-43-2											<5 ug/l	1	
benzaldehyde CAS Number: 100-52-7													X
benzo(a)pyrene CAS Number: 50-32-8											<10 ug/l	1	
benzidine CAS Number: 92-87-5											<80 ug/l	1	
benzo(k)fluoranthene CAS Number: 207-08-9											<10 ug/l	1	
benzo(ghi)perylene CAS Number: 191-24-2											<10 ug/l	1	
benzyl alcohol CAS Number: 100-51-6											<10 ug/l	1	
benzoic acid CAS Number: 65-85-0													X
bis(2-chloroethyl)ether CAS Number: 111-44-4											<10 ug/l	1	
beryllium CAS Number: 7440-41-7											<0.005 mg/l	1	
bomyl CAS Number: 122-10-1													X
benzotriazole CAS Number: 95-14-7													X
butoxypropanol CAS Number: 5131-66-8													X
bromoform CAS Number: 75-25-2											<5 ug/l	1	
butylamine CAS Number: 109-73-9													X
butyl acetate CAS Number: 123-86-4													X
butylbenzyl phthalate CAS Number: 85-68-7											<10 ug/l	1	
cadmium CAS Number: 7440-43-9											<0.005 mg/l	1	
carbamate CAS Number:													X
captan CAS Number: 133-06-2													X

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.f. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 5 of 12
Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	e. Long term average value		d. Number of analysis	
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
carbon disulfide CAS Number: 75-15-0									<5 ug/l		1		
carbaryl CAS Number: 63-25-2												X	
chlordane CAS Number: 57-74-9									<0.5 ug/l		1		
carbon tetrachloride CAS Number: 56-23-5									<5 ug/l		1		
chlorobenzene CAS Number: 108-90-7									<5 ug/l		1		
chlorine CAS Number: 7782-50-5												X	
chloromethyl methyl ether CAS Number: 107-30-2												X	
chromic acid CAS Number: 7738-94-5												X	
chloroform CAS Number: 67-66-3									<5 ug/l		1		
chromium CAS Number: 7440-47-3									<0.005 mg/l		1		
chrysene CAS Number: 218-01-9									<10 ug/l		1		
cobalt CAS Number: 7440-48-4									<0.05 mg/l		1		
copper CAS Number: 7440-50-8									<0.05 mg/l		1		
creosote CAS Number: 8001-58-9												X	
cresol CAS Number: 108-39-4												X	
cumene CAS Number: 98-82-8												X	
cyanide CAS Number: 57-12-5												X	
cyclohexane CAS Number: 110-82-7												X	
cyclohexanol CAS Number: 108-93-0												X	
cyclohexanone CAS Number: 108-94-1												X	
diazinon CAS Number: 33-41-5												X	

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.1. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 6 of 12
Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data d. Number of analysis	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value			
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
CAS Number: 53-70-3 dibenzo(ah)anthracene												1	
CAS Number: 132-64-9 dibenzofuran												1	
CAS Number: 84-74-2 dibutyl phthalate													X
CAS Number: 106-46-7 dichlorobenzene													X
CAS Number: 1464-53-5 diepoxybutane													X
CAS Number: 84-66-2 diethyl phthalate													X
CAS Number: 109-89-7 diethylamine													X
CAS Number: 111-46-6 diethylene glycol													X
CAS Number: 117-81-7 diethylhexyl phthalate													X
CAS Number: 108-20-3 diisopropylether													X
CAS Number: 68-12-2 dimethyl formamide													X
CAS Number: 131-11-3 dimethyl phthalate												1	
CAS Number: 77-78-1 dimethyl sulfate													X
CAS Number: 124-40-3 dimethylamine													X
CAS Number: 75-78-5 dimethyldichlorosilane													X
CAS Number: 121-14-2 dinitrotoluene													X
CAS Number: 117-84-0 di-n-octyl phthalate												1	
CAS Number: 88-85-7 dinoseb												1	
CAS Number: 85-00-7 diquat dibromide													X
CAS Number: 25155-30-0 dodecylbenzesulfonic acid													X
CAS Number: 64-17-5 ethanol													X

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.i. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 7 of 12
Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value		d. Number of analysis	
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
ether CAS Number: 60-29-7													X
ethyl acetate CAS Number: 141-78-6													X
ethyl acrylate CAS Number: 140-88-5													X
ethyl ether CAS Number: 60-29-7													X
ethyl methacrylate CAS Number: 97-63-2										<10 ug/l		1	
ethylbenzene CAS Number: 100-41-4										<5 ug/l		1	
ethylene glycol CAS Number: 107-21-1													X
ethylene glycol monoethyl ether CAS Number: 110-80-5													X
ethylene oxide CAS Number: 75-21-8													X
ferbam CAS Number: 14484-64-1													X
fluoranthene CAS Number: 206-44-0										<10 ug/l		1	
fluorene CAS Number: 86-73-7										<10 ug/l		1	
formaldehyde CAS Number: 50-00-0													X
furan CAS Number: 110-00-9													X
furfural CAS Number: 98-01-1													X
guthion CAS Number: 86-50-0													X
heptachlor CAS Number: 76-44-8										<.05 ug/l		1	
heptane CAS Number: 142-82-5													X
hexachlorobenzene CAS Number: 118-74-1										<10 ug/l		1	
hexachlorobutadiene CAS Number: 87-68-3										<10 ug/l		1	
hexachloroethane CAS Number: 67-72-1										<10 ug/l		1	

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.i. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 8 of 12
Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value		d. Number of analysis	
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
hexane CAS Number: 110-54-3													X
hydrazine CAS Number: 302-01-2													X
hydrochloric acid CAS Number: 7647-01-0													X
hydroquinone CAS Number: 123-31-9													X
iodine CAS Number: 7553-56-2													X
isobutanol CAS Number: 78-83-1									<100 ug/l		1		
isophorone CAS Number: 78-59-1									<10 ug/l		1		
isopropylbenzene CAS Number: 98-82-8													X
isopropanol CAS Number: 67-63-0													X
lanthanum nitrate CAS Number: 10277-43-7													X
lead CAS Number: 7439-92-1									<0.005 mg/l		1		
malathion CAS Number: 121-75-5													X
maleic hydrazide CAS Number: 123-33-1													X
m-cresol CAS Number: 108-39-4									<10 ug/l		1		
mercury CAS Number: 7439-97-6									<0.0004 mg/l		1		
methacrylonitrile CAS Number: 126-98-7									<10 ug/l		1		
methanethiol CAS Number: 74-93-1													X
methanol CAS Number: 67-56-1													X
methoxychlor CAS Number: 72-43-5									<0.5 ug/l		1		
methyl acetate CAS Number: 79-20-9													X
methyl chlorocarbonate CAS Number: 79-22-1													X

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

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Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value		d. Number of analysis	
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
methyl ethyl ketone CAS Number: 78-93-3													X
methyl iodide CAS Number: 74-88-4													X
methyl isobutyl ketone CAS Number: 108-10-1													X
methyl methacrylate CAS Number: 80-62-6									<10 ug/l		1		
methyl tertiary butyl ether CAS Number: 1634-04-4													X
methylcyclopentane CAS Number: 96-37-7													X
methylene chloride CAS Number: 75-09-2													X
methylol acryamide CAS Number: 924-42-5													X
methyltrichlorosilane CAS Number: 75-79-6													X
naphthalene CAS Number: 91-20-3									<10 ug/l		1		
n-butane CAS Number: 106-97-8													X
n-butanol CAS Number: 71-36-3													X
n-butyl phthalate CAS Number: 84-74-2													X
nickel CAS Number: 7440-02-0									<0.05 mg/l		1		
nitrobenzene CAS Number: 98-95-3									<10 ug/l		1		
n-methyl-2-pyrrolidone CAS Number: 872-50-4													X
o-cresol CAS Number: 95-48-7									<10 ug/l		1		
oryzalin CAS Number: 19044-88-3													X
o-toluidine CAS Number: 95-53-4									<10 ug/l		1		
o-xylene CAS Number: 95-47-6													X
palladium CAS Number: 7440-04-2													X

INDUSTRIAL APPLICAITON FORM NY - 2C
Section III - Sampling Information

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Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data	Believed present, no sampling results available (see disclaimer)
	a. Maximum daiy value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value		d. Number of analysis	
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
paraldehyde CAS Number: 123-63-7													X
PCB's CAS Number: 1336-36-3										.065 ug/l		1	
p-cresol CAS Number: 106-44-5													X
pentachlorophenol CAS Number: 87-86-5										<50 ug/l		1	
phenanthrene CAS Number: 85-01-8										<10 ug/l		1	
phenol CAS Number: 108-95-2										<10 ug/l		1	
phenyl ether (diphenyl oxide) CAS Number: 101-84-8													X
phosphoric acid CAS Number: 7664-38-2													X
p-nitrophenol CAS Number: 100-02-7													X
propargyl alcohol CAS Number: 107-19-7													X
propionitrile CAS Number: 107-12-0										<100 ug/l		1	
propylene glycol CAS Number: 504-63-2													X
propylene glycol monomethyl ether CAS Number: 107-98-2													X
p-xylene CAS Number: 106-42-3													X
pyrene CAS Number: 129-00-0										<10 ug/l		1	
pyridine CAS Number: 110-86-1													X
quaternary ammonium compounds CAS Number:													X
sec-butylbenzene CAS Number: 135-98-8													X
selenium CAS Number: 7782-49-2										<0.005 mg/l		1	
sevin CAS Number: 63-25-2													X
silver CAS Number: 7440-22-4										<0.02 mg/l		1	

INDUSTRIAL APPLICATION FORM NY - 2C
Section III - Sampling Information

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Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data d. Number of analysis	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value			
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
CAS Number: sodium hydroxide 1310-73-2													X
CAS Number: styrene 100-42-5									<5 ug/l		1		
CAS Number: tert-butylbenzene 98-06-6													X
CAS Number: tetrachlorobenzene 95-94-3													X
CAS Number: tetrachloroethane 79-34-5									<5 ug/l		1		
CAS Number: tetrachloroethylene 127-18-4													X
CAS Number: tetrahydrofuran 109-99-9													X
CAS Number: thallium 7440-28-0									<0.01 mg/l		1		
CAS Number: toluene 108-88-33									<5 ug/l		1		
CAS Number: toluene diisocyanate 26471-62-5													X
CAS Number: toluenediamine 95-80-7													X
CAS Number: trichlorobenzene 120-82-1 / 108-70-3 / 87-61-6													X
CAS Number: trichloroethane 71-55-6 / 79-00-5									<5 ug/l		1		
CAS Number: trichloroethylene 79-01-6													X
CAS Number: trichlorofluoromethane 75-69-4									<5 ug/l		1		
CAS Number: trichloromethylbenzene (benzoic trichloride) 98-07-7													X
CAS Number: trichlorotrifluoromethane 354-58-5													X
CAS Number: triethylamine 121-44-8													X
CAS Number: triethylchlorosilane 994-30-9													X
CAS Number: trimethylbenzene 108-67-8													X
CAS Number: trimethylamine 75-50-3													X

INDUSTRIAL APPLICATION FORM NY - 2C Section III - Sampling Information

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.i. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.													Page: 12 of 12
Pollutant and CAS Number	Effluent Data						d. Number of analysis	Units		Intake data (optional)		Influent Data d. Number of analysis	Believed present, no sampling results available (see disclaimer)
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)			a. Concentration	b. Mass	a. Long term average value			
	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass	(1)Concentration	(2)Mass				(1)Concentration	(2)Mass		
vanadium CAS Number: 33-41-5											<0.05 mg/l	1	
vinyl chloride CAS Number: 75-01-4													X
xylene CAS Number: 1330-20-7													X
zinc CAS Number: 7440-66-6											0.01 mg/l	1	
zinc bromide CAS Number: 7699-45-8													X
zinc phosphide CAS Number: 1314-87-7													X

Disclaimer:

The list of chemicals contained in this section was derived from the profiles of the wastestreams that have been accepted for disposal through the years 1997 up to and including 2002. The potential exists, although highly unlikely, for any one of the above chemicals to be present in the influent due to stormwater coming into contact with the trucks that are parked in the truck staging area. All influent will be processed through the carbon filters removing the chemicals before being discharged, as described in the application.

APPENDIX B

SHORT ENVIRONMENTAL ASSESSMENT FORM (EAF)

PROJECT I.D. NUMBER

617.20

SEQR

Appendix C

State Environmental Quality Review

SHORT ENVIRONMENTAL ASSESSMENT FORM

For UNLISTED ACTIONS Only

PART I—PROJECT INFORMATION (To be completed by Applicant or Project sponsor)

1. APPLICANT /SPONSOR Norlite Corporation	2. PROJECT NAME Stormwater Treatment Unit Operation
3. PROJECT LOCATION: Municipality <u>Cohoes</u> County <u>Albany</u>	
4. PRECISE LOCATION (Street address and road intersections, prominent landmarks, etc., or provide map) Tanker Staging Area and Specification Used Oil Fuel Storage Area Norlite Corporation 628 So. Saratoga Street Cohoes, New York 12047	
5. IS PROPOSED ACTION: <input type="checkbox"/> New <input type="checkbox"/> Expansion <input checked="" type="checkbox"/> Modification/alteration	
8. DESCRIBE PROJECT BRIEFLY: Stormwater Treatment by Batch Equalization Preliminary Treatment and Oil Absorbent/Carbon Treatment	
7. AMOUNT OF LAND AFFECTED: Initially <u>0.2</u> acres Ultimately <u>0.2</u> acres	
8. WILL PROPOSED ACTION COMPLY WITH EXISTING ZONING OR OTHER EXISTING LAND USE RESTRICTIONS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, describe briefly	
9. WHAT IS PRESENT LAND USE IN VICINITY OF PROJECT? <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Agriculture <input type="checkbox"/> Park/Forest/Open space <input type="checkbox"/> Other Describe:	
10. DOES ACTION INVOLVE A PERMIT APPROVAL, OR FUNDING, NOW OR ULTIMATELY FROM ANY OTHER GOVERNMENTAL AGENCY (FEDERAL, STATE OR LOCAL)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, list agency(s) and permit/approvals	
11. DOES ANY ASPECT OF THE ACTION HAVE A CURRENTLY VALID PERMIT OR APPROVAL? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, list agency name and permit/approval	
12. AS A RESULT OF PROPOSED ACTION WILL EXISTING PERMIT/APPROVAL REQUIRE MODIFICATION? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>SPDES #NY-0004880</u>	
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE TO THE BEST OF MY KNOWLEDGE	
Applicant/sponsor name: <u>William Morris</u>	Date: <u>6/11/05</u>
Signature: <u><i>William Morris</i></u>	

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment

OVER

PART II—ENVIRONMENTAL ASSESSMENT (To be completed by Agency)

<p>A. DOES ACTION EXCEED ANY TYPE I THRESHOLD IN 6 NYCRR PART 617.4? If yes, coordinate the review process and use the FULL EAF. <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>B. WILL ACTION RECEIVE COORDINATED REVIEW AS PROVIDED FOR UNLISTED ACTIONS IN 6 NYCRR, PART 617.6? If No, a negative declaration may be superseded by another involved agency. <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>C. COULD ACTION RESULT IN ANY ADVERSE EFFECTS ASSOCIATED WITH THE FOLLOWING: (Answers may be handwritten, if legible)</p> <p>C1. Existing air quality, surface or groundwater quality or quantity, noise levels, existing traffic patterns, solid waste production or disposal, potential for erosion, drainage or flooding problems? Explain briefly:</p> <p>C2. Aesthetic agricultural, archaeological, historic, or other natural or cultural resources; or community or neighborhood character? Explain briefly:</p> <p>C3. Vegetation or fauna, fish, shellfish or wildlife species, significant habitats, or threatened or endangered species? Explain briefly:</p> <p>C4. A community's existing plans or goals as officially adopted, or a change in use or intensity of use of land or other natural resources? Explain briefly:</p> <p>C5. Growth, subsequent development, or related activities likely to be induced by the proposed action? Explain briefly.</p> <p>C6. Long term, short term, cumulative, or other effects not identified in C1-C5? Explain briefly.</p> <p>C7. Other impacts (including changes in use of either quantity or type of energy)? Explain briefly.</p>
<p>D. WILL THE PROJECT HAVE AN IMPACT ON THE ENVIRONMENTAL CHARACTERISTICS THAT CAUSED THE ESTABLISHMENT OF A CEA? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>E. IS THERE, OR IS THERE LIKELY TO BE, CONTROVERSY RELATED TO POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, explain briefly</p>

PART III—DETERMINATION OF SIGNIFICANCE (To be completed by Agency)

INSTRUCTIONS: For each adverse effect identified above, determine whether it is substantial, large, important or otherwise significant. Each effect should be assessed in connection with its (a) setting (i.e. urban or rural); (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude. If necessary, add attachments or reference supporting materials. Ensure that explanations contain sufficient detail to show that all relevant adverse impacts have been identified and adequately addressed. If question D of Part II was checked yes, the determination and significance must evaluate the potential impact of the proposed action on the environmental characteristics of the CEA.

<p><input type="checkbox"/> Check this box if you have identified one or more potentially large or significant adverse impacts which MAY occur. Then proceed directly to the FULL EAF and/or prepare a positive declaration.</p> <p><input type="checkbox"/> Check this box if you have determined, based on the information and analysis above and any supporting documentation, that the proposed action WILL NOT result in any significant adverse environmental impacts AND provide on attachments as necessary, the reasons supporting this determination:</p>	
<p>_____</p> <p style="font-size: small;">Name of Lead Agency</p>	
<p>_____</p> <p style="font-size: small;">Print or Type Name of Responsible Officer in Lead Agency</p>	<p>_____</p> <p style="font-size: small;">Title of Responsible Officer</p>
<p>_____</p> <p style="font-size: small;">Signature of Responsible Officer in Lead Agency</p>	<p>_____</p> <p style="font-size: small;">Signature of Preparer (If different from responsible officer)</p>
<p>_____</p> <p style="font-size: small;">Date</p>	

APPENDIX C
ANALYSIS

Norlite

Truck Staging Area and Specification Used Oil Fuel Storage Area

Wastewater Treatment Facility Calculations (version 6/06/03)

Givens re: Carbon vessels:

Each treatment vessel is approximately 80 inches high and 48 inches in diameter.

Subtract 6 inches since outlet is not truly on bottom.

Top is hemispherical and piping can distribute flow over top.

Available volume?

$$V = h \times A$$

$$h = 74 \text{ inches}$$

$$A = \pi \times r^2$$
$$A = 3.141593 \times (24)^2$$
$$A = 3.141593 \times 576$$
$$A = 1809.56 \text{ inches}^2$$

$$V = 74 \times 1809.56$$

$$V = 133907 \text{ inches}^3 \text{ or } 77.49 \text{ cubic feet}$$

Mass of Carbon

Density of Carbon expected in vessel: 31 lb / cubic feet

Therefore, the mass of carbon to be loaded in the vessel is:

$$77.49 \text{ cubic feet} \times 31 \text{ lb/ cubic feet}$$
$$= 2402.27 \text{ lb of carbon or } 1,089,652 \text{ grams}$$

Worst Case Mass of Petroleum to be Bound in Carbon

Worst case influent Oil & Grease concentration was 62 mg/l, while organics were below their respective detection limits. Design can be based on petroleum.

$$\text{Carbon: } Y \text{ lbs can hold } 0.1 Y \text{ lbs of petroleum}$$
$$= 240.23 \text{ lbs of petroleum or } 108,965 \text{ grams}$$

How much storm water will the system need to treat?

The average annual precipitation in Albany, NY is about 36 inches per year.

The area of the Truck Staging Area = 60 feet by 200 feet (drawing by HMK)

$$= 12,000 \text{ square feet}$$

The area of the Specification Waste Oil Fuel Storage Area = about 2,000 square feet (See Figure 2)

Total Area = 14,000 square feet

Volume of Precipitation = $3 \times 14,000$
= 42,000 cubic feet per year
= **314,181 gallons per year**
= **860 gallons per day (gpd)**

How much storm water can the vessel treat?

Testing has indicated that the storm water should have approximately 28 mg/l of petroleum.

This is equivalent to 105.99 mg/ gallon

Since the carbon can hold about 108,965 grams of petroleum,

the vessel should be able to treat about 1,028,048 gallons of waste if petroleum were the only contaminant.

How long should a vessel last if assumptions are met?

If 314,181 gallons per year are to be treated, then a vessel of carbon will last

3.3 years

Cost to fill vessel?

Cost of Carbon = 2402.27 lbs x \$0.75 = \$1,801.70

Total Cost = **\$1,801.70**

What are the hydraulic loading rates to the vessel?

The cross-sectional area of a vessel is 1809.56 inches²

The normal flow to the vessel will be 2,500 gph

The normal flow rate is: **198.944 gph/ square foot**

3.316 gpm/square foot

0.44 ft/min

The cross-sectional area of a vessel is 1809.56 inches²

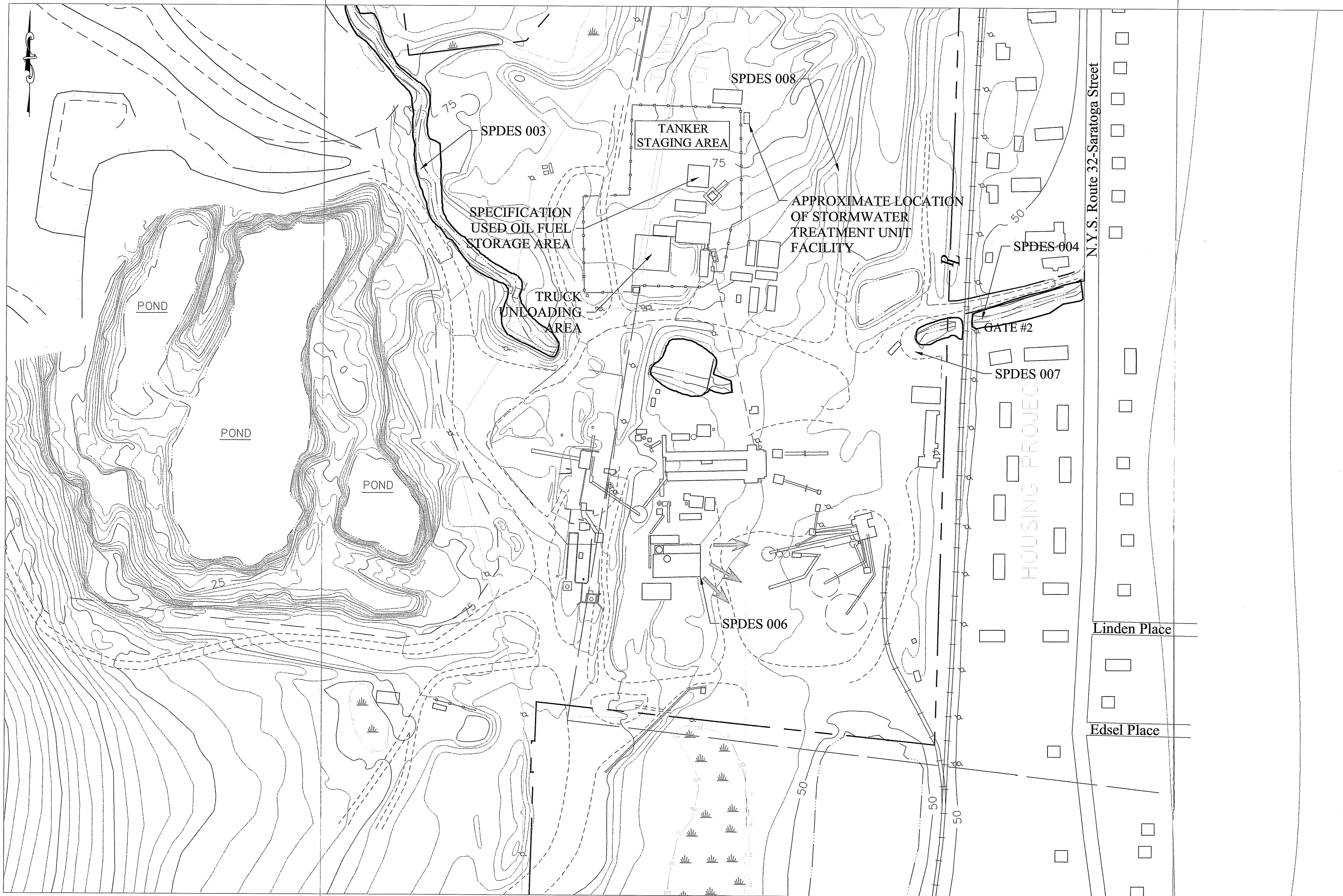
The peak flow to the vessel will be 5,000 gph

The peak flow rate is: **397.887 gph/ square foot**

6.631 gpm/square foot

0.89 ft/min

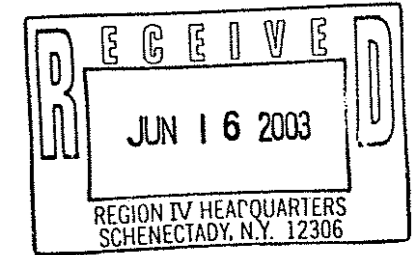
PLATE 1



- SPDES OUTFALLS**
 PERMIT NO. 4-103-16/01
 003 QUARRY WATER
 004 SHALE FINES LEACHATE POND
 005 KILN 1 & 2 SCRUBBER BLOWDOWN, NON-CONTACT COOLING WATER AND BOILER BLOWDOWN WWT DISCHARGES
 007 STORM RUNOFF
 008 TANKER STAGING AREA AND SPECIFICATION USED OIL FUEL STORAGE AREA TREATMENT DISCHARGE

NOTE: THIS DRAWING IS BASED ON THE DRAWING SUPPLIED BY NORLITE, TITLED "SITE PLAN MAP", PREPARED BY GRIGGS-LANG CONSULTING GEOLOGISTS, INC., AND DATED 5/02

PLATE 1



UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7202, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

NO.	DATE	RECORD OF WORK	DRN	CKD	APPR

PROJECT
 PROJ. ENGR.: M.P. Millspaugh, P.E.
 PROJ. NO.: 21033
 PREPARED BY: A. Kohli
 DRAFTED BY: A. Kohli
 CHECKED BY:
 APPROVED BY:
 DATUM:
 CONTOUR INTERVAL = 10 FEET
 0 25 50 100 200
 1"=100'

LOCATION OF STORMWATER TREATMENT UNIT OPERATION
NORLITE CORPORATION
 COHOES SITE
 CITY OF COHOES ALBANY CO., N.Y.
STERLING
 Sterling Environmental Engineering, P.C.
 One Columbia Circle • Albany, New York 12203
 DATE: 6/10/03 SCALE: 1"=100' DWG. NO. 21033004 SHEET 1 OF 1