



Ravenswood Generating Station
38-54 Vernon Blvd.
Long Island City, NY 11101

October 31, 2011

Chief Permit Administrator
NYS Dept. of Conservation
625 Broadway
Albany, New York 12233-1750

Re: TC Ravenswood Generating Station
SPDES Permit No. NY 0005193 Renewal

To Whom It May Concern:

Attached please find TC Ravenswood's SPDES permit renewal application for permit no. NY 0005193.

If you should have any questions, or require additional information please feel free to contact me at 718.706.2702 or members of my staff at gregory_pryor@transcanada.com or 718.706.2863.

Respectfully,

Kenneth A. Yager
Compliance Manager

cc: Regional Water Manager, DEC Region 2 (cover)

Ravenswood Generating Station
SPDES Permit Renewal
NY 0005193

Section I-

- SPDES Industrial Application Form NY-2C Section I
- SPDES Outfall Flow Diagram
- NY-2C Supplement A
- Attachment to Supplement A
- Tidal Graph
- Current Graph

Section 2- Outfall Data

- Outfall 01A
 - SPDES Industrial Application Form NY-2C Section II
- Outfall 01C
 - SPDES Industrial Application Form NY-2C Section II
- Outfall 01D
 - SPDES Industrial Application Form NY-2C Section II
- Outfall 01E
 - SPDES Industrial Application Form NY-2C Section II
- Outfall 01F
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- Outfall 01H
 - SPDES Industrial Application Form NY-2C Section II
- Outfall 001
 - SPDES Industrial Application Form NY-2C Section II
 - Supplement A- Mixing Zone Requirements
- Outfall 004
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 - Supplement A- Mixing Zone Requirements
- Outfall 006
 - SPDES Industrial Application Form NY-2C Section II
 - Supplement A- Mixing Zone Requirements
- Outfall 007
 - SPDES Industrial Application Form NY-2C Section II
 - Supplement A- Mixing Zone Requirements
- Outfall 008/009
 - SPDES Industrial Application Form NY-2C Section II
 - Supplement A- Mixing Zone Requirements
- Outfall 010
 - SPDES Industrial Application Form NY-2C Section II
 - Supplement A- Mixing Zone Requirements

- Future Outfall 011
 - SPDES Industrial Application Form NY-2C Section II

Section 3- Water Treatment Chemicals and MSDS

- Form WTCFX-Amercor
 - Amercor MSDS
- Form WTCFX-Sodium Phosphate (Dibasic)
 - Sodium Phosphate (Dibasic) MSDS
- Form WTCFX-Mekor
 - Mekor MSDS
- Form WTCFX-Sodium Hydroxide
 - Sodium Hydroxide MSDS
- Form WTCFX-Sulfuric Acid
 - Sulfuric Acid
- Form WTCFX-Sodium Phosphate (Tribasic)
 - Sodium Phosphate (Tribasic) MSDS
- Form WTCFX-Sodium Phosphate (Dibasic)
 - Sodium Phosphate (Dibasic) MSDS

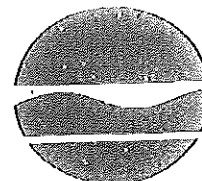
Section 4- Industrial Application Form NY-2C Section III-Sampling Information

- Sampling Matrix
- Sampling Data Sheets by outfall

Section 5- Drawings

TransCanada Drawing RWPSY-FV-01004-3 Site Drainage Plan Units 1&2
 TransCanada Drawing RWPSY-FV-01007-1 Site Drainage Plan Unit 3 and A-House
 Keyspan Drawing RWCY-FV-01001-1 Site Drainage Plan GT Station
 TransCanada Drawing S102 East Yard Drainage ALT A
 Con Ed Drawing A149565-4 Discharge Tunnel Plan and Sections Unit 1 & 2
 Con Ed Drawing A149566-4 Discharge Tunnel Plan and Sections From N9 to Col 1
 Con Ed Drawing A149566-4 Discharge Tunnel Plan and Sections From N9 to Col 1
 Con Ed Drawing A162859-2 Screenwell and intake tunnel plan
 Con Ed Drawing A162860-1 Screenwell and intake tunnel plan
 Con Ed Drawing A161424-3 General Arrangement of Screenwell and Equipment
 Con Ed Drawing A161425-3 General Arrangement of Screenwell and Equipment

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits, 4th Floor
25 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 • FAX: (518) 402-9029
Website: www.dec.ny.gov



Joe Martens
Commissioner

June 13, 2011

TC RAVENSWOOD LLC
KEN YAGAR
110 TURNPIKE ROAD, SUITE 203
WESTBOROUGH, MA 01581

RE: NOTICE of SPDES Permit Renewal Application Due
Renewal Application Deadline: NOVEMBER 2, 2011
SPDES Permit Expiration Date: APRIL 30, 2012
Facility: RAVENSWOOD GENERATING STATION
SPDES Permit No. NY0005193

Dear Permittee:

Department records indicate that your State Pollutant Discharge Elimination System (SPDES) permit is due to expire in less than one year. It can take a significant amount of time to perform the necessary sampling and complete the required application form(s). Therefore, you should begin work on the renewal application now in order to meet the application deadline.

POTWs: Complete Application Form NY-2A. This form is available on the NYSDEC website at www.dec.ny.gov/docs/permits_ej_operations_pdf/municipal2a.pdf. At least one sample result must be reported for each of the parameters listed in Section VI and Table NY-2A of the application form as well as for oil & grease, hardness (as CaCO₃), and E. coli (if discharge is to fresh water) or enterococci (if discharge is to marine water). Please note that mercury analysis must be performed using EPA method 1631. CSO and Type I SSO discharges are not required to perform this sampling.

Additionally, POTWs with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403, which separately discharge stormwater associated with industrial activity must complete NPDES Application Form 2F. This form is available on the USEPA website at www.epa.gov/npdes/pubs/3510-2F.pdf.

Industrial Permittees: Complete Application Form NY-2C. This form is available on the NYSDEC website at www.dec.ny.gov/permits/6287.html. Note that this form may direct you to submit other forms as well. Also, please note that mercury analysis must be performed using EPA method 1631.

Regulations require you to submit a SPDES permit renewal application at least 180 days prior to expiration of your permit, as noted above (see 6 NYCRR Part 750-1.16(a)). Failure to provide timely, complete, and accurate information may result in the assessment of penalties, ineligibility for State Administrative Procedure Act (SAPA) extension, and permit expiration. Discharge without a valid SPDES permit is a violation of Article 17 of Environmental Conservation Law.

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: NY0005193	DEC Number: 2-6304-00024/00004

2. Permit Action Requested: (Check applicable box)

☐ A NEW proposed discharge	☐ An EBPS INFORMATION REQUEST response	☒ A RENEWAL of an existing SPDES permit
☐ A MODIFICATION of the existing permit	☐ 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.	Increased backwash water through outfall 01D and increased boiler blowdown overboard out through outfall 01G.

3. Permittee Name and Address

Name TC Ravenswood, LLC	Attention
Street Address 100 Turnpike Rd. Suite 203	
City or Village Westborough	State MA ZIP Code 01581

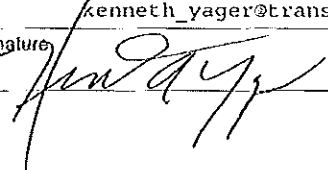
4. Facility Name, Address and Location

Name Ravenswood Generating Station			
Street Address 38-54 Vernon Blvd.		P.O. Box	
City or Village Long Island City	State NY	ZIP Code 11101	
Town		County Queens	
Telephone 718-706-2702	FAX 718-361-8875	NYTM - E	NYTM - N
Tax Map Info (New York City, Nassau County and Suffolk County only)			
Section	Block 357	Subblock	Lot 1

5. Facility Contact Person

Name Kenneth A. Yager	Title Compliance Manager
Street Address 38-54 Vernon Blvd.	
City or Village Long Island City	State NY ZIP Code 11101
Telephone 718-706-2702	FAX 718-361-8875
E-Mail or Internet kenneth_yager@transcanada.com	

6. Discharge Monitoring Report (DMR) Mailing Address

Mailing Name Ravenswood Generating Station	
Street Address 38-54 Vernon Blvd.	
City or Village Long Island City	State NY ZIP Code 11101
Telephone 718-706-2702	FAX 718-361-8875
E-Mail or Internet kenneth_yager@transcanada.com	
Name and Title of person responsible for signing DMRs Kenneth A. Yager, Compliance Manager	Signature 

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

Facility Name: Ravenswood Generating Station	SPDES Number: NY0005193

7. Summarize the outfalls present at the facility:

Outfall Number	Receiving Water	Type of discharge
001	East River	Once-through cooling, process water
004	East River	Rainey Tank Farm Stormwater
006	East River	Gas Turbine Site Stormwater
007	East River	Stormwater From Settling Ponds
008	East River	Unit 10 Screenwash
009	East River	Unit 20 Screenwash
010	East River	Unit 30 Screenwash
011	East River	Stormwater

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.

9. Water Flow Diagram:

See attachment of water flow diagram.

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

Facility Name: Ravenswood Generating Station	SPDES Number: NY0005193

10. Nature of business: (Describe the activities at the facility and the date(s) that operation(s) at the facility commenced)

10. Nature of business: (Describe the activities at the facility and the date(s) that operation(s) at the facility began.)

Electric Power Generation since 1963

The Ravenswood Facility consists of 3 steam electric generators units 10, 20, & 30, combined cycle combustion turbine/steam electric generator (Unit 40) and 11 simple cycle combustion turbines.

11. List the 4-digit SIC codes which describe your facility in order of priority:

Priority 1 4 9 1 1	Description: Electric Services	Priority 3 	Description:
Priority 2 	Description:	Priority 4 	Description:

12. Is your facility a primary industry as listed in Table 1 of the Instructions?

☒ YES - Complete the following table.

☐ NO - Go to Item 13. below.

Industrial Category	40 CFR		Industrial Category	40 CFR	
	Part	Subpart		Part	Subpart
Steam Electric Power Plant	423				

13. Does this facility manufacture, handle, or discharge recombinant-DNA, pathogens, or other potentially infectious or dangerous organisms?

☐ YES - Attach a detailed explanation to this application.

☒ NO - Go to Item 14 below.

14. Is storm runoff or leachate from a material storage area discharged by your facility?

☐ YES - Complete the following table, and show the location of the stockpile(s) and discharge point(s) on the diagram in Item 9.

☒ NO - Go to Item 15 on the following page.

[illegible]

INDUSTRIAL APPLICATION FORM NY-2C

Section I - Permittee and Facility Information

Facility Name: Ravenswood Generating Station	SPDES Number: NY0005193

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	MPFL	2-1960	X		
NYSDEC	CBS	2-000063	X		
NYSDEC	Title V	2-6304-00024/00035	X		
NYSDEC	Title V	2-6304-00024/00039	X		
NYSDEC	Title IV	2-6304/00024/00029	X		
USEPA	Haz Waste	NYR000072447	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?

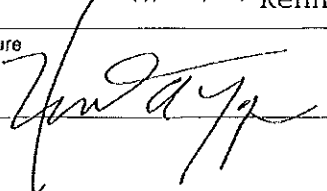
☒ YES - Complete the following table.

☐ NO - Go to Item 18 below.

Name of laboratory or consulting firm	Address	Telephone (area code and number)	Pollutants analyzed
H2M LABS INC	575 Broad Hollow Rd	631.694.3040	BOD, COD, TSS, TDS, O&G, TON, Sulfate, Chloride, Color, Phenols, Dissolved Silica, Phosphorus, Metals, VOA, BNA

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.

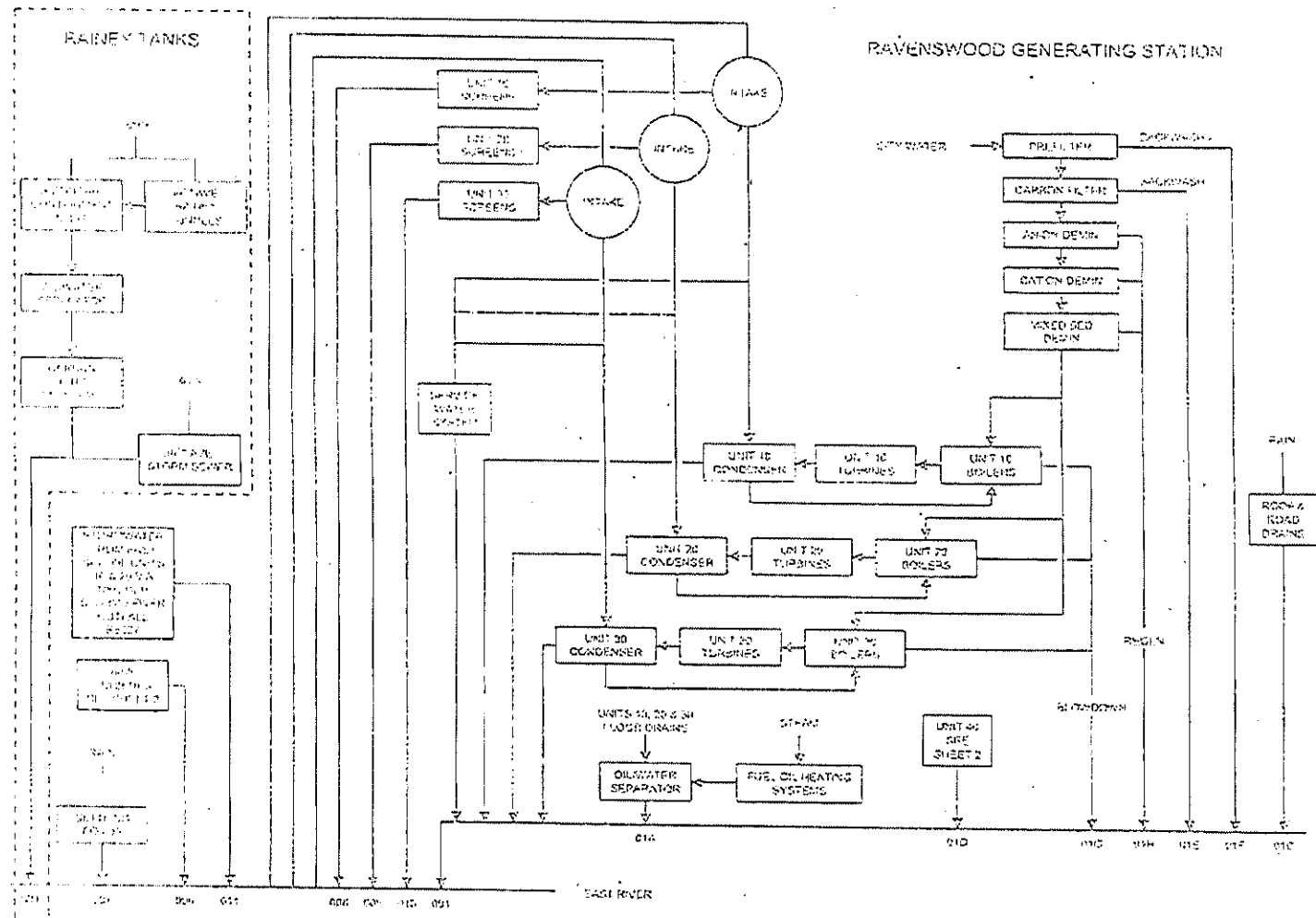
Name and official title (type or print) Kenneth A. Yager, Compliance Manager	Date signed
Signature 	Telephone number 718-706-2702
	FAX number 718-361-8875

Facility Name: Ravenswood Generating Station	SPDES Number: NY 0005193

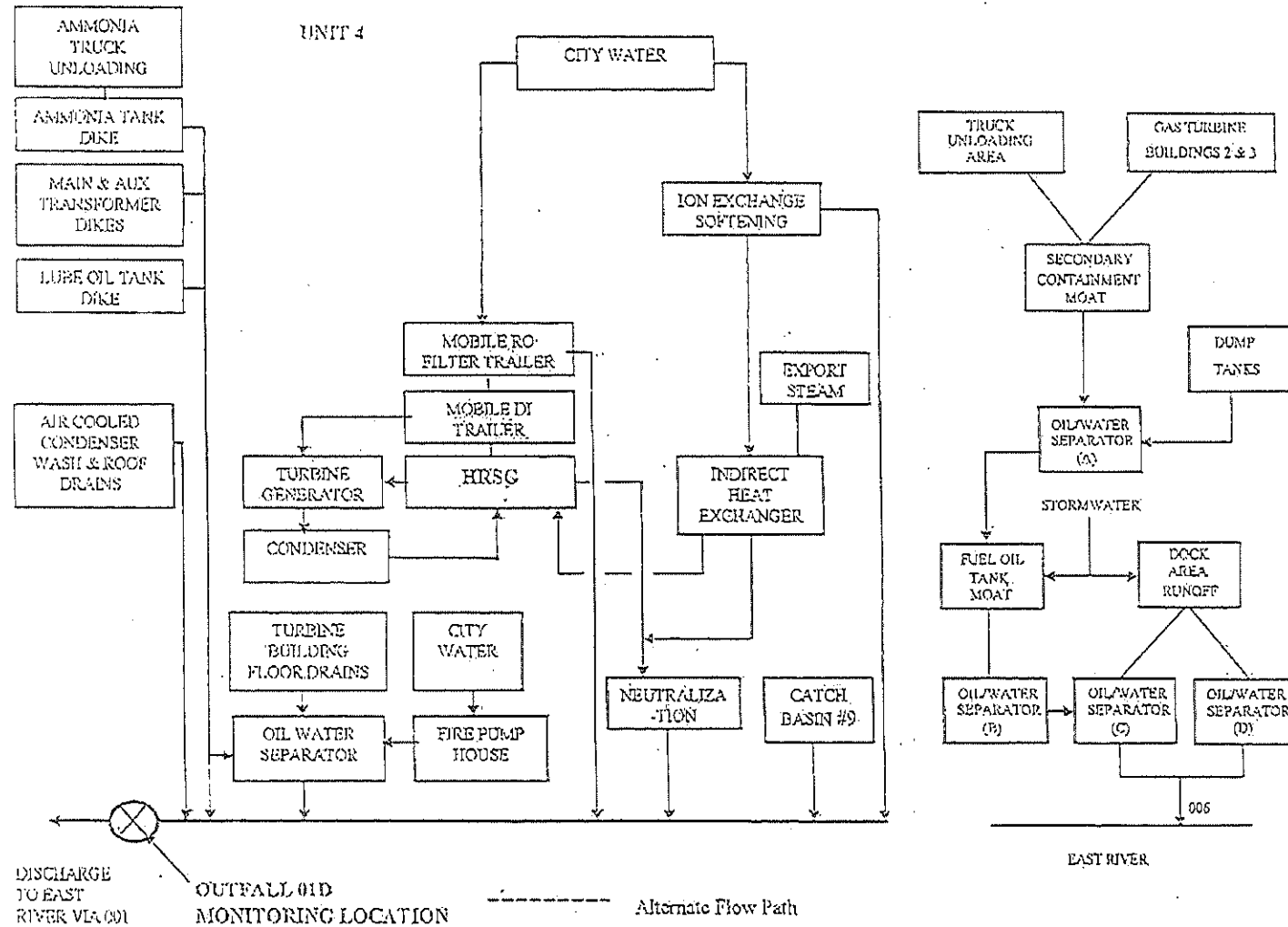
Complete all information for those substances your facility has used, produced, stored, distributed, or otherwise disposed of in the past five (5) years at or above the threshold values listed in the instructions. Include substances manufactured at your facility, as well as any substances that you have 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., 1000-10000 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 from 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.

[illegible]

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.



RAVENSWOOD COMBUSTION TURBINE SITE - SPDES # 0005123



State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C
Supplement A
COGENERATION AND STEAM GENERATING FACILITIES (Industrial Code 4911)

Facility Name: Ravenswood Generating Station	SPDES Number: NY 0005193

This supplement to your application requests specific plant and outfall information necessary to prepare your SPDES permit. The following information will enable you to provide the necessary information. If you have questions, please call the Bureau of Water Permits at (518) 457-1157.

Table 1: Plant Information

Type of Plant (Check all that apply)		Capacity Factor		Retirement Date	Plant fuel			
		Existing %	Future %		Fuel type	Quantity burned per year	Units	Sulfur content, %
Baseload	X	19.84	32.5	Not Defined	Natural Gas	33,023.4268	MCF	N/A
					#6 Fuel Oil	10,530.3549	1,000 gal	0.301
					#1 Fuel Oil	112.96	1,000 gal	0.041
Peaking	X	0.72	3.4	Not Defined	Natural Gas	721.1274	MCF	N/A
					#1 Fuel Oil	0.60	1,000 gal	0.041
Steam Heating								
Other:								

Table 2: Cooling Water Intake Information

	No	Yes	
A. Did you make any changes to the location, design, operation, construction, or capacity of the cooling water intake during the effective period of the current permit?		X	If "Yes," attach a complete description of the changes made.
B. Do you anticipate any changes to the location, design, operation, construction, or capacity of the cooling water intake during the effective period of the permit for which you are applying?		X	If "Yes," attach a complete description of the proposed changes and the approximate dates of the changes.
C. Do you anticipate the need to overhaul any of the condenser cooling water intake screens during the next five (5) years?		X	If "Yes," describe the anticipated work.
D. List the approximate date of the last major overhaul of the condenser cooling water intake screens:	22 Screen - Summer 2011		
E. Attach a brief summary of the quantities of intake cooling system spare parts such as chains, screen baskets, and bushings that are currently on hand, their approximate cost and the reorder level for each.			

Table 3: Thermal Discharge Information

Outfall #	Discharge Temperatures			Temperature differential between discharge and receiving water, °F			Maximum rate of temperature change at discharge point, °F/hour		Type of cooling used (e.g. once through, cooling towers, etc.)
	5% exceedance	1% exceedance	Maximum	Range	Maximum winter	Maximum summer	Planned	Emergency	
001	0*	0*	100	4-21	19	20.4	23	23	once through
*Max	discharge outlet temperature								

Also attach the following information:

- The composition of the steam condenser tube material and feedwater heat tube material.
- Discharge and intake configuration in plan and profile, showing water level fluctuations due to seasonal conditions and tidal variations, and distance from shore.
- Zebra mussel treatment information, including duration, frequency, and method of treatment. Do not include any reports previously submitted to this Department as part of required monitoring.
- Sludge removal and disposal information and handling methods for ash and pyrites.

Attachment to
Industrial Application Form NY-2C, Supplement A
Ravenswood Power Station

Cooling Water Intake Information

- a. In accordance with Biological Monitoring Requirement #2 of the Ravenswood SPDES permit, which became effective on May 1, 2007, upgrades to the existing traveling screens were performed to allow for continuous operation. In order to incrementally reduce flow and meet the performance standards provided for in the 2007 Ravenswood SPDES permit, Variable Speed Pumps (VSP) and Vacuum Priming Systems (VPS) were also installed on the once through cooling system for units 10, 20 and 30.
- b. The newly installed VSP/VFD systems for the cooling water intake will be operated to reduce flow, in accordance with the Department approved verification monitoring plan.
- c. In accordance with Biological requirement #2, a major overhaul and upgrades to the traveling screens were completed. This entailed replacement of the drive chain, upper and lower sprockets, upper and lower bearings, baskets (if needed), nozzles and shafts.
- d. Intake Cooling System Spare Parts-See attached List

Condenser Tubes - Titanium (all units)

Feedwater Heating Tubes

Ravenswood - Unit #10

FW Heater 11 (Drain Cooler) 439 SS
FW Heater 12 Admiralty
FW Heater 13 90-10 Cu-Ni
FW Heater 14 439 SS
FW Heater 15 Admiralty
FW Heater 16N Monel
FW Heater 16S 304N SS
FW Heater 17N Monel
FW Heater 17S 304 SS

Ravenswood - Unit #20

FW Heater 21 (Drain Cooler) Admiralty
FW Heater 22 Admiralty
FW Heater 23 439 SS
FW Heater 24 439 SS
FW Heater 25 90-10 Cu-Ni
FW Heater 26N 304N SS
FW Heater 26S 304N SS

FW Heater 27N 304 SS
FW Heater 27S 304N SS

Ravenswood - Unit #30

FW Heater 31N (Drain Cooler) Admiralty
FW Heater 31S (Drain Cooler) 90-10 Cu-Ni
FW Heater 32N 439 SS
FW Heater 32S 439 SS
FW Heater 33N 90-10 Cu-Ni
FW Heater 33S 90-10 Cu-Ni
FW Heater 34N 439 SS
FW Heater 34S 439 SS
FW Heater 35N 90-10 Cu-Ni
FW Heater 35S 439 SS
FW Heater 36N Monel
FW Heater 36S Monel
FW Heater 37N Monel
FW Heater 37S Monel

Discharge & Intake Configuration

The intake and discharge structures are both located on New York's East River. Attached are the drawings of both the intake and discharge configurations. Each condenser for units 10 and 20 are fed circulating cooling water from two pumps, each rated at 107,000 GPM. The Unit 30 condensers are fed by two pumps; each rated at 268,000 GPM. The discharges from each condenser combine into a common discharge channel.

Biofouling Treatment

The Ravenswood Power station has not used chlorination as a biofouling treatment in the cooling water system since the summer of 2007.

Sludge Removal & Disposal

The Ravenswood Plant does not have a Waste Water Treatment Facility. The only sludge generated would be when the various oil water separators, the floor drain settling tank require cleaning or a boiler wash is performed. Any waste generated is trucked to an authorized disposal facility

Summary of Intake System Spare Parts for Ravenswood Power Station					
Total \$	Inventory item			per item \$	total
\$33,520.00	82747300	CHAIN, CARRIER, 160' TOTAL (80' LEFT HAND & 80' RIGHT HAND) WITH 316L SS SIDEBARS & LUBRICATED 17-4 PH SS STEEL PINS, ROLLERS & BUSHINGS. MUST BE SUITABLE FOR NON-METALLIC OR STEEL BASKETS. END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$16,760.00	2
\$11,113.00	82747301	FOOTSHAFT ASSEMBLY. (SEE LONG DESCRIPTION FOR COMPLETE PARTS LIST) END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$11,113.00	1
\$9,255.00	82747302	HEADSHAFT ASSEMBLY. (SEE LONG DESCRIPTION FOR COMPLETE PARTS LIST) END USE: RAV # 10 & 21 TRAVELING SCREENS	EA	\$9,255.00	1
\$33,750.00	82747303	BASKET ASSEMBLY, NON METALLIC HAVING 14 GAUGE 316 SS MESH WITH 3/8" SQUARE OPENINGS, 316 SS MESH RETAINING STRAPS & 316 SS ASSEMBLY HARDWARE END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$675.00	50
\$1,150.00	82747304	HARDWARE, BASKET ATTACHMENT SET, 316 SS (TO INSTALL ONE COMPLETE BASKET ASSEMBLY) END USE: RAV #10 & #21 TRAVELING SCREENS	EA	\$11.50	100
\$1,418.00	82747305	DRIVE CHAIN, (78-LINKS X 3.075" PITCH) END USE: RAVENWOOD UNIT #10 & #21 REX TRAVELING SCREENS	EA	\$709.00	2
\$3,660.00	82747306	DRIVE SPROCKET, 55-TOOTH TO FIT 3.075: PITCH CHAIN END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$1,830.00	2
\$1,215.00	82747307	PIN, SPARE PINS 17-4 SS FOR CARRIER CHAIN (LUBE STYLE) END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$20.25	60
\$2,600.00	82747308	ROLLER, SPARE ROLLERS FOR CARRIER CHAIN END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$26.00	100
\$2,816.00	82747309	SHEAR HUB ASSEMBLY END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$1,408.00	2
\$1,140.00	82747310	NOZZLE, SPRAYWASH, 3/4" NPT ALUM BRONZE (SSI P/N 33-510) END USE: SCREENWASH HEADERS ON RAV UNIT 10, #21 REX & UNIT 30 FMC TRAVELING SCREENS	EA	\$38.00	30
\$4,900.00	82747311	HOUSING, TAKE UP WITH THORDON BUSHINGS FOR 4-7/16" DIAMETER SHAFT END USE: RAV #10 & #21 REX TRAVELING SCREENS	EA	\$1,225.00	4
\$34,400.00	82747320	CHAIN, CARRIER, 160' TOTAL (80' LEFT HAND & 80' RIGHT HAND) WITH 316L SS SIDEBARS & LUBRICATED 17-4 SS PINS, ROLLERS & BUSHINGS. MUST BE SUITABLE FOR NON-METALLIC OR STEEL BASKETS. END USE: RAV #22,23,24 FMC TRAVELING SCREENS	EA	\$17,200.00	2
\$6,860.00	82747321	FOOTSHAFT, ASSEMBLY (SEE LONG DESCRIPTION FOR PARTS LIST) END USE: RAV #22, 23 & 24 FMC TRAVELING SCREENS	EA	\$6,860.00	1
\$11,891.00	82747322	HEADSHAFT, ASSEMBLY (SEE LONG DESCRIPTION FOR PARTS LIST) END USE: RAV #22, 23 & 24 FMC TRAVELING SCREENS	EA	\$11,891.00	1
\$34,000.00	82747323	BASKET, ASSEMBLIES NON METALLIC 14 GAUGE 316 SS MESH WITH 3/8" SQUARE OPENINGS, 316 SS MESH RETAINING STRAPS AND 316 SS ASSEMBLY HARWARE. BASKETS MUST MESH WITH EXISTING SSI NON-METALLIC BASKET END USE: RAV #22,23,24 FMS TRAVELING SCREENS	EA	\$680.00	50
\$4,000.00	82747324	HARDWARE, BASKET ATTACHMENT, 316 SS ONE SET CONSISTS OF ENOUGH HARWARE TO INSTALL ONE BASKET ASSEMBLY END USE: RAV #22,23 & 24 FMC TRAVELING SCREENS	EA	\$40.00	100
\$450.00	82747325	CHAIN, DRIVE 144 LINKS, 1.5" PITCH END USE: RAV #22,23 & 24 FMC TRAVELING SCREENS	EA	\$225.00	2
\$2,598.00	82747326	SPROCKET, DRIVE 80-TOOTH TO FIT 1.5" PITCH CHAIN END USE: RAV #22,23 & 24 FMC TRAVELING SCREENS	EA	\$1,299.00	2
\$1,475.00	82747327	PIN, SPARE PINS 17-4 PH STAINLESS STEEL (LUBE STYLE) FOR CARRIER CHAIN END USE: RAV #22,23 & 24 FMC TRAVELING SCREENS	EA	\$14.75	100
\$3,200.00	82747328	ROLLER, SPARE ROLLERS FOR CARRIER CHAIN END USE: RAV #22, 23 & 24 FMC TRAVELING SCREENS	EA	\$32.00	100
\$850.00	82747329	SPROCKET, DRIVE, 13-TOOTH FOR 1.5: PITCH CHAIN END USE: RAV #22, 23 & 24 FMC TRAVELING SCREENS	EA	\$425.00	2
\$1,320.00	82747330	NOZZLE, SPRAYWASH, 17-4PHSS WITH U-BOLTS SSI P/N 33-550 END USE: SCREENWASH HEADERS ON RAV #22, 23 & 24 FMC TRAVELING SCREENS	EA	\$44.00	30
\$5,336.00	82747331	HOUSING, TAKE UP HOUSING WITH THORDON BUSHINGS FOR 4-15/16" DIAMETER SHAFT END USE: RAV #22, 23 & 24 FMC TRAVELING SCREENS	EA	\$1,334.00	4
\$40,420.00	82747332	CHAIN, CARRIER, 180' (94' LEFT HAND & 84' RIGHT HAND) WITH 316L SS SIDEBARS & LUBRICATED 17-4 PH SS PINS, ROLLERS & BUSHINGS. MUST BE SUITABLE FOR NON-METALLIC OR STEEL BASKETS. END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$20,210.00	2

\$6,860.00	82747333	FOOTSHAFT ASSEMBLY (SEE LONG DESCRIPTION FOR PARTS LIST) END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$6,860.00	1
\$13,219.00	82747334	HEADSHAFT ASSEMBLY (SEE LONG DESCRIPTION FOR PARTS LIST) END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$13,219.00	1
\$47,600.00	82747335	BASKET, ASSEMBLY NON-METALLIC HAVING 14 GAUGE 316 SS MESH WITH 3/8" SQUARE OPENINGS, 316 SS MESH RETAINING STRAPS & 316 SS ASSEMBLY HARDWARE. BASKETS MUST MESH WITH EXISTING SSI NON-METALLIC BASKETS. END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$680.00	70
\$4,000.00	82747336	HARDWARE, BASKET ATTACHMENT, 316 SS. (TO INSTALL ONE COMPLETE BASKET ASSEMBLY) END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$40.00	100
\$1,418.00	82747337	CHAIN, DRIVE (78-LINKS), 3.075" PITCH END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$709.00	2
\$3,076.00	82747338	SPROCKET, DRIVE 60-TOOTH TO FIT 3.075" PITCH CHAIN END USE: RAV #30 FMC TRAVELING SCREENS	EA	\$1,838.00	2
\$1,475.00	82747339	PIN, SPARE 17-4 P11 STAINLESS STEEL FOR CARRIER CHAIN (LUBE STYLE) END USE: RAV 30 FMC TRAVELING SCREENS	EA	\$14.75	100
\$3,200.00	82747340	ROLLER, SPARE FOR CARRIER CHAIN END USE: RAV 30 FMC TRAVELING SCREENS	EA	\$32.00	100
\$2,862.00	82747341	SHEAR HUB ASSEMBLY END USE: RAV 30 FMC TRAVELING SCREENS	EA	\$1,431.00	2
	82747342	NOZZLE, SCREENWASH 3/4" NPT BRONZE END USE: RAV 30 FMC TRAVELING SCREENS *ORDER NO MORE * USE M&S 82747310	EA	\$36.00	
\$5,644.00	82747343	HOUSING, TAKE UP WITH THORDON BUSHINGS FOR 5-7/16" DIAMETER SHAFT END USE: RAV 30 FMC TRAVELING SCREENS	EA	\$1,411.00	4
\$2,175.00	82747350	HEADER, SCREEN SPRAYWASH 316 STAINLESS STEEL 3" PIPING FOR THREADED NOZZLES END USE: #10 REX & #20 & 30 FMC TRAVELING SCREENS	EA	\$2,175.00	1

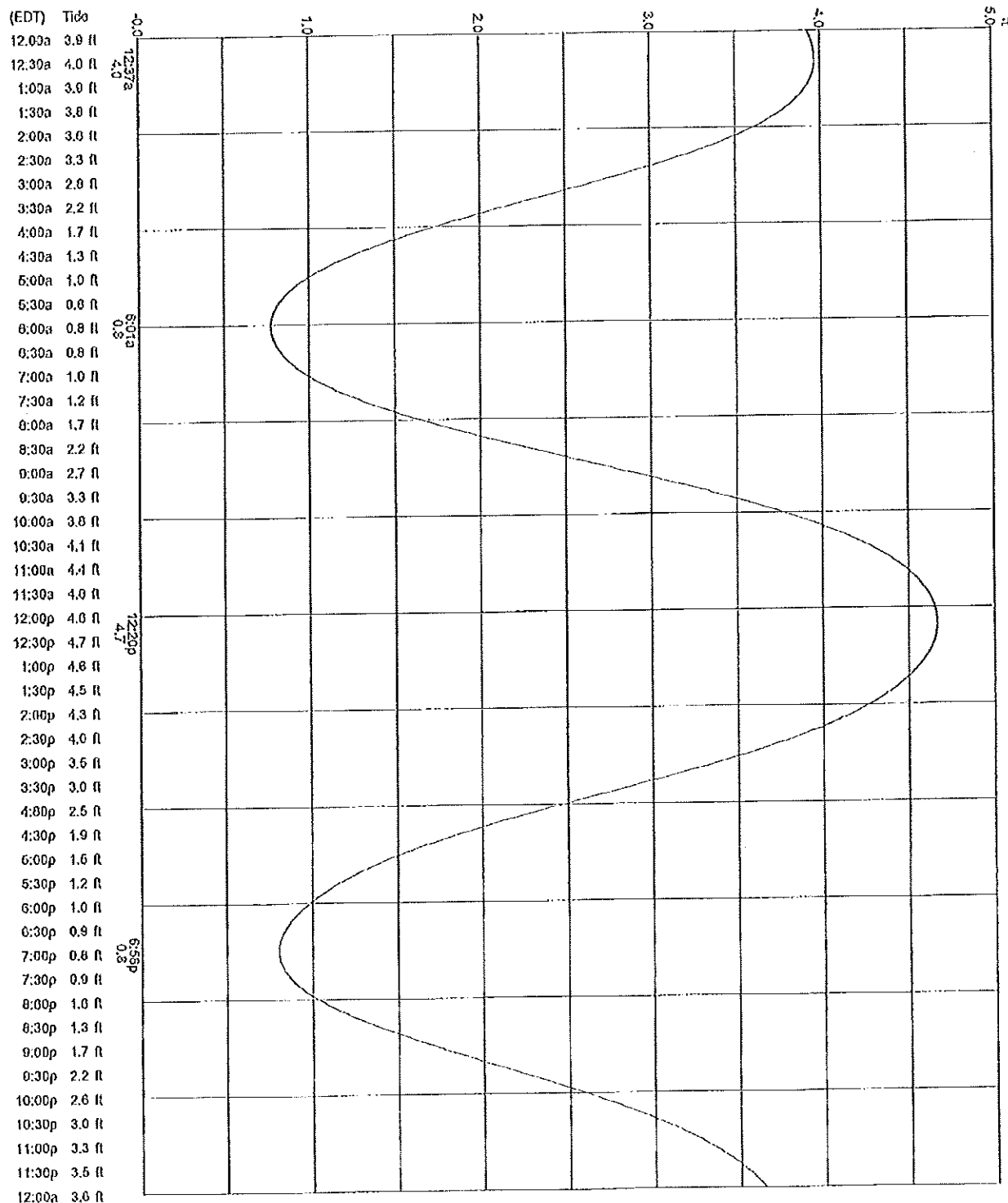
Tides: Queensboro Bridge

based on New York, The Battery (NOAA)
40° 45' 30" N 73° 57' 30" W

Sunday, October 16, 2011

Average Tides
Mean Range: 4.3 ft
MHW: 5.2 ft
Mean Tide: 2.4 ft

Daily Highs & Lows
12:37a 4.0 ft High
6:01a 0.8 ft Low
12:20p 4.7 ft High
6:58p 0.8 ft Low



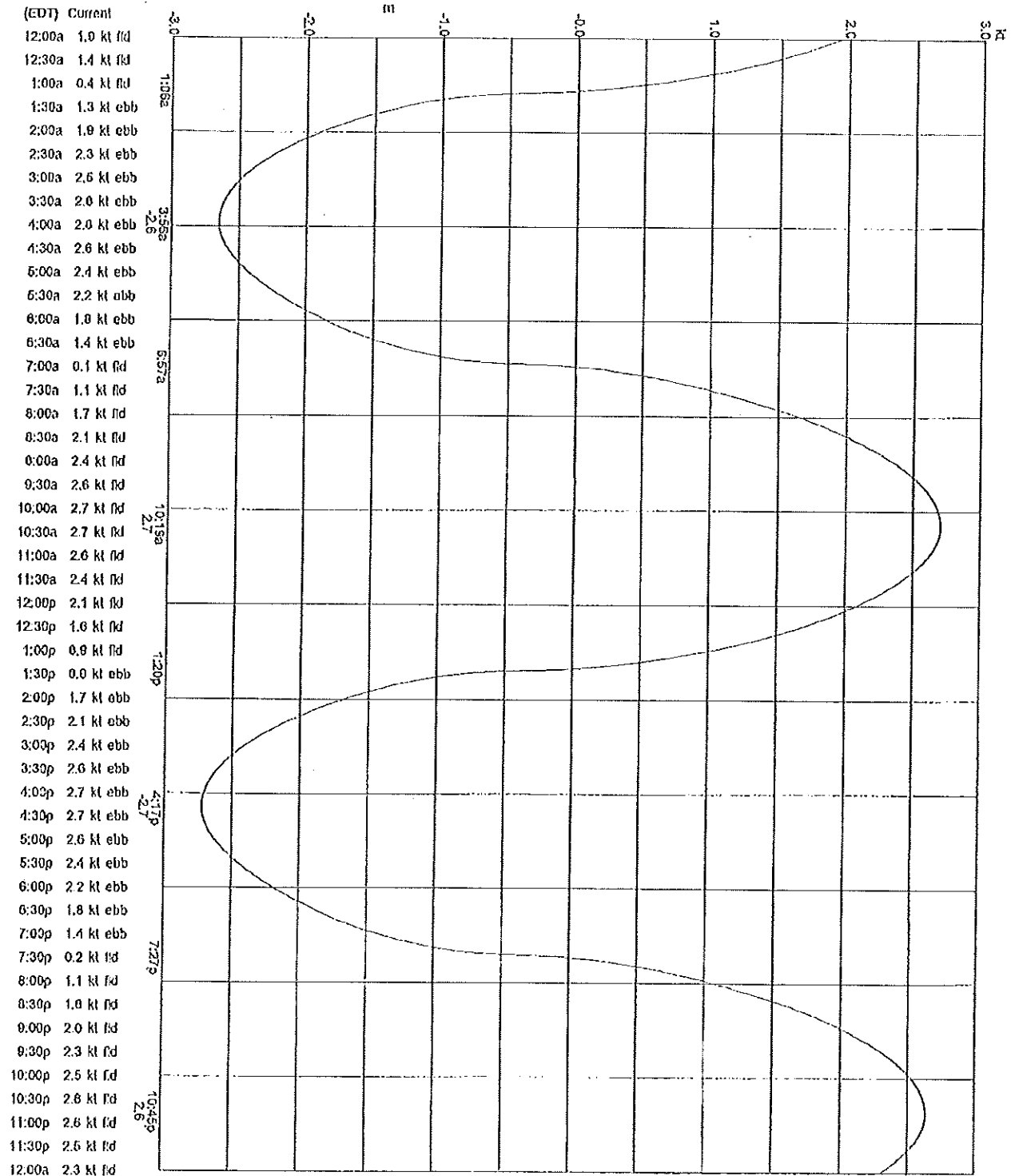
Currents: Williamsburg Bridge, 0.3 mile north of

based on Hel Galo (off Mill Rock), New York (NOAA)
40° 43' 05" N 73° 50' 14" W

Sunday, October 16, 2011

Average Currents	
Min Before Flood:	
Avg Max Flood:	2.7 kt 20°
Min Before Ebb:	
Avg Max Ebb:	2.9 kt 220°

S slack	Max Flood	Ebb
1:08a	3:56a	2.0 kt 220° ebb
6:57a	10:19a	2.7 kt 20° fl
1:20p	4:17p	2.7 kt 220° ebb
7:27p	10:45p	2.6 kt 20° fl



Outfall #	Description	Sup A	NY 2C	Pipe Size/Eleva tion	Total Annual (MG)	Avg. daily Flow (GPD)	Max Daily Flow (GPD)	Design Flow (MGD)	Average Flow (CFS)	Avg Max Flow (CFS)	Design Flow (CFS)	Velocity (FPS)	Comments
001	Main Outfall	X	X	35.41x 20	206,655.32	566,178,950	1,389 MGD	1,389.0	1,261.5	1,473.1	2,150.0	3.0	
01A	Floor Drains and Fuel heating Condensate	NA	X	N/A	4.30	12,000	24,000	0.576	N/A	N/A	N/A	N/A	Seperator max flow is 400 GPM, assume sump pump operate 30 min/day or 12,000 GPD. Max operates 1/hr day, design 24 hr/day
01C	Roof and Yard	NA	X	N/A	16.00	160,963	3,626,640	3.630	N/A				see rainfall calculations
01D	Unit 40 Combined discharge	NA	X	N/A	15.07	32,000	587,000		N/A				Stormwater calc., blowdown assumed at 150,000 GPY, and RO backwash 33,000 GPD
01E	Carbon Filter Backwash	NA	X	N/A	0.26	700	1,700	0.2448	N/A				Back wash = 170 GPM X 10 Min x 3 CF per week.
01F	Pre-Filter Backwash	NA	X	N/A	3.8	10,500	10,500	0.0105	N/A				Back wash: 10 min at 400 GPM Rinse: 5 min at 250 GPM Total: 2 filters 10,500 GPD per vendor manual
01G	Boiler Blowdowns	NA	X	N/A	8.7	23,863	68,763	745,320	N/A				10 Blowdown 8393 GPH 20 Blowdown 8393 GPH 30 Blowdown 14269 GPH
01H	Demineralizer Regen	NA	X	N/A	6.3	18,924	41,810	0.244					Design 170 GPM * 60 min*24 hr =244,800 GPD
004	Rainey Tank	X	X	6"/32	0.7	7,200	72,000	0.007	0.010	0.200	0.200	0.05	90 GPM pump
006	GT Site	X	X	18"/9.0	11.4	114,000	860,000	0.860	0.176	1.330	1.330	0.370	(2) 300 GPM OWS
007	Settling Ponds	X	X	N/A	0.4	356,000	28,880	0.028					pumped when needed by 2 submersible pumps @ 10 GPM.
008	Unit 10 Screenwash	X	X	24"/ 5'6"		1,152,000	1,152,000	1.152	1.8	1.8	1.8	0.567	(3) 800 GPM pumps installed 1 pump runs per outfall
009	Unit 20 Screenwash	X	X	24"/ 5'6"		1,152,000	1,152,000	1.152	1.8	1.8	1.8	0.567	(3) 800 GPM pumps installed 1 pump runs per outfall
010	Unit 30 Screenwash	X	X	24"/ 5'6"		1,728,000	1,728,000	1.728	2.7	2.7	2.7	0.851	(2) 1200 GPM pumps installed 1 pump runs
011	East Side Drainage	NA	X	N/A	No Discharge								Outfall has not been connected to DEP discharge

**Ravenswood Generating Station
Calculation of Stormwater Totals**

Assume an average of 52 inches/year
Volume of Stormwater =

1" of H₂O/sq ft = .6234 gallons

1 gallon = 0.1336805 cu ft.

4.33 cu ft /yr per sq ft

32.4 gal/year per sq ft

Outfall	Sq ft	Avg. GPD	Max GPD
004	17,000	5,508	124,100
006	353,600	114,566	2,581,280
01C	496,800	160,963	3,626,640
01D	76,000	24,624	554,800
011	57,000	18,468	416,100
Total	1,000,400		

Assume 100 rain days per year

0.324 gal/rain day per sq ft

Maximum Flow

Assume short term heavy rain = 0.5 inch per hour

12 in/day = 1 cu ft/sq ft

7.3 gal/sq ft

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 01A			
Latitude 40 ° 45 ' 31 "	Longitude 73 ° 56 ' 54 "	Receiving Water East River via Outfall 001	

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): Floor Drains and Fuel Oil Heating System Condensate						8.3		X	
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
4.3 MG	0.0 MGD	0.012 MGD	0.024 MGD	0.576 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01A
	SPDES Number: NY0005193

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	NY City	12,000	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: ☐Discharge is equipped with diffuser: ☐

Attach Supplement C, MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES.

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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 01A
	SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01A
	SPDES Number: NY0005193

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 (Settling Tank)	1 - U	Suspended Solids	400 GPM
Flotation (Oil Water Separator)	1 - H	Oil and Grease	400 GPM

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.

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 01C		
Latitude 40° 45' 38"	Longitude 73° 56' 54"	Receiving Water East River via outfall 001

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	160,963			GPD
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):									
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
16.0 MG	0.0 MGD	0.160 MGD	3.6 MGD	3.6 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01C
	SPDES Number: NY0005193

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)	Stormwater	0.160	X 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: ☐Discharge is equipped with diffuser: ☐

Attach Supplement C, MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES.

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
Foot	Feet	Feet/Sec

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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 01C
	SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the Instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name:	Ravenswood Generating Station	Outfall No.:	01C
		SPDES Number:	NY0005193

11. Is the discharge from this outfall treated to remove process wastes, water treatment additives, or other pollutants?

☐ YES - Complete the following table. Treatment codos are listed in Table 4.

X NO - Go to Item 12 below.

[illegible]

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.

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 01D			
Latitude 40 ° 45 ' 38 "	Longitude 73 ° 56 ' 54 "	Receiving Water East River Via Outfall 001	

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	150,000		GPY	
d. Process Wastewater					i. Storm Water	2.462		MGY	
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify): Reverse Osmosis Reject water						.033	X		
l. Other discharge (specify): Fire Pump gland leakage						negligible			

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 14.52 MG	b. Daily Minimum Flow 0.003 MGD	c. Daily Average Flow 0.033 MGD	d. Daily Maximum Flow 0.587 MGD	e. Maximum Design flow rate MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01D
	SPDES Number: NY0005193

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	New York City	33,866	MGD	☒ GPD	GPM
Private Surface Water Source			MGD	GPD	GPM
Private Supply Well			MGD	GPD	GPM
Other (specify)	Stormwater	24,624	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	Foot	Feet/Sec

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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 01.D
	SPDES Number: NY 0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

- ☐ YES - Complete the following table. ☐ Information on the intake and discharge configuration of this outfall is attached.
- ☒ NO - Go to Item 9, below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

- ☒ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.
- ☐ NO - Go to Item 10, below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name
Ashland	Mekor 6701		
various	Sulfuric Acid		
Ashland	Amercor		

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

- ☐ YES - Complete the following table.
- ☒ NO - Go to Item 11, on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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: Ravenswood Generating Station	SPDES Number: NY 0005193

1. Outfall Number and Location

Outfall No.: 01E	Latitude 40 ° 45 ' 32"	Longitude 75 ° 56 ' 54"	Receiving Water East River Via Outfall 001

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
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): Carbon Filter Backwash						170		X	
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
0.2652 MGD	0.0 MGD	0.0007 MGD	0.0017 MGD	.244 MGD

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

Facility Name: Ravenswood Generating Station		Outfall No.: 01E
		SPDES Number: NY0005193

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	New York City	700	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	Are the results of a mixing/diffusion study attached?	☐ YES ☐ NO
Feet	Feet	Feet/Sec		

Section II - Outfall Information

Outfall No.: 01E	
Facility Name: Ravenswood Generating Station	SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9, below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10, below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11, on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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: Ravenswood Generating Station	SPDES Number: NY 0005193

1. Outfall Number and Location

Outfall No.: 01F		
Latitude 40° 45' 32"	Longitude 73° 56' 49"	Receiving Water East River via 001

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): Pre-filter backwash						10,500		GPD	
l. Other discharge (specify):									

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 3.83 MG	b. Daily Minimum Flow 0.01 MGD	c. Daily Average Flow 0.01 MGD	d. Daily Maximum Flow 0.01 MGD	e. Maximum Design flow rate 0.01 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01F
	SPDES Number: NY 0005193

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
			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	New York City	10,500	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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 01F
	SPDES Number: NY 0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table. ☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (o.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2G
 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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 01G			
Latitude 45° 45 ' 32"	Longitude 73° 56 ' 49"	Receiving Water East River via outfall 001	

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	16.5		X	
d. Process Wastewater					i. Storm Water				
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):									
l. Other discharge (specify):									

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 8.7 MG	b. Daily Minimum Flow 0.0 MGD	c. Daily Average Flow 0.023 MGD	d. Daily Maximum Flow 0.068 MGD	e. Maximum Design flow rate 0.745 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01G
	SPDES Number: NY0005193

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	New York City	.023	☒ 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: ☐Discharge is equipped with diffuser: ☐

Attach Supplement C, MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES.

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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 01G
	SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☒ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☐ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name
Ashland	Ammercor 8850		
Ashland	Mekor 6701		
various	Trisodium Phosphate		
various	Disodium Phosphate		

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 01H			
Latitude 40° 45' 32"	Longitude 75° 56' 49"	Receiving Water East River via outfall 001	

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	18,924			GPD	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):									
l. Other discharge (specify):									

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

a. Name of the process contributing to the discharge Anion and Cation demineralizer regeneration water			Process SIC code: 4 9 1 1
Describe the contributing process Sulfuric acid(92%) and sodium hydroxide(50%) are used to regenerate ion exchange resin.	Category 423	Quantity per day 18,924	Units of measure GPD
	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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
6.29 MG	0.0 MGD	0.019 MGD	0.041 MGD	0.244 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 01H
	SPDES Number: NY0005193

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	New York City	18,924	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	Are the results of a mixing/diffusion study attached?	☐ YES
Foot	Foot	Feet/Sec		☐ NO

Section II - Outfall Information

Facility Name: Ravenswood Generating Station		Outfall No.: 01H
		SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table. ☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☒ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☐ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name
BCS	Sulfuric Acid 92%		
BCS	Sodium Hydroxide 50%		

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name:	Ravenswood Generating Station	Outfall No.:	01H
		SPDES Number:	NY0005193

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.

X NO - Go to Item 12 below.

[illegible]

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.

X NO - Go to Section III on the following page.

[illegible]

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.

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 001		
Latitude 40° 45' 31"	Longitude 73° 56' 54"	Receiving Water East River

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	566	X		
b. Process Wastewater					g. Remediation System Discharge				
c. Process Wastewater					h. Boiler Blowdown 01G	0.023	X		
d. Process Wastewater					i. Storm Water 01C	0.160	X		
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify): 01A, 01D, 01E, 01F, 01H						0.073	X		
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
206,655.18 MG	MGD	566.43 MGD	1,389.6 MGD	1,389.6 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 001
	SPDES Number: NY0005193

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	New York City	0.08	☒ MGD	☐ GPD	☐ GPM
Private Surface Water Source			☐ MGD	☐ GPD	☐ GPM
Private Supply Well			☐ MGD	☐ GPD	☐ GPM
Other (specify)	East River	565	☒ 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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 001
	SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

- ☒ YES - Complete the following table. ☒ Information on the intake and discharge configuration of this outfall is attached.
- ☐ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (o.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	
4.6	20.4	97.9	1	1	7/21	7/21	1,389	Once through subsurface

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

- ☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.
- ☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

- ☐ YES - Complete the following table.
- ☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name:	Ravenswood Generating Station	Outfall No.: 001
		SPDES Number: NY0005193

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.

X NO - Go to Item 12 below.

[illegible]

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.

X NO - Go to Section III on the following page.

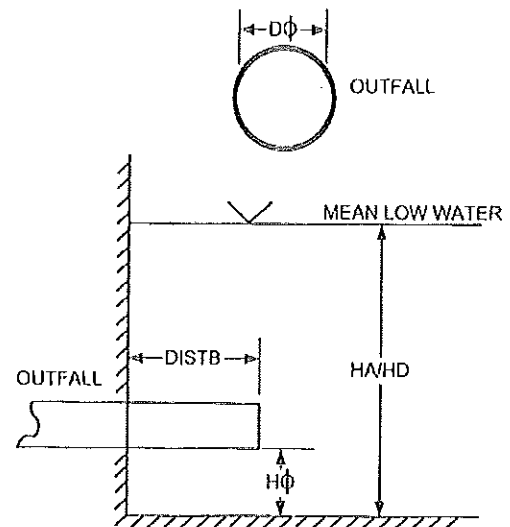
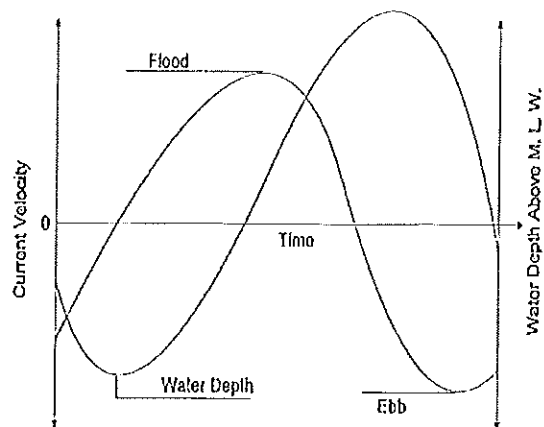
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-Outfall 001	SPDES Number: NY0005193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = HA/HD
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft:	23' 9"
Ft:	15
Ft:	0.0
Ft:	708 sq. ft
FPS:	1.9
CFS:	2150
CFS:	1261
CFS:	1473
Kg/m ³	996
Kg/m ³	996
Kg/m ³	996

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.

²Yearly average of monthly hourly maximum effluent flow.

³Upstream of the discharge site

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 004		
Latitude 40° 45' 48"	Longitude 73° 56' 40"	Receiving Water East River

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	0.007	X		
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):									
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
0.7 MG	0.0 MGD	0.007 MGD	0.129 MGD	0.129 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 004
	SPDES Number: NY0005193

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)	Stormwater	0.007	X 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	Are the results of a mixing/diffusion study attached? ☐ YES ☐ NO
Feet	Feet	Feet/Sec	

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 004
	SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9, below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10, below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11, on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name: Ravenswood Generating Station		Outfall No.: 004
		SPDES Number: NY0005193

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)
Flotation	1-H	Oil and Grease	300 GPM
Carbon Adsorption	2-A	Oil and Grease	300 GPM

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.

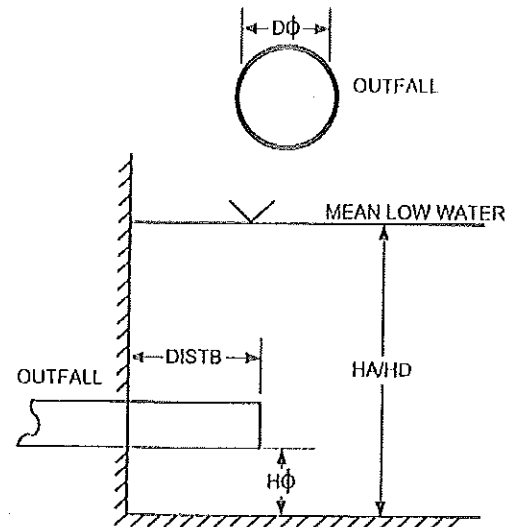
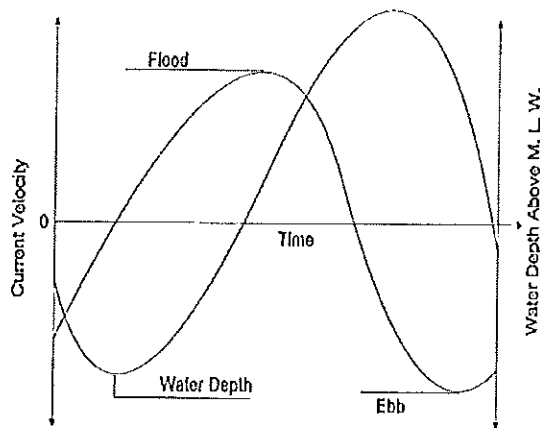
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2G & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-004	SPDES Number: NY0005193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = HA/HD
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft:	32.0
Ft:	20.0
Ft:	0.0
Ft:	0.5
FPS:	0.05
CFS:	0.2
CFS:	0.01
CFS:	0.2
Kg/m ³	996
Kg/m ³	996
Kg/m ³	996

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.

²Yearly average of monthly hourly maximum effluent flow.

³Upstream of the discharge site

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 006		
Latitude 40° 45' 44"	Longitude 73° 56' 43"	Receiving Water East River

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	0.114	X		
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):									
l. Other discharge (specify):									

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 11.4 MGD	b. Daily Minimum Flow 0.0 MGD	c. Daily Average Flow 0.114 MGD	d. Daily Maximum Flow 0.86 MGD	e. Maximum Design flow rate 0.86 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 006
	SPDES Number: NY0005193

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)	Stormwater	0.114	X 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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station		Outfall No.: 006
		SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9, below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10, below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11, on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

INDUSTRIAL APPLICATION FORM NY-2C

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 006
	SPDES Number: NY0005193

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)
Flotation (2 oil/water separators)	1-H	Oil and Grease	2 OWS at 225 GPM

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.

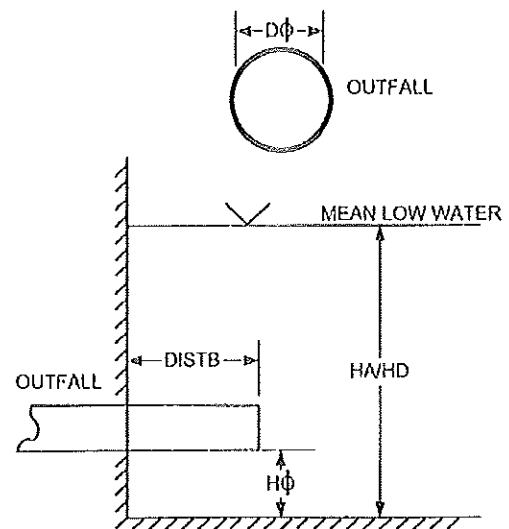
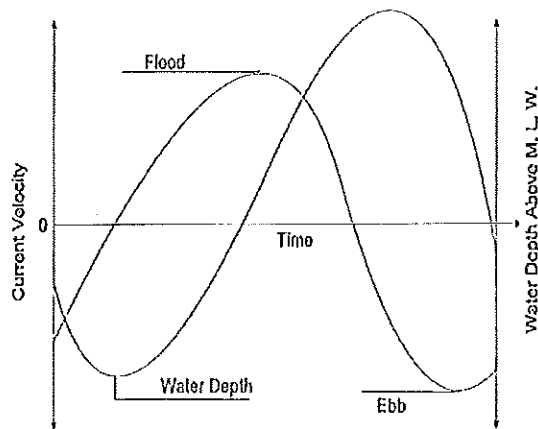
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-Outfall 006	SPDES Number: NY0005193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = HA/HD
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft:	26.0
Ft:	17.0
Ft:	0.0
Ft:	1.5
FPS:	0.1
CFS:	1.3
CFS:	0.176
CFS:	1.3
Kg/m ³ :	996
Kg/m ³ :	996
Kg/m ³ :	996

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.
²Yearly average of monthly hourly maximum effluent flow.
³Upstream of the discharge site

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 007		
Latitude 40° 45' 32"	Longitude 75° 56' 53"	Receiving Water East River

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	0.356		MGY	
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):									
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
0.356 MGD	0.0 MGD	0.001 MGD	0.0288 MGD	0.0288 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 007
	SPDES Number: NY0005193

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)	Stormwater	0.001	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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 007 SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name: Ravenswood Generating Station	Outfall No.: 007
	SPDES Number: NY0005193

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)

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.

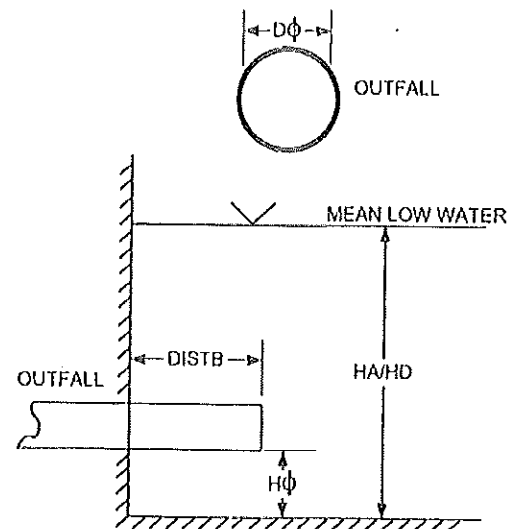
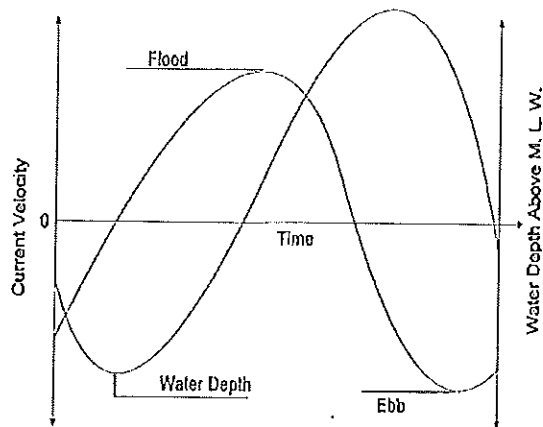
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-Outfall 007	SPDES Number: NY 0005193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = HA/HD
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft: _____
 Ft: _____
 Ft: _____
 Ft: _____
 FPS: _____
 CFS: _____
 CFS: _____
 CFS: _____
 Kg/m³ 996 _____
 Kg/m³ 996 _____
 Kg/m³ 996 _____

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.
²Yearly average of monthly hourly maximum effluent flow.
³Upstream of the discharge site

**No permanent piping. Two 10 GPM submersible pumps are used to pump out rain water when needed.

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 008		
Latitude 40° 45' 33"	Longitude 73° 56' 50"	Receiving Water East River

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
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): Screenwash Discharge						1.152	X		
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
420.48 MG	0.0 MGD	1.152 MGD	1.152 MGD	1.152 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 008
	SPDES Number: NY0005193

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)	East River	1.152	☒ 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

Section II - Outfall Information

Facility Name: Ravenswood Generating Station

Outfall No.: 008

SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name: Ravenswood Generating Station	Outfall No.: 008
	SPDES Number: NY0005193

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)

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.

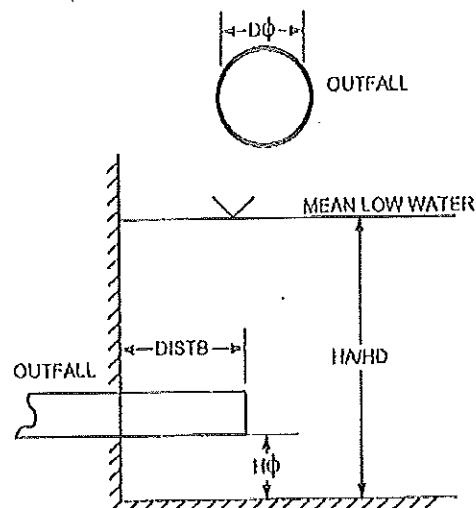
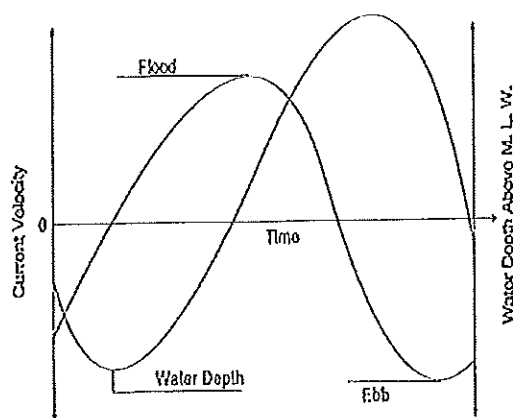
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-20 & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-Outfall 008	SPDES Number: NY 000 5193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = HA/HD
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft:	27.5
Ft:	22.0
Ft:	2.5
Ft:	2.0
FPS:	0.56
CFS:	1.78
CFS:	1.78
CFS:	1.78
Kg/m ³	996
Kg/m ³	996
Kg/m ³	996

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.
²Yearly average of monthly hourly maximum effluent flow.
³Upstream of the discharge site

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 009		
Latitude 40° 45' 33"	Longitude 73° 56' 50"	Receiving Water East River

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): Screenwash Discharge	1.152	X							
l. Other discharge (specify):									

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 420.48 MGD	b. Daily Minimum Flow 0.0 MGD	c. Daily Average Flow 1.152 MGD	d. Daily Maximum Flow 1.152 MGD	e. Maximum Design flow rate 1.152 MGD

INDUSTRIAL APPLICATION FORM NY-2C

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 009
	SPDES Number: NY0005193

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
			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)	East River	1.152	☒ 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

Section II - Outfall Information		Outfall No.: 009
Facility Name: Ravenswood Generating Station		SPDES Number: NY0005193

☐ YES • Complete the following table. Treatment codes are listed in Table 4.

X NO - Go to Item 12 below.

Treatment process	Treatment Code(s)	Treatment used for the removal of:	Design Flow Rate (include units)

YES - Complete the following table.

☒ **X** NO - Go to Section III on the following page.

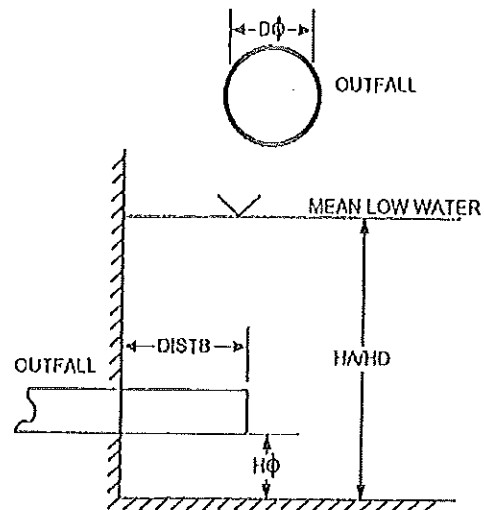
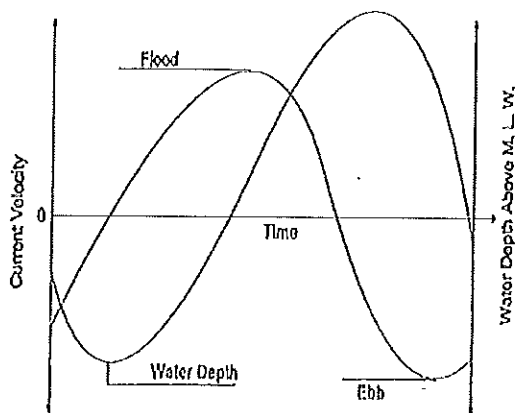
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-Outfall 009	SPDES Number: NY 000 5193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = HA/HD
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft:	27.5
Ft:	22.0
Ft:	2.5
Ft:	2.0
FPS:	0.56
CFS:	1.78
CFS:	1.78
CFS:	1.78
Kg/m ³	996
Kg/m ³	996
Kg/m ³	996

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.
²Yearly average of monthly hourly maximum effluent flow.
³Upstream of the discharge site

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 010			
Latitude 40° 45' 37"	Longitude 73° 56' 45"	Receiving Water East River	

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
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): Screenwash water	1.728	X							
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
630.7 MG	0.0 MGD	1.728 MGD	1.728 MGD	1.728 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 010
	SPDES Number: NY0005193

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)	East River	1.728	☒ 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	Are the results of a mixing/diffusion study attached?	☐ YES ☐ NO
Feet	Feet	Foot/Sec		

Section II - Outfall Information

Facility Name: Ravenswood Generating Station		Outfall No.: 010
		SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table. ☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Facility Name:	Ravenswood Generating Station	Outfall No.:	010
		SPDES Number:	NY0005193

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.

☒ **X** NO - Go to Item 12 below.

[illegible]

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.

X NO - Go to Section III on the following page.

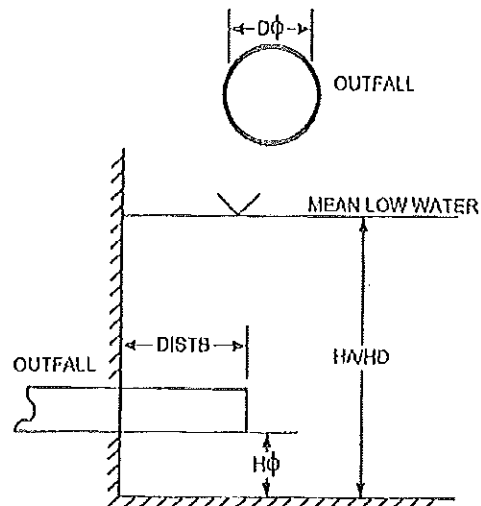
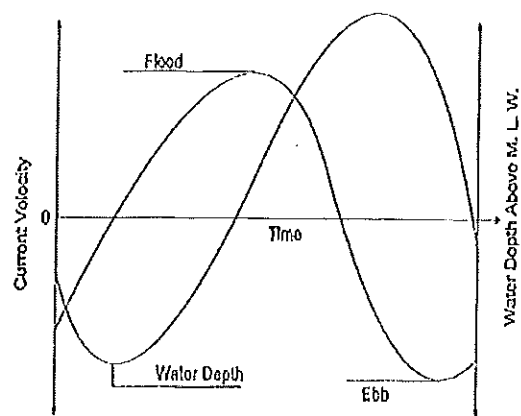
Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

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.

State Pollutant Discharge Elimination System (SPDES)
INDUSTRIAL APPLICATION FORM NY-2C & MUNICIPAL APPLICATION FORM NY-2A
Supplement A
MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES

Facility Name: Ravenswood Generating Station-Outfall 010	SPDES Number: NY 000 5193

**Mixing Zone Analysis For Estuarine Marine Waters
Data Requirements - Pipe Discharge**



Discharge outfall height = $H\phi$
 Average Depth = $H\phi/HD$
 Distance to the Bank = $DISTB$
 Outfall/Port Diameter = $D\phi$
 Discharge Velocity = $U\phi$
 Design Discharge Flow = $Q\phi_0$
 Actual Average Flow¹ = $Q\phi_1$
 Average Peak Flow^{1,2} = $Q\phi_2$
 Discharge Density = $RHO\phi$
 Surface Density³- Tidal Waters = $RHOAS$
 Bottom Density³- Tidal Waters = $RHOAD$

Ft:	29.5
Ft:	24.0
Ft:	3.5
Ft:	2.0
FPS:	0.86
CFS:	2.7
CFS:	2.7
CFS:	2.7
Kg/m ³	996
Kg/m ³	996
Kg/m ³	996

Provide Stage VS. Time data over a tidal cycle
 Provide Tidal Velocity VS. Time data over a tidal cycle

--See above diagram
 --See above diagram

Note: ¹Two year period shall be used.

²Yearly average of monthly hourly maximum effluent flow.

³Upstream of the discharge site

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: Ravenswood Generating Station	SPDES Number: NY0005193

1. Outfall Number and Location

Outfall No.: 011		
Latitude 40° 45' 30"	Longitude 73° 56' 45"	Receiving Water East River via NYC DEP Outfall

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	.018	X		
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify):									
l. Other discharge (specify):									

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	b. Daily Minimum Flow	c. Daily Average Flow	d. Daily Maximum Flow	e. Maximum Design flow rate
1.8 MGD	0.0 MGD	0.018 MGD	0.416 MGD	0.416 MGD

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

Facility Name: Ravenswood Generating Station	Outfall No.: 011
	SPDES Number: NY0005193

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)	stormwater	0.018	X 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	Are the results of a mixing/diffusion study attached? ☐ YES ☐ NO
Feet	Feet	Feet/Sec	

Section II - Outfall Information

Facility Name: Ravenswood Generating Station	Outfall No.: 011 SPDES Number: NY0005193

8. Thermal Discharge Criteria

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?

☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?

☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

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

Station #: 011	Outfall No.: 011
Facility Name: Ravenswood Generating Station	SPDES Number: NY0005193

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.

[illegible]

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.

X 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.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Applicability

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use. The DEC will review that submittal and determine if a formal SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require formal SPDES permit modification. Notification requirements are summarized below. WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use this form for review and authorization of substances, other than WTCs, which could be present in wastewater, e.g. process chemicals.

Notification Requirements and Instructions

For each new or increased use of a WTC, please complete items 1a, and 2 - 14 on the attached 3 page form, entitled WTC Usage Notification Requirements for SPDES Permittees. Alternatively, the permittee may, at a minimum, complete items 1a, 2 - 9 and 14 then forward the form to the WTC manufacturer who must then complete the remaining items (10 - 13) and items 1b and 15. The manufacturer must then send the completed form directly to the permit writer. This alternative method may be necessary because the WTC manufacturer may be reluctant to reveal trade secret product formulations to the permittee.¹ Fax or Mail the completed form to:

Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - In general, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. However, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

Toxicity Information - When completing item 13, please ensure that the tests were conducted in accordance with the EPA Toxicity Manual and that the results are for the appropriate receiving water (i.e. fresh water or salt water).² In general, submissions which do not include any toxicity information will not be authorized. Submissions containing incomplete toxicity information will be reviewed using conservative safety factors which may prevent authorization or result in the permit being modified to include routine whole effluent toxicity testing or other monitoring.

Phosphorus - The permittee must demonstrate that the use and discharge of any WTCs containing phosphorus, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

After reviewing the submission, the permit writer will complete items 16 and 17 and fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.

Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

- (1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.
- (2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

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Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

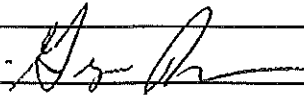
Permittee completes Items 1a and 2 - 14. Alternatively, the permittee may complete items 1a, 2 - 9 and 14 if the WTC manufacturer completes items 1b, 10 - 13 and 15. See Instructions page.

1.a. Date Signed by Permittee -		1.b. Date Signed by WTC Manufacturer -	
2.a. Permittee Name - TC Ravenswood		2.b. SPDES No. - NY 0005193 ☒	
2.c. Contact Name - Gregory Pryor			
3.a. WTC Name - Amercor			
3.b. WTC Manufacturer - Ashland			
4. WTC Function - Corrosion Inhibitor			
5. Affected Outfall(s) - outfall 001 (via 01G and 01D)			
6.a. WTC Daily Dosage: average lbs/day = , maximum lbs/day = 3,928 lbs/year			
6.b. Dosage Frequency: minutes/day = varies , days/week = varies			
7.a. Outfall Flow Rate: average MGD = , maximum MGD = 42,464.88 MGY			
7.b. Outfall WTC Concentration: average mg/l = , maximum mg/l = 0.011			
8.a. System Blowdown Flow Rate: average gpm = varies , maximum gpm =			
8.b. System Blowdown Frequency: minutes/day = 1800 hr/yr , days/week =			
9. List measures in place to ensure that excessive levels of WTC are not used and subsequently discharged - Amercor will be mostly consumed in the boiler steam cycle and not discharged.			
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Cyclobexylamine	50%	108-91-8	0.005 mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products -			

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WTC Usage Notification Requirements for SPDES Permittees
 Page 2 of 3

1.a. Date Signed by Permittee - 10/11/2011		1.b. Date Signed by WTC Manufacturer -			
2.b. SPDES No. - NY 0005193		3.a. WTC Name - Amercor			
11. WTC BOD and COD (lb/lb) -					
12.a. Is WTC a NYS registered biocide?			12.b. Registration Number -		
13. WTC Toxicity Info (most sensitive species) - Attach description of endpoint for each EC50 and LOEC.					
13.a. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Oncorhynchus mykiss	3,450 mg/l	mg/l	mg/l	mg/l	
13.b. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Pimephales promelas	381 mg/l	mg/l	mg/l	mg/l	
13.c. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Daphnia magna	722 mg/l	mg/l	mg/l	mg/l	
13.d. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.e. Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	

14. Permittee Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete. The generic WTC usage requirements noted below will be adhered to.

PRINT NAME - Gregory Pryor	SIGNATURE - 
TITLE/COMPANY - Environmental Specialist	
TELEPHONE - 718.706.2863	FAX - 718.361.8875

15. WTC Manufacturer Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete.

PRINT NAME -	SIGNATURE -
TITLE/COMPANY -	
TELEPHONE -	FAX -

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 3 of 3

1.a. Date Signed by Permittee -	1.b. Date Signed by WTC Manufacturer -
2.b. SPDES No. - NY 0005193	2.c. Contact Name - Gregory Pryor
3.a.. WTC Name - Amercor	6.a. Avg/Max Daily Dosage = / 3,928 lbs/day

Generic WTC Usage Requirements

- A. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.
- B. The discharge shall not cause or contribute to a violation of water quality or an exceedance of AWQC.
- C. The permittee must maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 3 years. This period may be extended by request of the DEC.
- D. The permittee shall provide an annual report, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

Items 16 - 17 must be completed by NYSDEC permit writer.

16. Review Decision (check the appropriate box). *Fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.*

☐ The proposed WTC usage may proceed as proposed without permit modification subject to the conditions noted above.

☐ The proposed WTC usage may not proceed for one of the following three reasons:

- ☐ As noted below, the information provided is insufficient to complete our review.
- ☐ As noted below, the SPDES permit must first be modified to add new requirements.
- ☐ As noted below, the proposed use is prohibited.

17. Permit Writer Information:

PRINT NAME -	SIGNATURE -
TITLE -	DATE -
ADDRESS -	
TELEPHONE -	FAX -

ASHLAND
SAFETY DATA SHEET

Page: 1
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Version: 1.5

Amercor™ 8850 CORROSION
INHIBITOR 100125

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE
COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone	1-800-ASHLAND (1-800-274-5263)

Product name	Amercor™ 8850 CORROSION INHIBITOR
Product code	100125
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, Clear colorless to yellow

DANGER! FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. HARMFUL IF ABSORBED THROUGH THE SKIN. MAY BE HARMFUL. MAY CAUSE SEVERE BURNS OF RESPIRATORY AND DIGESTIVE TRACTS. HARMFUL IF SWALLOWED. CAUSES SEVERE BURNS OF THE EYES AND SKIN.

Potential Health Effects

Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness. Additional symptoms of eye exposure may include: halo vision (blurred vision around bright objects)

Skin contact

Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects) Passage of this material into the body through the skin is possible, and skin contact may be harmful.

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Amercor™ 8850 CORROSION
INHIBITOR 100125

Ingestion

Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Skin, lung (for example, asthma-like conditions), male reproductive system. Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways), Cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), nervousness, effects on blood pressure, chest pain, effects on heart rate, Lack of coordination, Difficulty in breathing, lung edema (fluid buildup in the lung tissue), May cause methemoglobinemia, a blood abnormality that may cause headache, difficulty breathing, lightheadedness, weakness, confusion, rapid heart rate and cyanosis (lack of oxygen in the tissues causing blue-colored skin and nails).

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible bladder effects, effects on male fertility, testis damage

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

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Reproductive hazard

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Other information

This material (or a component) has been both positive and negative in tests for mutagenicity. The relevance of this finding to human health is uncertain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
CYCLOHEXYLAMINE	108-91-8	>=40-<50%

4. FIRST AID MEASURES

Eyes

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

Ingestion

Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

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Notes to physician

Hazards: Overexposure to this product (or a component) may cause methemoglobinemia, which in sufficient concentration causes cyanosis. Severe cyanosis may require intravenous injection of methylene blue. Methylene blue is contraindicated if the patient has confirmed or suspected glucose-6-phosphate dehydrogenase deficiency.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Alcohol-resistant foam, Carbon dioxide (CO₂), Dry chemical

Hazardous combustion products

May form: Ammonia, carbon dioxide and carbon monoxide, nitrogen compounds, toxic fumes, Hydrocarbons

Precautions for fire-fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

Flammability Class for Flammable Liquids

Combustible Liquid Class II

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

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Environmental precautions

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for cleaning up

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Storage

Store in a cool, dry, ventilated area, away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

CYCLOHEXYLAMINE		108-91-8
ACGIH	time weighted average	10 ppm
NIOSH	Recommended exposure limit (REL);	10 ppm
NIOSH	Recommended exposure limit (REL);	40 mg/m3

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Amercor™ 8850 CORROSION
INHIBITOR 100125

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Eye protection

Chemical splash goggles and face shield (8" min.) in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.)

Skin and body protection

Wear resistant gloves (consult your safety equipment supplier).
To prevent skin contact, wear impervious full-body protective clothing.

Respiratory protection

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	No data
Colour	Clear colorless to yellow
Odour	No data
Boiling point/boiling range	212.00 °F / 212 °F@ 760.00 mmHg
pH	(+/- 0.34) 12.4
Flash point	119.8 °F / 48.8 °C, Pensky Martens closed cup
Evaporation rate	> 1 (Ethyl Ether)
Explosion limits	1.5 %(V) 9.4 %(V)
Vapour pressure	17.50 mmHg
Vapour density	(>) 1 (AIR=1)

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Density	0.945 g/cm3 @ 77.00 °F / 25.00 °C
Solubility	No data
Partition coefficient: n-octanol/water	No data
log Pow	no data available
Autoignition temperature	No data

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
None known. None known.

Incompatible products
Avoid contact with: Acids, aluminum, Copper, galvanized metals, Strong oxidizing agents, Zinc

Hazardous decomposition products
Ammonia, carbon dioxide and carbon monoxide, nitrogen compounds

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

CYCLOHEXYLAMINE	LD 50 Rat: 156 mg/kg

Acute inhalation toxicity

CYCLOHEXYLAMINE	LC 50 Rat: 2.3 mg/l , 4 h

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Acute dermal toxicity

CYCLOHEXYLAMINE

LD 50 Rabbit: 277 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Acute and Prolonged Toxicity to Fish

96 h LC 50 *Oncorhynchus mykiss* (rainbow trout), static test: 3,450 mg/l

96 h LC 50 *Pimephales promelas* (fathead minnow), static test: 381 mg/l

Acute Toxicity to Aquatic Invertebrates

48 h LC 50 Water flea (*Daphnia magna*), static test: 772 mg/l

Environmental fate and pathways

COD: 450,000 mg/l

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

IMDG:

UN2357, CYCLOHEXYLAMINE SOLUTION 8 (3), II

IATA_P:

UN2357, Cyclohexylamine Solution 8 (3), II

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IATA_C:
UN2357, Cyclohexylamine Solution 8 (3), II

CFR_ROAD:
UN2357, Cyclohexylamine Solution 8 (3), II

CFR_RAIL:
UN2357, Cyclohexylamine Solution 8 (3), II

CFR_INWTR:
UN2357, Cyclohexylamine Solution 8 (3), II

IMDG_ROAD:
UN2357, CYCLOHEXYLAMINE SOLUTION 8 (3), II

IMDG_RAIL:
UN2357, CYCLOHEXYLAMINE SOLUTION 8 (3), II

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SARA Hazard Classification	Fire Hazard
	Acute Health Hazard

New Jersey RTK Label Information

WATER

CYCLOHEXYLAMINE

7732-18-5

108-91-8

Pennsylvania RTK Label Information

WATER

CYCLOHEXYLAMINE

7732-18-5

108-91-8

Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302)

250 lbs

Reportable quantity - Components

CYCLOHEXYLAMINE

108-91-8

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	Health	Flammability	Reactivity	Other
HMIS	3	2	1	
NFPA	3	2	1	

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Applicability

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use. The DEC will review that submittal and determine if a formal SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. **The majority of WTC authorizations do not require formal SPDES permit modification.** Notification requirements are summarized below. WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use this form for review and authorization of substances, other than WTCs, which could be present in wastewater, e.g. process chemicals.

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Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - *In general*, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. *However*, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

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Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

- (1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.
- (2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees
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Permittee completes Items 1a and 2 - 14. Alternatively, the permittee may complete Items 1a, 2 - 9 and 14 if the WTC manufacturer completes Items 1b, 10 - 13 and 15. See instructions page.

1.a. Date Signed by Permittee -		1.b. Date Signed by WTC Manufacturer -	
2.a. Permittee Name - Ravenswood Generating Station		2.b. SPDES No. - NY 0005193	
2.c. Contact Name - Gregory Pryor			
3.a. WTC Name - Disodium Phosphate Anhydrous			
3.b. WTC Manufacturer - ICL Performance Products LP			
4. WTC Function - Boiler water chemistry phosphate inventory control			
5. Affected Outfall(s) - outfalls 001 via 01G			
6.a. WTC Daily Dosage: average lbs/day = 850 lbs/year , maximum lbs/day =			
6.b. Dosage Frequency: minutes/day = varies , days/week =			
7.a. Outfall Flow Rate: average MGD = 42,464 MGY , maximum MGD =			
7.b. Outfall WTC Concentration: average mg/l = 0.002 , maximum mg/l =			
8.a. System Blowdown Flow Rate: average gpm = 1800 hrs , maximum gpm =			
8.b. System Blowdown Frequency: minutes/day = varies , days/week =			
9. List measures in place to ensure that excessive levels of WTC are not used and subsequently discharged - Chemical is added to boiler to maintain boiler chemistry. Disodium phosphate is added to maintain phosphate inventory in boiler water and react with scale to form chemical listed in 10e.			
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Disodium Phosphate	100%	7558-79-4	0.002 mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products - Calcium Phosphate and Magnesium Phosphate			

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 2 of 3

1.a. Date Signed by Permittee - 10/17/2001			1.b. Date Signed by WTC Manufacturer -		
2.b. SPDES No. - NY 0005193			3.a. WTC Name - Disodium Phosphate Anhydrous		
11. WTC BOD and COD (lb/lb) - NA					
12.a. Is WTC a NYS registered biocide? No			12.b. Registration Number - NA		
13. WTC Toxicity Info (most sensitive species) - Attach description of endpoint for each EC50 and LOEC.					
13.a. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Rainbow Trout 96 hr	>100 mg/l	mg/l	mg/l	mg/l	
13.b. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.c. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Daphnia magna 48 hr	mg/l	>100 mg/l	mg/l	mg/l	
13.d. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.e. Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	

14. Permittee Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete. The generic WTC usage requirements noted below will be adhered to.

PRINT NAME - Gregory Pryor	SIGNATURE - 
TITLE/COMPANY - Environmental Specialist	
TELEPHONE - 718.706.2863	FAX - 718.361.8875

15. WTC Manufacturer Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete.

PRINT NAME -	SIGNATURE -
TITLE/COMPANY -	
TELEPHONE -	FAX -

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 3 of 3

1.a. Date Signed by Permittee -	1.b. Date Signed by WTC Manufacturer -
2.b. SPDES No. - NY 0005193	2.c. Contact Name - Gregory Pryor
3.a. WTC Name - Disodium Phosphate Anhydrous	6.a. Avg/Max Daily Dosage = 850 $\frac{\text{lb}}{\text{day}}$ / lbs/day

Generic WTC Usage Requirements

- A. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.
- B. The discharge shall not cause or contribute to a violation of water quality or an exceedance of AWQC.
- C. The permittee must maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 3 years. This period may be extended by request of the DEC.
- D. The permittee shall provide an annual report, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

Items 16 - 17 must be completed by NYSDEC permit writer.

16. Review Decision (check the appropriate box). *Fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.*

☐ The proposed WTC usage may proceed as proposed without permit modification subject to the conditions noted above.

☐ The proposed WTC usage may not proceed for one of the following three reasons:

- ☐ As noted below, the information provided is insufficient to complete our review.
- ☐ As noted below, the SPDES permit must first be modified to add new requirements.
- ☐ As noted below, the proposed use is prohibited.

17. Permit Writer Information:

PRINT NAME -	SIGNATURE -
TITLE -	DATE -
ADDRESS -	
TELEPHONE -	FAX -

ASHLAND

SAFETY DATA SHEET

Page: 1
Revision Date: 10/13/2009
Print Date: 10/14/2009
MSDS Number: R0185315
Version: 1.5

MEKOR® 6701 CORROSION
INHIBITOR
100288

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone	1-800-ASHLAND (1-800-274-5263)

Product name	MEKOR® 6701 CORROSION INHIBITOR
Product code	100288
Product Use Description	Water-boiler treatment.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid,, colourless

DANGER! COMBUSTIBLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL IF INHALED. CAUSES SEVERE EYE BURNS.

Potential Health Effects

Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin contact

May cause mild skin irritation. Symptoms may include redness and burning of skin. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects) Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

ASHLAND
SAFETY DATA SHEET

Page: 2
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Print Date: 10/14/2009
MSDS Number: R0185315
Version: 1.5

MEKOR® 6701 CORROSION
INHIBITOR
100288

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful.

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Upper respiratory tract, lung (for example, asthma-like conditions), Liver, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), blood abnormalities (breakage of red blood cells), narcosis (dazed or sluggish feeling), respiratory failure, coma, May cause methemoglobinemia, a blood abnormality that may cause headache, difficulty breathing, lightheadedness, weakness, confusion, rapid heart rate and cyanosis (lack of oxygen in the tissues causing blue-colored skin and nails).

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible spleen effects, mild, reversible kidney effects, anemia, nasal damage, liver damage

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Methyl ethyl ketoxime has been shown to cause liver cancer in male rats and mice. The relevance of this finding to humans is uncertain.

Reproductive hazard

Methyl ethyl ketoxime was not harmful to the fetus in laboratory animal studies even at levels that were harmful to the pregnant animals.



**ICL Performance
Products LP**

Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name: DISODIUM PHOSPHATE ANHYDROUS
Reference Number: AST10007
Date: April 24, 2006

Use of the substance or preparation

Food Ingredient, water treatment

Company/Undertaking Identification

ICL PERFORMANCE PRODUCTS LP
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Emergency telephone

In USA call CHEMTREC: 1 800 424 9300
In Canada call CANUTEC: 1 613 996 6666

General Information: +1 800 244 6169 (Worldwide)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition

<u>Substance</u>	<u>CAS No.</u>	<u>%w/w</u>	<u>EINECS No.</u>	<u>Risk Phrase</u>
Disodium Phosphate Anhydrous	7558-79-4	100	231-448-7	R36/37/38

3. HAZARDS IDENTIFICATION

Classification of the substance/preparation

EC Classification none
Safety Phrase S26 S36

Human Health Effects

Contact with eyes or skin may cause irritation. Inhalation of dust may cause coughing and sneezing. Inhalation may cause respiratory irritation. Ingestion of large amounts may cause gastrointestinal irritation including nausea, vomiting and diarrhea.

Environmental Effects

This material is not expected to product any significant adverse environmental effects when recommended use instructions are followed.

4. FIRST AID MEASURES

General

Treatment is symptomatic and supportive. The product may cause eye and skin irritation. May cause abdominal discomfort if ingested in quantity.

Eye contact

Avoid contact with eyes. In case of contact with eyes, immediately flush the eyes with plenty of water. Seek medical attention if needed. This dry powder may cause foreign body irritation in some individuals.

Skin contact

Remove this material from skin with plenty of soap and water. Prolonged contact with dry powder may cause drying or chapping of the skin.

Inhalation

Inhalation of the dust may cause coughing and sneezing. Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. No significant health effects are expected if small amounts (less than a mouthful) are swallowed. Swallowing large amounts may cause abdominal discomfort and diarrhea.

5. FIRE FIGHTING MEASURES

Extinguishing media

Non-combustible

No special requirement.

To extinguish fire use water spray, dry chemical, carbon dioxide, or appropriate foam

Unsuitable extinguishable media

Non-combustible

No special requirement.

Exposure hazards

No special considerations

Protective equipment

As a general precaution, firefighters and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid unnecessary exposure and remove all material from eyes, skin and clothing.

Environmental precautions

Small quantities: Avoid discharge into the environment

Large quantities: Avoid discharge into the environment – See section 15

Method for cleaning up

Sweep, scoop or vacuum spill material, contaminated soil and other contaminated material and place in clean, dry containers for removal. If possible, complete cleanup on a dry basis. Residual material can be flushed with water.

7. HANDLING AND STORAGE

Handling:

Handle in accordance with good industrial hygiene and safety practices.
Avoid contact with eyes.
Wash hands immediately after handling
Remove material from clothing.

Engineering measures

Ensure adequate ventilation. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment.

Storage

Store in cool, dry place to maintain product performance. Product is hygroscopic and should be stored in a dry area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure limit

ACGIH TLV	10 mg/m ³ (inhalable) 8-hr TWA, 3 mg/m ³ (respirable) 8-hr TWA
OSHA PEL	15 mg/m ³ (total dust) 8-hr TWA, 5 mg/m ³ (respirable) 8-hr TWA

OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) which are the least stringent exposure limits applicable to dusts.

Respiratory protection

Avoid breathing dust. In case of insufficient ventilation, use approved respiratory protective equipment as described in OSHA 29 CFR 1910.134 or European Standard EN149. A dust respirator is recommended.

Hand/Skin protection

Wear protective gloves is recommended; wash hands and contaminated skin thoroughly after handling.

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described in OSHA eye and face regulation in 29 CFR 1910.133 or European Standard EN166.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Chemical Formula:	Na ₂ HPO ₄
Form:	Crystals
Color:	White

ICL Performance Products LP Material Safety Data Sheet

Material: Disodium Phosphate Anhydrous

Reference No.: AST10007

Page 4 of 6

April 24, 2006

Odor:

Odorless

Important health, safety and environmental information

pH:	9.0 (as a 1% solution)
Vapor Density	4.9
Specific Gravity	1.679
Melting Point	243 – 245 °C
Solubility in Water:	(g./100 g. H ₂ O): 1.7 @ 0 degrees C 11.5 @ 25 degrees C 51.7 @ 40 degrees C 78.8 @ 60 degrees C 102.4 @ 100 degrees C

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Product is stable under normal conditions of storage and handling. Store in a cool, dry place to maintain product performance.

Conditions to avoid

Store product in dry areas away from moisture. The product is hygroscopic.

Materials to avoid

Incompatible with acids, alkaloids, lead acetate, antipyrine, chloral hydrate, resorcinol and pyrogallol.

Hazardous decomposition

Oxides of sodium and phosphorus may form when heated to decomposition

11. TOXICOLOGICAL INFORMATION

Laboratory data

Data from ICL Performance Products LP single-dose (acute) animal studies with this material are given below:

Oral - rat LD50:	5,950 mg/kg; practically nontoxic
Dermal - rabbit LD50:	>7,940 mg/kg; practically nontoxic
Eye Irritation - rabbit:	4.2/110.0; slightly irritating
Skin Irritation - rabbit:	0.0/8.0 (24-hr. exp.); nonirritating
DOT skin corrosion - rabbit (4-hr. exp.):	not corrosive

The dry powder or granules may cause foreign body irritation in some individuals. Prolonged contact with the dry powder may cause drying or chapping of the skin. Due to the high alkalinity of this product, prolonged contact with the eyes or skin may cause slight irritation. Inhalation of dust has been reported to produce a mild drying effect on the respiratory tract membranes of exposed workers. Excessive inhalation of dust may be annoying and can mechanically impede respiration.

Sodium phosphates have been used as therapeutic agents in medicinal preparations for their laxative effects. These phosphate salts are incompletely absorbed from the intestinal tract. Due to their osmotic activity, they draw water into the intestine and produce purging.

This product (in anhydrous and hydrated forms) has produced no genetic changes in standard tests using bacterial cells.

12. ECOLOGICAL INFORMATION

Environmental toxicity

This product (in anhydrous and hydrated forms) has produced no genetic changes in standard tests using bacterial cells.

Rainbow trout, Inland silversides and Mysid shrimp 96 hr. LC50 >100 mg/L, non-toxic.
[FMC 189-1085, 1086 & 1087]

Daphnia magna: 48 hr. EC50 >100 mg/L, non-toxic. [FMC 189-1088]
No algal toxicity data was available for this material.

Environmental fate

Inorganic compounds in contact with the soil, sub-surface or surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates, usually with calcium or magnesium. The resultant compounds are insoluble in water and become a part of the soil or sediment. The term biodegradability, as such, is not applicable to inorganic compounds.

13. DISPOSAL CONSIDERATIONS

European waste catalog number

Unknown

Disposal Considerations

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Road/Rail, Sea and Air

IMDG/UN	Environmentally hazardous substance, solid, n.o.s., UN 3077, Class 9, PG III
ICAO/IATA passenger aircraft	Environmentally hazardous substance, solid, n.o.s., UN 3077, Class 9, PG III
RID/ADR	Unknown
Canadian TDG	Environmentally hazardous substance, solid, n.o.s., UN 3077, Class 9, PG III
US DOT	Environmentally hazardous substance, solid, n.o.s. (contains sodium phosphate, dibasic), UN 3077, 9, PG III*

+ Applies only to packages containing a Reportable Limit of 230 kg or more

* Applies only to a package containing a Reportable Quantity (RQ) of 5000 lbs or more.

15. REGULATORY INFORMATION

EC Label

Hazard symbol:	none
R36/37/38	Irritating to eyes, respiratory system and skin
S26	In case of contact with eyes, rinse immediately with plenty of water and

S36 seek medical attention
Wear suitable protective clothing

Chemical Inventory

USA TSCA: Listed
Canada DSL: Listed
EC: Listed
Japan Listed
Australia Listed
Korea Listed
Philippines Listed
China Listed

Other Information

WHMIS Classification Not Controlled
SARA Hazard Notification
Hazard Categories Under Title III Rules (40 CFR 370): Not applicable
Section 302 Extremely Hazardous Substances: Not Applicable
Section 313 Toxic Chemical(s): Not Applicable

CERCLA Reportable Quantity: 5,000 lb. RQ of sodium phosphate, dibasic

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contain all the information required by the Canadian Controlled Products Regulation.

16. OTHER INFORMATION

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>Additional Information</u>
Suggested NFPA Rating	1	0	0	
Suggested HMIS Rating	1	0	0	E E = safety glasses, gloves, dust respirator

Reason for revision: Revised section 1. Supersedes MSDS dated: November 1, 2005
Drafted in accordance with ECC Dir 2001/58/EC

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ICL Performance Products LP makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ICL Performance Products LP be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Applicability

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use. The DEC will review that submittal and determine if a formal SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. **The majority of WTC authorizations do not require formal SPDES permit modification.** Notification requirements are summarized below. WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use this form for review and authorization of substances, other than WTCs, which could be present in wastewater, e.g. process chemicals.

Notification Requirements and Instructions

For each new or increased use of a WTC, please complete Items 1a, and 2 - 14 on the attached 3 page form, entitled **WTC Usage Notification Requirements for SPDES Permittees**. *Alternatively*, the permittee may, at a minimum, complete items 1a, 2 - 9 and 14 then forward the form to the WTC manufacturer who must then complete the remaining items (10 - 13) and items 1b and 15. The manufacturer must then send the completed form directly to the permit writer. This alternative method may be necessary because the WTC manufacturer may be reluctant to reveal trade secret product formulations to the permittee.¹ **Fax or Mail the completed form to:**

Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - *In general*, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. *However*, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

Toxicity Information - When completing item 13, please ensure that the tests were conducted in accordance with the EPA Toxicity Manual and that the results are for the appropriate receiving water (i.e. fresh water or salt water).² In general, submissions which do not include any toxicity information will not be authorized. Submissions containing incomplete toxicity information will be reviewed using conservative safety factors which may prevent authorization or result in the permit being modified to include routine whole effluent toxicity testing or other monitoring.

Phosphorus - The permittee must demonstrate that the use and discharge of any WTCs containing phosphorus, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

After reviewing the submission, the permit writer will complete Items 16 and 17 and fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.

Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

- (1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.
- (2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees
Page 1 of 3

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

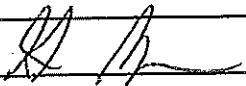
Permittee completes items 1a and 2 - 14. Alternatively, the permittee may complete items 1a, 2 - 9 and 14 if the WTC manufacturer completes items 1b, 10 - 13 and 15. See instructions page.

1.a. Date Signed by Permittee -		1.b. Date Signed by WTC Manufacturer -	
2.a. Permittee Name - Ravenswood Generating Station		2.b. SPDES No. - NY 0005193	
2.c. Contact Name - Gregory Pryor			
3.a. WTC Name - Mekor 6701 Corrsion Inhibitor			
3.b. WTC Manufacturer - Ashland			
4. WTC Function - Boiler water treatment			
5. Affected Outfall(s) - outfalls 001 via 01G			
6.a. WTC Daily Dosage: average lbs/day = 6,480 lbs/year , maximum lbs/day =			
6.b. Dosage Frequency: minutes/day = varies , days/week =			
7.a. Outfall Flow Rate: average MGD = 42,464 MGY , maximum MGD =			
7.b. Outfall WTC Concentration: average mg/l = 0.024 , maximum mg/l =			
8.a. System Blowdown Flow Rate: average gpm = 1800 hrs/yr , maximum gpm =			
8.b. System Blowdown Frequency: minutes/day = varies , days/week =			
9. List measures in place to ensure that excessive levels of WTC are not used and subsequently discharged - Mekor product will be mostly used up in boiler chemistry control and will not be discharged into outfall.			
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Methyl Ethyl Ketone Oximine	15%	96-29-7	0.003 mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products -			

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 2 of 3

1.a. Date Signed by Permittee - 10/17/2011			1.b. Date Signed by WTC Manufacturer -		
2.b. SPDES No. - NY 0005193			3.a. WTC Name - Mckor 6701 Corrsion Inhibitor		
11. WTC BOD and COD (lb/lb) -					
12.a. Is WTC a NYS registered biocide? No			12.b. Registration Number - NA		
13. WTC Toxicity Info (most sensitive species) - Attach description of endpoint for each EC50 and LOEC.					
13.a. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Rainbow Trout 96 hr	3,078 mg/l	mg/l	mg/l	mg/l	
13.b. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.c. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Daphnia magna 48 hr	2,679.4 mg/l	mg/l	mg/l	mg/l	
13.d. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.e. Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	

14. Permittee Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete. The generic WTC usage requirements noted below will be adhered to.

PRINT NAME - Gregory Pryor	SIGNATURE - 
TITLE/COMPANY - Environmental Specialist	
TELEPHONE - 718.706.2863	FAX - 718.361.8875

15. WTC Manufacturer Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete.

PRINT NAME -	SIGNATURE -
TITLE/COMPANY -	
TELEPHONE -	FAX -

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 3 of 3

1.a. Date Signed by Permittee -	1.b. Date Signed by WTC Manufacturer -
2.b. SPDES No. - NY 0005193	2.c. Contact Name - Gregory Pryor
3.a.. WTC Name - Mekor 6701 Corrsion Inhibitor	6.a. Avg/Max Daily Dosage = 6,480 / lbs/day

Generic WTC Usage Requirements

- A. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.
 B. The discharge shall not cause or contribute to a violation of water quality or an exceedance of AWQC.
 C. The permittee must maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 3 years. This period may be extended by request of the DEC.
 D. The permittee shall provide an annual report, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

Items 16 - 17 must be completed by NYSDEC permit writer.

16. Review Decision (check the appropriate box). *Fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.*

☐ The proposed WTC usage may proceed as proposed without permit modification subject to the conditions noted above.

☐ The proposed WTC usage may not proceed for one of the following three reasons:

- ☐ As noted below, the information provided is insufficient to complete our review.
☐ As noted below, the SPDES permit must first be modified to add new requirements.
☐ As noted below, the proposed use is prohibited.

17. Permit Writer Information:

PRINT NAME -	SIGNATURE -
TITLE -	DATE -
ADDRESS -	
TELEPHONE -	FAX -

ASHLAND

SAFETY DATA SHEET

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MEKOR® 6701 CORROSION
INHIBITOR
100288

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland
P.O. Box 2219
Columbus, OH 43216

Regulatory Information Number
Telephone
Emergency telephone

1-800-325-3751
614-790-3333
1-800-ASHLAND
(1-800-274-5263)

Product name	MEKOR® 6701 CORROSION INHIBITOR
Product code	100288
Product Use Description	Water-boiler treatment.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid,, colourless

DANGER! COMBUSTIBLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL IF INHALED. CAUSES SEVERE EYE BURNS.

Potential Health Effects

Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin contact

May cause mild skin irritation. Symptoms may include redness and burning of skin. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects) Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

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Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful.

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Upper respiratory tract, lung (for example, asthma-like conditions), Liver, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), blood abnormalities (breakage of red blood cells), narcosis (dazed or sluggish feeling), respiratory failure, coma, May cause methemoglobinemia, a blood abnormality that may cause headache, difficulty breathing, lightheadedness, weakness, confusion, rapid heart rate and cyanosis (lack of oxygen in the tissues causing blue-colored skin and nails).

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible spleen effects, mild, reversible kidney effects, anemia, nasal damage, liver damage

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Methyl ethyl ketoxime has been shown to cause liver cancer in male rats and mice. The relevance of this finding to humans is uncertain.

Reproductive hazard

Methyl ethyl ketoxime was not harmful to the fetus in laboratory animal studies even at levels that were harmful to the pregnant animals.

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SAFETY DATA SHEET

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Other Information

Ingestion of alcoholic beverages after exposure to methyl ethyl ketoxime may result in headache, redness of the face, vomiting, sweating, and rapid heartbeat.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
METHYL ETHYL KETONE OXIME	96-29-7	>=10-<15%

4. FIRST AID MEASURES

Eyes

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Notes to physician

Hazards: Overexposure to this product (or a component) may cause methemoglobinemia, which in sufficient concentration causes cyanosis. Severe cyanosis

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may require intravenous injection of methylene blue. Methylene blue is contraindicated if the patient has confirmed or suspected glucose-6-phosphate dehydrogenase deficiency.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Alcohol-resistant foam, Carbon dioxide (CO₂), Dry chemical

Hazardous combustion products

May form: carbon dioxide and carbon monoxide, methyl ethyl ketone, nitrogen oxides (NO_x), substituted amides

Precautions for fire-fighting

If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

Flammability Class for Flammable Liquids

Combustible Liquid Class IIIA

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks).

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Environmental precautions

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for cleaning up

Scoop and sweep up all spilled product and other contaminated materials and place in marked disposal containers. If possible, clean up spill area on a dry basis and then flush with plenty of water.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. When opening, remove closures carefully to relieve possible internal pressure. Never use pressure to empty. Do not store near high heat or open flames.

Storage

Store in closed containers in a dry, well-ventilated area. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below level of overexposure (from known, suspected or apparent adverse effects).

Eye protection

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Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin and body protection

To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Wear resistant gloves such as:

Nitrile rubber

butyl-rubber

neoprene -- unsupported

neoprene - supported

Respiratory protection

If overexposure has been determined or documented, a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators under specified conditions. (See your safety equipment supplier.) Engineering or administrative controls should be implemented to reduce exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	Aqueous solution
Colour	colourless
Odour	characteristic
Boiling point/boiling range	97.78 °C / 208.00 °F @ 1,013.33 hPa
Melting point/range	28 °F / -2 °C
pH	10.4
Flash point	157.98 °F / 69.99 °C, Pensky Martens closed cup
Evaporation rate	> 1 (Ethyl Ether)
Explosion limits	No data
Vapour pressure	23.33 hPa @ 68 °F / 20 °C
Vapour density	(>) 1 (AIR=1)
Density	1.000 g/cm3 @ 77.00 °F / 25.00 °C
Solubility	completely soluble in water
Partition coefficient: n-octanol/water	No data

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log Pow	no data available
Autoignition temperature	No data

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
Avoid contact with: excessive heat excessive heat

Incompatible products
Avoid contact with: strong alkalis, strong organic acids, Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, methyl ethyl ketone, nitrogen oxides
(NOx), substituted amides

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

METHYL ETHYL KETONE OXIME	LD 50 Rat: 930 mg/kg

Acute inhalation toxicity

METHYL ETHYL KETONE OXIME	LC 50 Rat: > 4,830 mg/l , 4 h

Acute dermal toxicity

METHYL ETHYL KETONE OXIME	LD 50 Rabbit: > 1,000 mg/kg

12. ECOLOGICAL INFORMATION

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Aquatic toxicity

Acute and Prolonged Toxicity to Fish

96 h LC 50 *Oncorhynchus mykiss* (rainbow trout), static test: 3,078.0 mg/l

Acute Toxicity to Aquatic Invertebrates

48 h LC 50 *Daphnia magna* (Water flea), static test: 2,679.4 mg/l

Environmental fate and pathways

BOD5: 124,500 mg/l

COD: 228,000 mg/l

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

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California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SARA Hazard Classification	Fire Hazard
	Acute Health Hazard

New Jersey RTK Label Information

WATER	7732-18-5
METHYL ETHYL KETONE OXIME	96-29-7
N-Isopropylhydroxylamine	5080-22-8

Pennsylvania RTK Label Information

WATER	7732-18-5
METHYL ETHYL KETONE OXIME	96-29-7
N-Isopropylhydroxylamine	5080-22-8

Reportable quantity - Components

METHYL ETHYL KETONE OXIME	96-29-7	none

	Health	Flammability	Reactivity	Other
HMIS	3*	2	0	
NFPA	3	2	0	

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Applicability

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use. The DEC will review that submittal and determine if a formal SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. **The majority of WTC authorizations do not require formal SPDES permit modification.** Notification requirements are summarized below. WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use this form for review and authorization of substances, other than WTCs, which could be present in wastewater, e.g. process chemicals.

Notification Requirements and Instructions

For each new or increased use of a WTC, please complete items 1a, and 2 - 14 on the attached 3 page form, entitled **WTC Usage Notification Requirements for SPDES Permittees**. *Alternatively*, the permittee may, at a minimum, complete items 1a, 2 - 9 and 14 then forward the form to the WTC manufacturer who must then complete the remaining items (10 - 13) and items 1b and 15. The manufacturer must then send the completed form directly to the permit writer. This alternative method may be necessary because the WTC manufacturer may be reluctant to reveal trade secret product formulations to the permittee.¹ **Fax or Mail the completed form to:**

Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - *In general*, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. *However*, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

Toxicity Information - When completing item 13, please ensure that the tests were conducted in accordance with the EPA Toxicity Manual and that the results are for the appropriate receiving water (i.e. fresh water or salt water).² In general, submissions which do not include any toxicity information will not be authorized. Submissions containing incomplete toxicity information will be reviewed using conservative safety factors which may prevent authorization or result in the permit being modified to include routine whole effluent toxicity testing or other monitoring.

Phosphorus - The permittee must demonstrate that the use and discharge of any WTCs containing phosphorus, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

After reviewing the submission, the permit writer will complete items 16 and 17 and fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.

Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

(1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.

(2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Page 1 of 3

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Permittee completes Items 1a and 2 - 14. Alternatively, the permittee may complete Items 1a, 2 - 9 and 14 if the WTC manufacturer completes items 1b, 10 - 13 and 15. See instructions page.

1.a. Date Signed by Permittee -		1.b. Date Signed by WTC Manufacturer -	
2.a. Permittee Name - Ravenswood Generating Station		2.b. SPDES No. - NY 0005193	
2.c. Contact Name - Gregory Pryor			
3.a. WTC Name - Sodium Hydroxide 50% Solution			
3.b. WTC Manufacturer - Basic Chemical Solutions			
4. WTC Function - Demineralizer Resin Regeneration			
5. Affected Outfall(s) - outfalls 001 via 01H			
6.a. WTC Daily Dosage: average lbs/day = 307,913 lbs/year , maximum lbs/day =			
6.b. Dosage Frequency: minutes/day = 772 hr/yr , days/week =			
7.a. Outfall Flow Rate: average MGD = 18,212 GPY , maximum MGD =			
7.b. Outfall WTC Concentration: average mg/l = 2.02 , maximum mg/l =			
8.a. System Blowdown Flow Rate: average gpm = , maximum gpm =			
8.b. System Blowdown Frequency: minutes/day = , days/week =			
9. List measures in place to ensure that excessive levels of WTC are not used and subsequently discharged - NaOH is used to regenerate the Anion and Mixed Bed demineralizer resin. NaOH is pumped into the demineralizer tanks as needed to regenerate the demineralizer string.			
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Sodium Hydroxide	50%	215-185-5	**1.01 mg/l
Water	50%	231-791-2	mg/l
*No free base is expected to be discharged from outfall			mg/l
001. It is neutralized by circulating water prior to			mg/l
discharge to East River.			mg/l
**As a sodium ion (Na ⁺)			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products - Sodium Oxide			

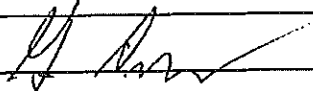
NYSDEC - Division of Water

WTC Usage Notification Requirements for SPDES Permittees

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1.a. Date Signed by Permittee - 10/11/2011		1.b. Date Signed by WTC Manufacturer -			
2.b. SPDES No. - NY 0005193		3.a. WTC Name - Sodium Hydroxide 50% Solution			
11. WTC BOD and COD (lb/lb) - NA					
12.a. Is WTC a NYS registered biocide? No			12.b. Registration Number -		
13. WTC Toxicity Info (most sensitive species) - Attach description of endpoint for each EC50 and LOEC.					
13.a. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Bluegill sunfish 48-hour	99 mg/l	mg/l	mg/l	mg/l	
13.b. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Mosquito Fish 96-hour	125 mg/l	mg/l	mg/l	mg/l	
13.c. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Brown Shrimp 48-hour	30-100 mg/l	mg/l	mg/l	mg/l	
13.d. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.e. Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	

14. Permittee Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete. The generic WTC usage requirements noted below will be adhered to.

PRINT NAME - Gregory Pryor	SIGNATURE - 
TITLE/COMPANY - Environmental Specialist	
TELEPHONE - 718.706.2863	FAX - 718.361.8875

15. WTC Manufacturer Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete.

PRINT NAME -	SIGNATURE -
TITLE/COMPANY -	
TELEPHONE -	FAX -

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
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1.a. Date Signed by Permittee -	1.b. Date Signed by WTC Manufacturer -
2.b. SPDES No. - NY 0005193	2.c. Contact Name - Gregory Pryor
3.a. WTC Name - Sodium Hydroxide 50% Solution	6.a. Avg/Max Daily Dosage = 307,91 / lbs/day

Generic WTC Usage Requirements

- A. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.
- B. The discharge shall not cause or contribute to a violation of water quality or an exceedance of AWQC.
- C. The permittee must maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 3 years. This period may be extended by request of the DEC.
- D. The permittee shall provide an annual report, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

Items 16 - 17 must be completed by NYSDEC permit writer.

16. Review Decision (check the appropriate box). *Fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.*

☐ The proposed WTC usage may proceed as proposed without permit modification subject to the conditions noted above.

☐ The proposed WTC usage may not proceed for one of the following three reasons:

- ☐ As noted below, the information provided is insufficient to complete our review.
- ☐ As noted below, the SPDES permit must first be modified to add new requirements.
- ☐ As noted below, the proposed use is prohibited.

17. Permit Writer Information:

PRINT NAME -	SIGNATURE -
TITLE -	DATE -
ADDRESS -	
TELEPHONE -	FAX -



MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

BASIC CHEMICAL SOLUTIONS

PART I *What Is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **BCS SODIUM HYDROXIDE LIQUID**
(1% - 50%)

CHEMICAL NAME/CLASS: Sodium Hydroxide Solution

PRODUCT USE: Metal finishing, neutralization, industrial cleaners, chemical processing.

SUPPLIER/MANUFACTURER'S NAME: **BASIC CHEMICAL SOLUTIONS**
ADDRESS: Corporate Office
525 Seaport Blvd.
Redwood City, CA 94063

BUSINESS PHONE: 800-411-4227

EMERGENCY PHONE: CHEMTREC: 800-424-9300

DATE OF PREPARATION: May 7, 2003
DATE OF REVISION: March 5, 2009

Si usted no entiende las Hojas de Informacion de Seguridad sobre Materiales, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the Material Safety Data Sheet, find someone to explain it to you in detail.)

2. COMPOSITION AND INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			OTHER mg/m ³
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³	IDLH mg/m ³	
Sodium Hydroxide	1310-73-2	1-50	2, C	NE	2, C (Vacated 1989 PELs)	NE	10	NIOSH REL: 2 DFG MAKs: 2
Water and other ingredients. The other ingredients are each present in less than 1 percent concentration in this product.		Balance	The components present in the balance of this product do not contribute any significant, additional hazards. All hazard information pertinent to this product has been presented in the remaining sections of this Material Safety Data Sheet, per the requirements of Federal Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200).					

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a clear to turbid liquid solution. This solution is corrosive, and can be damaging to contaminated tissue. Ingestion of large quantities can be fatal. In the event of fire or spill, adequate precautions must be taken. This solution reacts with water to generate heat. If involved in a fire, this product may decompose to produce sodium oxides and a variety of other compounds (i.e. carbon monoxide and carbon dioxide). Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: This solution can damage skin, eyes, mucous membranes, and other contaminated tissue. Burns may not be immediately painful or visible.

INHALATION: If mists or sprays of this solution are inhaled, this product may cause pulmonary irritation, irritation of the mucus membranes, coughing, and a sore throat. Damage to the tissues of the respiratory system may occur.

CONTACT WITH SKIN or EYES: Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage possibly blindness. Skin contact may result in a "soapy" feel and cause reddening, discomfort, and irritation. Prolonged exposure may result in ulcerating burns which could leave scars.

SKIN ABSORPTION: Skin absorption is not anticipated to be a significant route of over-exposure to any component of this product.

INGESTION: Though ingestion is not anticipated to be a significant route of over-exposure to this product, if ingestion does occur burning and irritation of the mouth, throat, esophagus, and other tissues of the digestive system will occur immediately upon contact. Ingestion of large quantities may be fatal.

INJECTION: Though injection is not anticipated to be a significant route of over-exposure to this product, if it occurs, may cause local reddening, tissue swelling, and discomfort.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation In Lay Terms.

ACUTE: This solution is corrosive, and can burn and damage eyes, skin, mucous membranes, and any other exposed tissue. If inhaled, irritation of the respiratory system may occur, with coughing, and breathing difficulty. Though unlikely to occur during occupational use, ingestion of large quantities may be fatal.

CHRONIC: Repeated skin contact with this product may result in dermatitis (inflammation and reddening of the skin).

HAZARDOUS MATERIAL INFORMATION SYSTEM			
HEALTH		(BLUE)	3
FLAMMABILITY		(RED)	0
REACTIVITY		(YELLOW)	1
PROTECTIVE EQUIPMENT			D
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		
For routine industrial applications			

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. Washing with large amounts of clean water should continue until affected skin surface no longer feels slippery. Victim must seek medical attention.

EYE EXPOSURE: If this product enters the eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Do not attempt to neutralize. Oils or ointments should not be used at this time. Victim must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): Not flammable.

AUTOIGNITION TEMPERATURE, °C: Not flammable.

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES

Carbon Dioxide: YES

Foam: YES

Dry Chemical: YES

Halon: YES

Other: Any "ABC" Class.

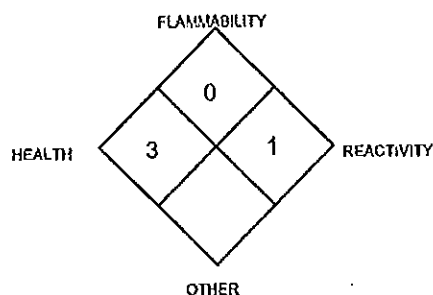
UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered flammable or combustible. Does not support combustion. However, contact with water or acids may generate sufficient heat to ignite nearby combustible materials. Contact with aluminum, tin or zinc will result in the generation of heat and release of hydrogen gas. Run-off from fire control may cause pollution. Keep fire-exposed containers cool with water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination. When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (including carbon monoxide, carbon dioxide and sodium oxides). Products of combustion are irritating to the respiratory tract and may cause breathing difficulty. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING



6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

The proper personal protective equipment for incidental releases (e.g., 1 L of the product released in a well-ventilated area) use impermeable gloves, specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard-hat. Self Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, Select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

Absorb spilled liquid with polypads or other suitable absorbent materials. Neutralize residue with citric acid or other caustic neutralizing agent. Decontaminate the area thoroughly. Test area with litmus paper to confirm neutralization. Place all spill residue in a suitable container. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this material. Remove contaminated clothing immediately. Discard contaminated clothing items, or launder before re-use. Inform anyone handling such contaminated laundry of the hazards associated with this product. Use ventilation and other engineering controls to minimize potential exposure to this product.

7. HANDLING and STORAGE (Continued)

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. It is best to never add water to this product, always add product, with constant stirring, slowly to surface of lukewarm (80-100 °F, 27-38 °C) water, to assure product is being completely dispersed as it is added. Only trained personnel can add water to this product. Never add more product than can be absorbed by solution while maintaining temperatures below 200 °F (93 °C) to prevent boiling and spattering of caustic solution. Use in a well-ventilated location.

For Non-Bulk Containers: Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid, therefore, empty containers should be handled with care.

Bulk Containers: All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

Tank Car Shipments: Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tank (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be clean and free of incompatible chemicals, prior to connection to the tank car or vessel. Valves and hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment before maintenance begins by a triple-rinse with water followed, if necessary, by using caustic neutralizing agent and an additional rinse. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: If required use a corrosion-resistant ventilation system separate from other exhaust ventilation systems to ensure that there is no potential for overexposure to sprays, or mists of this product and that exposures are below those in section 2 (Composition and Information on Ingredients). Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. If adequate ventilation is not available or if there is potential for airborne exposure above the exposure limits (listed in Section 2) a respirator may be worn up to respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For a higher level of protection use positive pressure supplied air respiration protection or Self Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:

Positive pressure, full-facepiece Self Contained Breathing Apparatus; or positive pressure, full-facepiece Self Contained Breathing Apparatus with an auxiliary positive pressure Self Contained Breathing Apparatus.

EYE PROTECTION: Splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION: Wear appropriate gloves for routine industrial use. Use appropriate gloves for spill response, as stated in Section 6 of this MSDS (Accidental Release Measures).

BODY PROTECTION: Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from natural rubber are generally acceptable, depending upon the task.

9. PHYSICAL and CHEMICAL PROPERTIES

Physical and chemical properties for various concentrations of Sodium Hydroxide, the main component of this product are as follows:

	Series			
	10	20	30	50
PHYSICAL STATE:	Liquid			
BOILING POINT @ 760 mm Hg:	110°C	113°C	119°C	140°C
FREEZING POINT:	-12°C 10°F	-26°C -14°F	0°C 32°F	12°C 53.6°F
VAPOR PRESSURE mm Hg @ 60°C:	135	110	76	13
SPECIFIC GRAVITY @ 15.6° C	1.11	1.22	1.33	1.53
DENSITY - lb./gal @ 15.6°C:	9.26	10.17	11.09	12.76
VAPOR DENSITY:	Not Determined			
EVAPORATION RATE (water = 1):	Similar to or slower than water depending upon weight percent.			
pH:	14.0 pH @ 7.5% solution			
SOLUBILITY in H ₂ O - % by wt:	Completely Soluble			

ODOR THRESHOLD: Not available.

APPEARANCE AND COLOR: This product is a clear light straw to turbid liquid solution.

HOW TO DETECT THIS SUBSTANCE (warning properties): Litmus paper will turn blue-purple upon contact with this solution even with low concentrations.

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Thermal decomposition products of this solution can include carbon monoxide, carbon dioxide, and sodium compounds.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product reacts with strong acids. Additionally, it is incompatible with organic halogen compounds, organic nitro compounds, aluminum, zinc, tin, and other metals. Avoid contact with leather and wool. Reactions with various food sugars may form carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures and incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Additional toxicology information for components greater than 1 percent in concentration is provided below.

SODIUM HYDROXIDE:

Eye Irritancy (monkey) = 1% solution, 24 hr, Severe.

Skin Irritancy (rabbit) = 500 mg, 24 hr, Severe.

Eye Irritancy (rabbit) = 4 g, 24 hr, Mild.

Eye Irritancy (rabbit) = 1% solution, 24 hr, Severe.

Eye Irritancy (rabbit) = 50 g, 24 hr, Severe.

Eye Irritancy (rabbit) = 1 mg, 24 hr, Severe.

Eye Irritancy (rabbit) = 100 mg with rinse, 24 hr, Severe.

Cytogenic Analysis System (grasshopper, parenteral) = 20 mg

LD₅₀ (Intraperitoneal, mouse) = 40 mg/kg.

LDLo (oral, rabbit) = 500 mg/kg.

11. TOXICOLOGICAL INFORMATION (Continued)

SUSPECTED CANCER AGENT: The components of this product's ingredients are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, CAL/OSHA; and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is severely irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans. Mutation data is available for the Sodium Hydroxide (component of this product), obtained during clinical studies on animal tissues exposed to high doses of this compound.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans.

*A **mutagen** is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An **embryotoxin** is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A **teratogen** is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A **reproductive toxin** is any substance which interferes in any way with the reproductive process.*

BIOLOGICAL EXPOSURE INDICES: Currently there are no Biological Exposure Indices (BEIs) associated with the components of this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Skin disorders can be aggravated by over-exposure to this product. Inhalation of this product's mists may aggravate respiratory conditions.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate over-exposure to this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product are relatively stable in the environment; they may degrade, after time, into other organic and inorganic constituents. Additional environmental data is available for the components of this product as follows:

SODIUM HYDROXIDE: K_{ow} = too low to be measured. Water solubility = 9 g/0.9 ml water. BOD: None.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product is harmful to plant and animal life if this product is released into the environment. As with all chemicals, work practices should be aimed at eliminating environmental releases.

EFFECT OF CHEMICAL ON AQUATIC LIFE This product can substantially raise the pH of an aquatic environment and can be extremely toxic to fish and aquatic plants. As with all chemicals, work practices should be aimed at eliminating environmental releases. Additional aquatic data for the components of this product is available as follows:

SODIUM HYDROXIDE:

LC₁₀₀ (Cyprinus carpio) = 180 ppm/24 hr/25 °C

TL_m (mosquito fish) = 125 ppm/96 hr (fresh water)

TL_m (bluegill) = 99 mg/L/48 hr (tap water)

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER: D002 (Characteristic, corrosive), applicable to wastes consisting only of this solution.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Sodium Hydroxide solution

HAZARD CLASS NUMBER and DESCRIPTION: 8 (Corrosive Material)

UN IDENTIFICATION NUMBER: UN 1824

PACKING GROUP: II

DOT LABEL(S) REQUIRED: Corrosive

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 154

MARINE POLLUTANT: This product does not contain any components which are designated by the Department of Transportation to be Marine Pollutants. (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

Note: The latest DOT information is provided, please verify all DOT information as it is subject to change without notice.

15. REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: The components of this product subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act are as follows.

COMPONENT	SARA 302	SARA 304	SARA 313
Sodium Hydroxide	No	Yes	No

SARA Threshold Planning Quantity: Not applicable.

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ): Sodium Hydroxide = 1000 lbs.

OTHER FEDERAL REGULATIONS: Not applicable.

STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Sodium Hydroxide.
California - Permissible Exposure Limits for Chemical Contaminants: Sodium Hydroxide.
Florida - Substance List: Sodium Hydroxide.
Illinois - Toxic Substance List: Sodium Hydroxide.
Kansas - Section 302/313 List: Sodium Hydroxide.

Minnesota - List of Hazardous Substances: Sodium Hydroxide.
Missouri - Employer Information/Toxic Substance List: Sodium Hydroxide.
New Jersey - Right to Know Hazardous Substance List: Sodium Hydroxide.
North Dakota - List of Hazardous Chemicals, Reportable Quantities: Sodium Hydroxide.

Pennsylvania - Hazardous Substance List: Sodium Hydroxide.
Rhode Island - Hazardous Substance List: Sodium Hydroxide.
Texas - Hazardous Substance List: Sodium Hydroxide.
West Virginia Substance List: Sodium Hydroxide.
Wisconsin - Toxic and Hazardous Substances: Sodium Hydroxide.

CALIFORNIA PROPOSITION 65 No component of this product is on the California Proposition 65 lists.

LABELING (Precautionary Statements): DANGER! CORROSIVE MATERIAL! LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE LUNG DAMAGE. REACTS VIOLENTLY WITH ACIDS. REACTS WITH WATER TO GENERATE HEAT. AVOID SPATTERING BY SLOWLY ADDING TO SOLUTION. Do not get into eyes, on skin or clothing. Avoid breathing spray or mist. Do not take internally. Use with adequate ventilation and employ respiratory protection when exposed to the mist or spray. When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing. Do not transfer to unlabeled containers. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed when not in use. FIRST-AID: In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do not induce vomiting. IN CASE OF FIRE: Use water, dry chemical, CO₂, or alcohol foam. IN CASE OF SPILL: Dike area to contain spill. Only trained personnel equipped full acid- protective gear should be permitted in this area. Spilled material may be absorbed into an appropriate absorbent material. Spills should be removed using a vacuum truck. Neutralize remaining traces of material with any dilute inorganic acid or citric acid and then flush with water. If necessary a liberal covering of sodium bicarbonate should then be applied and then rinsed with water. Do not wash into storm or sanitary sewer system.

TARGET ORGANS: Skin, eyes and respiratory system.

WHMIS SYMBOLS:

15. REGULATORY INFORMATION (Continued)

E- Corrosive Material



16. OTHER INFORMATION

INFORMATION SOURCE:

CHEMICAL SAFETY ASSOCIATES, Inc.

PREPARED BY:

BASIC CHEMICAL SOLUTIONS

THIS INFORMATION IS DRAWN FROM RECOGNIZED SOURCES BELIEVED TO BE RELIABLE. BASIC CHEMICAL SOLUTIONS MAKES NO GUARANTEES NOR ASSUMES ANY LIABILITY IN CONNECTION WITH THIS INFORMATION. THE USER SHOULD BE AWARE OF CHANGING TECHNOLOGY, RESEARCH, REGULATIONS AND ANALYTICAL PROCEDURES THAT MAY REQUIRE CHANGES HEREIN. THE ABOVE DATA IS SUPPLIED UPON THE CONDITION THAT PERSONS WILL EVALUATE THIS INFORMATION AND THEN DETERMINE ITS SUITABILITY FOR THEIR USE.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (TWA), the 15-minute Short Term Exposure Limit, and the Instantaneous Ceiling Level. Skin adsorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (*Federal Register*, 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30 minutes without suffering escape-preventing or permanent injury. The DFG - MAK is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs). When no exposure guidelines are established, an entry of NE is made for reference.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **LEL** - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; ppm concentration expressed in parts of material per million parts of air or water; **mg/m³** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. **IARC** and **NTP** rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TD₀₁**, **LDLo**, and **LD₀₁**, or **TC**, **TC₀₁**, **LCLo**, and **LC₀₁**, the lowest dose (or concentration) to cause death. **BEI** - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substances Control Act (TSCA)**; **Marine Pollutant** status according to the **DOT**; **California's Safe Drinking Water Act (Proposition 65)**; the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Applicability

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use. The DEC will review that submittal and determine if a formal SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require formal SPDES permit modification. Notification requirements are summarized below. WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use this form for review and authorization of substances, other than WTCs, which could be present in wastewater, e.g. process chemicals.

Notification Requirements and Instructions

For each new or increased use of a WTC, please complete items 1a, and 2 - 14 on the attached 3 page form, entitled **WTC Usage Notification Requirements for SPDES Permittees**. Alternatively, the permittee may, at a minimum, complete items 1a, 2 - 9 and 14 then forward the form to the WTC manufacturer who must then complete the remaining items (10 - 13) and items 1b and 15. The manufacturer must then send the completed form directly to the permit writer. This alternative method may be necessary because the WTC manufacturer may be reluctant to reveal trade secret product formulations to the permittee.¹ Fax or Mail the completed form to:

Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - In general, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. However, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

Toxicity Information - When completing item 13, please ensure that the tests were conducted in accordance with the EPA Toxicity Manual and that the results are for the appropriate receiving water (i.e. fresh water or salt water).² In general, submissions which do not include any toxicity information will not be authorized. Submissions containing incomplete toxicity information will be reviewed using conservative safety factors which may prevent authorization or result in the permit being modified to include routine whole effluent toxicity testing or other monitoring.

Phosphorus - The permittee must demonstrate that the use and discharge of any WTCs containing phosphorus, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

After reviewing the submission, the permit writer will complete items 16 and 17 and fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.

Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

- (1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.
- (2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Page 1 of 3

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

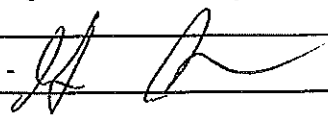
Permittee completes items 1a and 2 - 14. Alternatively, the permittee may complete items 1a, 2 - 9 and 14 if the WTC manufacturer completes items 1b, 10 - 13 and 15. See instructions page.

1.a. Date Signed by Permittee -		1.b. Date Signed by WTC Manufacturer -	
2.a. Permittee Name - TC Ravenswood		2.b. SPDES No. - NY 0005193	
2.c. Contact Name - Gregory Pryor			
3.a. WTC Name - Sulfuric Acid 93%			
3.b. WTC Manufacturer - Basic Chemical Solutions			
4. WTC Function - Demineralizer resin regeneration and pH control			
5. Affected Outfall(s) - outfalls 001 via 01H and 01D			
6.a. WTC Daily Dosage: average lbs/day = 363,000 lbs/year , maximum lbs/day =			
6.b. Dosage Frequency: minutes/day = varies , days/week =			
7.a. Outfall Flow Rate: average MGD = 18,212 MGY , maximum MGD =			
7.b. Outfall WTC Concentration: average mg/l = 2.39 , maximum mg/l =			
8.a. System Blowdown Flow Rate: average gpm = , maximum gpm =			
8.b. System Blowdown Frequency: minutes/day = , days/week =			
9. List measures in place to ensure that excessive levels of WTC are not used and subsequently discharged - No free sulfuric acid is expected to be discharged from outfall 001. Neutralization to occur by circulating water prior to discharge to East River.			
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Sulfuric Acid	93%	7664-93-9	**2.39 mg/l
Deionized water	7%	7664-93-9	mg/l
**As sulfate ion (SO ₄)			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products -			

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 2 of 3

1.a. Date Signed by Permittee - 10/1/2011		1.b. Date Signed by WTC Manufacturer -			
2.b. SPDES No. - NY 0005193		3.a. WTC Name - Sulfuric Acid 93%			
11. WTC BOD and COD (lb/lb) - NA					
12.a. Is WTC a NYS registered biocide? NO			12.b. Registration Number - NA		
13. WTC Toxicity Info (most sensitive species) - Attach description of endpoint for each EC50 and LOEC.					
13.a. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.b. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.c. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.d. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.e. Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	

14. Permittee Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete. The generic WTC usage requirements noted below will be adhered to.

PRINT NAME - Gregory Pryor	SIGNATURE - 
TITLE/COMPANY - Environmental Specialist	
TELEPHONE -	FAX -

15. WTC Manufacturer Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete.

PRINT NAME -	SIGNATURE -
TITLE/COMPANY -	
TELEPHONE -	FAX -

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 3 of 3

1.a. Date Signed by Permittee -	1.b. Date Signed by WTC Manufacturer -
2.b. SPDES No. - NY 0005193	2.c. Contact Name - Gregory Pryor
3.a.. WTC Name - Sulfuric Acid 93%	6.a. Avg/Max Daily Dosage = 363,04 / lbs/day

Generic WTC Usage Requirements

- A. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.
- B. The discharge shall not cause or contribute to a violation of water quality or an exceedance of AWQC.
- C. The permittee must maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 3 years. This period may be extended by request of the DEC.
- D. The permittee shall provide an annual report, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

Items 16 - 17 must be completed by NYSDEC permit writer.

16. Review Decision (check the appropriate box). *Fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.*

☐ The proposed WTC usage may proceed as proposed without permit modification subject to the conditions noted above.

☐ The proposed WTC usage may not proceed for one of the following three reasons:

- ☐ As noted below, the information provided is insufficient to complete our review.
- ☐ As noted below, the SPDES permit must first be modified to add new requirements.
- ☐ As noted below, the proposed use is prohibited.

17. Permit Writer Information:

PRINT NAME -	SIGNATURE -
TITLE -	DATE -
ADDRESS -	
TELEPHONE -	FAX -



MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

BASIC CHEMICAL SOLUTIONS

PART I What is the material and what do I need to know in an emergency?

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): BCS SULFURIC ACID (>51%)
CHEMICAL NAME/CLASS: Sulfuric Acid Solution
PRODUCT USE: Neutralization, metal processing, battery acid.
SUPPLIER/MANUFACTURER'S NAME: BASIC CHEMICAL SOLUTIONS
ADDRESS: Corporate Office
525 Seaport Blvd.
Redwood City, CA 94063
BUSINESS PHONE: 800-411-4227
EMERGENCY PHONE: CHEMTREC: 800-424-9300

DATE OF PREPARATION: February 16, 2004
DATE OF REVISION: November 6, 2009

Si usted no entiende las Hojas de Informacion de Seguridad sobre Materiales, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the Material Safety Data Sheet, find someone to explain it to you in detail.)

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			OTHER mg/m ³
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³	IDLH	
Sulfuric Acid	7664-93-9	>51	1 mg/m ³	10	1 mg/m ³	3 mg/m ³	15 mg/m ³	NA
Water and other Ingredients. The other Ingredients are each present in less than 1 percent concentration in this product.		Balance	The components present in the balance of this product do not contribute any significant, additional hazards. All hazard information pertinent to this product has been presented in the remaining sections of this Material Safety Data Sheet, per the requirements of Federal Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200).					

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a clear solution. Danger! Extremely corrosive. Causes severe burns. Reacts with water. Harmful if ingested or inhaled, can be fatal. In the event of fire or spill, adequate precautions must be taken. This product may decompose to produce a variety of compounds (i.e. carbon monoxide, carbon dioxide and oxides of sulfur). Flammable hydrogen gas can evolve when in contact with most metals. Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding. Transport in approved vehicles and containers.

BCS SULFURIC ACID (>51%) M.S.D.S.

PAGE 1 OF 8

3. HAZARD IDENTIFICATION (Continued)

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product are as follows:

INHALATION: If mists or sprays of this solution are inhaled, this product may cause pulmonary irritation, irritation of the mucus membranes, coughing, and a sore throat. Inhalation of high concentrations of this product may cause damage to the tissues of the respiratory system, producing potentially fatal lung disorders (chemical pneumonitis and pulmonary edema) and erosion of the tooth enamel.

CONTACT WITH SKIN or EYES: Contact with the eyes can cause severe irritation, eye burns and permanent eye damage. Contact with the skin can cause severe irritation, skin burns and permanent skin damage. Prolonged exposure may result in ulcerating burns which could leave scars.

SKIN ABSORPTION: Skin absorption is not anticipated to be a significant route of over-exposure to any component of this product.

INGESTION: Though ingestion is not anticipated to be a significant route of over-exposure to this product, if ingestion does occur burning and irritation of the mouth, throat, esophagus, and other tissues of the digestive system will occur immediately upon contact. Ingestion of large quantities may be fatal.

INJECTION: Though injection is not anticipated to be a significant route of over-exposure to this product, if it occurs, may cause local reddening, tissue swelling, and discomfort.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms.

ACUTE: This solution is corrosive, and can burn and damage eyes, skin, mucous membranes, and any other exposed tissue. If inhaled, irritation of the respiratory system may occur, with coughing, and breathing difficulty. Though unlikely to occur during occupational use, ingestion or injection of large quantities may be fatal.

CHRONIC: This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11).

HAZARDOUS MATERIAL INFORMATION SYSTEM			
HEALTH		(BLUE)	3
FLAMMABILITY		(RED)	0
REACTIVITY		(YELLOW)	2
PROTECTIVE			D
EYES	RESPIRATOR	HAND	BODY
	SEE SECTION		
For routine industrial applications			

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking goggles off last. Victim must seek medical attention.

EYE EXPOSURE: If this product enters the eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers. If shortness of breath occurs, evaluate the possibility of bronchitis or pneumonitis. Chest x-ray and arterial blood gasses can be used to determine the presence of pulmonary edema. In severe cases, use of humidified oxygen and assisted ventilation including positive end expiratory pressure (PEEP) may be needed. Parenteral steroids may be useful in limiting the extent of pulmonary damage.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should rinse mouth with large amounts of water. Victim should drink 2-3 glasses of water to dilute the ingested material. Never induce vomiting or give diluents (water) to someone who is unconscious, having convulsions, or who cannot swallow. The use of gastric lavage is controversial. The removal of acid must be weighed against the risk of perforation or bleeding. If a large amount of acid (greater than 1ml/kg body weight) has been ingested, cautious gastric lavage is generally advised if the patient is alert and there is little risk of convulsions. Consultation with a gastroenterologist and/or surgeon is advised. Serious complications such as perforation or stricture of the esophagus may occur requiring care by specialist. Laryngeal edema may develop requiring intubation or tracheostomy.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): Not flammable.

AUTOIGNITION TEMPERATURE, °C: Not flammable.

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (Expect reaction)

Foam: YES

Halon: YES

Carbon Dioxide: YES

Dry Chemical: YES

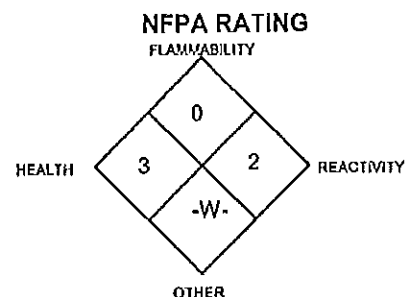
Other: NO.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is corrosive, and presents a significant contact hazard to fire-fighters. For large fires, flood fire area from a distance. Expect a reaction with water. Do not let solid stream of water contact spilled materials. When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (including carbon monoxide, carbon dioxide and oxides of sulfur).

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.



6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

The proper personal protective equipment for incidental releases (e.g., 1 L of the product released in a well-ventilated area) use impermeable gloves, specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard-hat. Self Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, Select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

Absorb spilled liquid with polyads or other suitable absorbent materials. Neutralize residue with lime or soda ash or other acid neutralizing agent. Decontaminate the area thoroughly. Test area with litmus paper to confirm neutralization. Place all spill residue in a suitable container. Dispose of in accordance with Federal, State and local hazardous waste disposal regulations (see Section 13 – Disposal Considerations.)

PART III *How can I prevent hazardous situations from occurring*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this material. Remove contaminated clothing immediately. Use ventilation and other engineering controls to minimize potential exposure to this product.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. Use in a well-ventilated location.

For Non-Bulk Containers: Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

Empty containers may contain residual liquid. Therefore, empty containers should be handled with care.

BCS SULFURIC ACID (>51%) M.S.D.S.

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7. HANDLING and STORAGE (Continued)

Bulk Containers: All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

Tank Car Shipments: Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tank (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be clean and free of incompatible chemicals, prior to connection to the tank car or vessel. Valves and hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment before maintenance begins by a triple-rinse with water followed, if necessary, by using acid neutralizing agent and an additional rinse. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: If required use a corrosion-resistant ventilation system separate from other exhaust ventilation systems to ensure that there is no potential for overexposure to sprays, or mists of this product and that exposures are below those in section 2. Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. If adequate ventilation is not available or if there is potential for airborne exposure above the exposure limits (listed in Section 2) a respirator may be worn up to respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For a higher level of protection use positive pressure supplied air respiration protection or Self Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:

Positive pressure, full-facepiece Self Contained Breathing Apparatus; or positive pressure, full-facepiece Self Contained Breathing Apparatus with an auxiliary positive pressure Self Contained Breathing Apparatus.

EYE PROTECTION: Chemical Splash goggles and Full Face-shields are strongly recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION: Wear appropriate gloves for routine industrial use. Use appropriate gloves for spill response, as stated in Section 6 of this MSDS (Accidental Release Measures).

BODY PROTECTION: Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from natural rubber or other appropriate materials are generally acceptable, depending upon the task.

9. PHYSICAL and CHEMICAL PROPERTIES

Physical and chemical properties for Sulfuric Acid.

Appearance: Clear oily liquid.

Odor: Odorless.

Solubility: Miscible with water, liberates much heat.

Specific Gravity: 1.84 (98%), 1.71 (78%), 1.40 (50%)

pH: 1 N solution (ca. 5% w/w) = 0.3; 0.1 N solution (ca. 0.5% w/w) = 1.2; 0.01 N solution (ca. 0.05% w/w) = 2.1.

% Volatiles by volume @ 21C (70F): No information found.

Boiling Point: ca. 290C (ca. 554F) (decomposes at 340C)

Melting Point: 3C (100%), -32C (93%), -38C (78%), -64C (65%).

Vapor Density (Air=1): 3.4

Vapor Pressure (mm Hg): 1 @ 145.8C (295F)

Evaporation Rate (BuAc=1): No information found.

ODOR THRESHOLD: Not available.

APPEARANCE AND COLOR: No odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): Litmus paper will turn red upon contact with even low concentrations of this solution.

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Thermal decomposition products of this solution can include carbon monoxide, carbon dioxide and oxides of sulfur.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product reacts with bases, reducing agents, alkali metals, carbides, cyanides, sulfides and metal powders. Do not mix this product with sodium hypochlorite, sodium bisulfite, Chlorine Sanitizers or Chlorinated Cleaners – a deadly gas can be formed.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures and incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Additional toxicology information for components greater than 1 percent in concentration is provided below.

SULFURIC ACID:

LD₅₀ (oral, rat) 2140 mg/kg

LC₅₀ (rat) 510 mg/m²/2 hrs

LC₅₀ (rat) 347 ppm/1 hr

SUSPECTED CANCER AGENT: The components of this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA; and are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

BCS, LLC only adds water to produce lower concentrations of sulfuric acid. The following quote is from a 93% sulfuric acid MSDS dated 5/7/97 from Rhodia Inc., who is a producer of sulfuric acid and is regarding cancer and strong acid mists. "The International Agency for Research on cancer (IARC) has classified strong inorganic acid mists containing sulfuric as a known human carcinogen (IARC Category 1). This classification applies to sulfuric acid when it is generated as a mist. There is still debate in the scientific community whether the studies reviewed by IARC adequately controlled for confounding occupational exposures and personal habits such as smoking and alcohol consumption. A few epidemiology studies have suggested a possible association between sulfuric acid exposure and laryngeal or lung cancer; however, in all these studies, workers were exposed to many other chemicals, some of which are recognized carcinogens, such as diethylsulfate and nickel. Considering the multiple chemical exposures and other limitations of the studies we (Rhodia Inc.) disagree with IARC's conclusions that a cause and effect relationship between cancer and exposure to strong inorganic acid mist containing sulfuric acid has been demonstrated."

11. TOXICOLOGICAL INFORMATION (Continued)

IRRITANCY OF PRODUCT: This product is severely irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES: Currently there are no Biological Exposure Indices (BEIs) associated with the components of this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Skin disorders can be aggravated by over-exposure to this product. Inhalation of this product's mists may aggravate respiratory conditions.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate over-exposure to this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No chemical fate data found.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product is harmful or fatal to plant and animal life if released into the environment. As with all chemicals, work practices should be aimed at eliminating environmental releases. Refer to Section 11 (Toxicological Information) for further toxicological data.

EFFECT OF CHEMICAL ON AQUATIC LIFE The toxicity of sulfuric acid to fish is dependent on the resulting pH of the water, lethality at a pH of 5.0 or below. Required to cause lethality varies depending on the hardness of the water (hard water has some buffering capacity) and the species of fish (some fish are more resistant to the effects of acidity) McKee, JE, and Wolf, HA (Editors) Water Quality Criteria, 2nd ed., Publications No. 3-A, p. 279, California State Water Quality Resources Control Board, Sacramento, CA (Rev. 1963).

As with all chemicals, work practices should be aimed at eliminating environmental releases.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER: D002 (Characteristic, Corrosivity), applicable to wastes consisting only of this solution.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

<u>PROPER SHIPPING NAME:</u>	Sulfuric Acid with more than 51% acid
<u>HAZARD CLASS NUMBER and DESCRIPTION:</u>	8 (Corrosive Material)
<u>UN IDENTIFICATION NUMBER:</u>	UN 1830
<u>PACKING GROUP:</u>	II
<u>DOT LABEL(S) REQUIRED:</u>	Corrosive
<u>NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000):</u> 137	

BCS SULFURIC ACID (>51%) M.S.D.S.

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14. TRANSPORTATION INFORMATION—(Continued)

MARINE POLLUTANT: This product does not contain any components which are designated by the Department of Transportation to be Marine Pollutants. (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

Note: The latest DOT information is provided, please verify all DOT information as it is subject to change without notice.

15. REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: The components of this product subject to the reporting requirements of Section 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act are as follows.

COMPONENT	SARA 302	SARA 304	SARA 313
Sulfuric Acid	Yes	Yes	No

SARA Threshold Planning Quantity: NA

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ): Sulfuric Acid = 1000 lbs,

OTHER FEDERAL REGULATIONS: Not applicable.

STATE REGULATORY INFORMATION: Not determined.

CALIFORNIA PROPOSITION 65: No component of this product is on the California Proposition 65 lists.

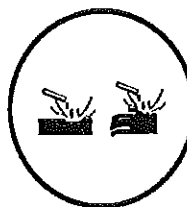
LABELING (Precautionary Statements): DANGER! CORROSIVE MATERIAL! LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE LUNG DAMAGE. Do not get into eyes, on skin or clothing. Avoid breathing spray or mist. Do not take internally. Use with adequate ventilation and employ respiratory protection when exposed to the mist or spray. When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing. Do not transfer to unlabeled containers. Wash thoroughly after handling. Keep container closed when not in use. **FIRST AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do not induce vomiting. **IN CASE OF FIRE:** Use water, dry chemical, CO₂, or alcohol foam. **IN CASE OF SPILL:** Neutralize residue with acid neutralizing agent. Refer to MSDS for additional information.

TARGET ORGANS: Skin, eyes and respiratory system.

WHMIS SYMBOLS:

D1A- Poisonous and Infectious Materials
 Very Toxic Materials

E- Corrosive Material



16. OTHER INFORMATION

INFORMATION SOURCE:

CHEMICAL SAFETY ASSOCIATES, Inc.
Rhodia Inc.

PREPARED BY:

BASIC CHEMICAL SOLUTIONS

THIS INFORMATION IS DRAWN FROM RECOGNIZED SOURCES BELIEVED TO BE RELIABLE. BASIC CHEMICAL SOLUTIONS, LLC MAKES NO GUARANTEES NOR ASSUMES ANY LIABILITY IN CONNECTION WITH THIS INFORMATION. THE USER SHOULD BE AWARE OF CHANGING TECHNOLOGY, RESEARCH, REGULATIONS AND ANALYTICAL PROCEDURES THAT MAY REQUIRE CHANGES HEREIN. THE ABOVE DATA IS SUPPLIED UPON THE CONDITION THAT PERSONS WILL EVALUATE THIS INFORMATION AND THEN DETERMINE ITS SUITABILITY FOR THEIR USE.

DEFINITIONS OF TERMS

15. OTHER INFORMATION (Continued)

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (TWA), the 15-minute Short Term Exposure Limit, and the Instantaneous Ceiling Level. Skin adsorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The DFG - MAK is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs). When no exposure guidelines are established, an entry of NE is made for reference.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **LEL** - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; ppm concentration expressed in parts of material per million parts of air or water; mg/m³ concentration expressed in weight of substance per volume of air; mg/kg quantity of material, by weight, administered to a test subject, based on their body weight in kg. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. **IARC** and **NTP** rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TD₀**, **LDLo**, and **LD₀**, or **TC**, **TC₀**, **LCLo**, and **LC₀**, the lowest dose (or concentration) to cause death. **BEI** - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substance Control Act (TSCA)**; Marine Pollutant status according to the **DOT**; California's Safe Drinking Water Act (**Proposition 65**); the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the materials package label.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Applicability

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use. The DEC will review that submittal and determine if a formal SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. **The majority of WTC authorizations do not require formal SPDES permit modification.** Notification requirements are summarized below. WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use this form for review and authorization of substances, other than WTCs, which could be present in wastewater, e.g. process chemicals.

Notification Requirements and Instructions

For each new or increased use of a WTC, please complete items 1a, and 2 - 14 on the attached 3 page form, entitled **WTC Usage Notification Requirements for SPDES Permittees**. *Alternatively*, the permittee may, at a minimum, complete items 1a, 2 - 9 and 14 then forward the form to the WTC manufacturer who must then complete the remaining items (10 - 13) and items 1b and 15. The manufacturer must then send the completed form directly to the permit writer. This alternative method may be necessary because the WTC manufacturer may be reluctant to reveal trade secret product formulations to the permittee.¹ **Fax or Mail the completed form to:**

Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - *In general*, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. *However*, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

Toxicity Information - When completing item 13, please ensure that the tests were conducted in accordance with the EPA Toxicity Manual and that the results are for the appropriate receiving water (i.e. fresh water or salt water).² In general, submissions which do not include any toxicity information will not be authorized. Submissions containing incomplete toxicity information will be reviewed using conservative safety factors which may prevent authorization or result in the permit being modified to include routine whole effluent toxicity testing or other monitoring.

Phosphorus - The permittee must demonstrate that the use and discharge of any WTCs containing phosphorus, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

After reviewing the submission, the permit writer will complete items 16 and 17 and fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.

Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

- (1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.
- (2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Instructions Page

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Notification Requirements and Instructions

For each new or increased use of a WTC, please complete items 1a, and 2 - 14 on the attached 3 page form, entitled **WTC Usage Notification Requirements for SPDES Permittees**. Alternatively, the permittee may, at a minimum, complete items 1a, 2 - 9 and 14 then forward the form to the WTC manufacturer who must then complete the remaining items (10 - 13) and items 1b and 15. The manufacturer must then send the completed form directly to the permit writer. This alternative method may be necessary because the WTC manufacturer may be reluctant to reveal trade secret product formulations to the permittee.¹ Fax or Mail the completed form to:

Permit writer:	Telephone:	Fax:
Address:		

Outfall WTC Concentration - In general, when completing item 7b, the average mg/l should be determined by dividing the average dosage in 6a by the average flow in 7a and then dividing by 8.34; the maximum mg/l should be determined by dividing the maximum dosage in 6a by the average flow in 7a and then dividing by 8.34. However, for blowdowns which are highly intermittent or are not tributary to a treatment system or some form of equalization, it may be appropriate to factor in the information in item 8 when completing item 7b.

Toxicity Information - When completing item 13, please ensure that the tests were conducted in accordance with the EPA Toxicity Manual and that the results are for the appropriate receiving water (i.e. fresh water or salt water).² In general, submissions which do not include any toxicity information will not be authorized. Submissions containing incomplete toxicity information will be reviewed using conservative safety factors which may prevent authorization or result in the permit being modified to include routine whole effluent toxicity testing or other monitoring.

Phosphorus - The permittee must demonstrate that the use and discharge of any WTCs containing phosphorus, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

After reviewing the submission, the permit writer will complete items 16 and 17 and fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.

Common Reasons Which Prevent Letter Authorization of a WTC

- Submission of incomplete or inaccurate information.
- High WTC toxicity compared to available receiving stream dilution or other predicted water quality contravention.
- Department review indicates that a SPDES permit modification is necessary.

Footnotes:

- (1) If requested, the Department will restrict access to trade secret information to the extent authorized by law.
- (2) Submission of both acute (48 or 96 hour LC50 or EC50) and chronic (NOEC) test results for at least one vertebrate and one invertebrate species are required. Refer to the following three manuals: EPA/600/4-90/027F (1993); EPA/600/4-91/002 (1994); EPA/600/4-91/003 (1994); or their replacements.

NYSDEC - Division of Water

Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees

Page 1 of 3

Note: All requested information must be supplied. Incomplete submissions will not be reviewed.

Permittee completes items 1a and 2 - 14. Alternatively, the permittee may complete items 1a, 2 - 9 and 14 if the WTC manufacturer completes items 1b, 10 - 13 and 15. See instructions page.

1.a. Date Signed by Permittee -		1.b. Date Signed by WTC Manufacturer -	
2.a. Permittee Name - Ravenswood Generating Station		2.b. SPDES No. - NY 0005193	
2.c. Contact Name - Gregory Pryor			
3.a. WTC Name - Trisodium Phosphate Anhydrous			
3.b. WTC Manufacturer - ICL Performance Products LP			
4. WTC Function - Boiler water chemistry and pH control			
5. Affected Outfall(s) - outfalls 001 via 01G			
6.a. WTC Daily Dosage: average lbs/day = 3,600 lbs/year , maximum lbs/day =			
6.b. Dosage Frequency: minutes/day = varies , days/week =			
7.a. Outfall Flow Rate: average MGD = 42,464 MGY , maximum MGD =			
7.b. Outfall WTC Concentration: average mg/l = 0.01 , maximum mg/l =			
8.a. System Blowdown Flow Rate: average gpm = varies , maximum gpm =			
8.b. System Blowdown Frequency: minutes/day = 1800 hr/yr , days/week =			
9. List measures in place to ensure that excessive levels of WTC are not used and subsequently discharged - Chemical is pumped into the boiler water to control pH and maintain boiler chemistry. Trisodium Phosphate reacts with boiler scale to produce chemicals listed in section 10e.			
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Trisodium Phosphate	100	7601-54-9	0.01 mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products - Calcium Phosphate, Magnesium Phosphate, and Sodium Chloride.			

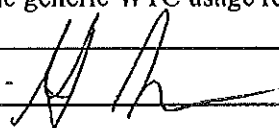
NYSDEC - Division of Water

WTC Usage Notification Requirements for SPDES Permittees

Page 2 of 3

1.a. Date Signed by Permittee - 10/11/2011		1.b. Date Signed by WTC Manufacturer -			
2.b. SPDES No. - NY 0005193		3.a. WTC Name - Trisodium Phosphate Anhydrous			
11. WTC BOD and COD (lb/lb) - NA					
12.a. Is WTC a NYS registered biocide? No			12.b. Registration Number - NA		
13. WTC Toxicity Info (most sensitive species) - Attach description of endpoint for each EC50 and LOEC.					
13.a. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Bluegill sunfish	220 mg/l	mg/l	mg/l	mg/l	
13.b. Vertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Rainbow Trout	120 mg/l	mg/l	mg/l	mg/l	
13.c. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
Daphnia magna	mg/l	177 mg/l	mg/l	mg/l	
13.d. Invertebrate Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	
13.e. Species	LC50	EC50	NOEC	LOEC	Other -
	mg/l	mg/l	mg/l	mg/l	

14. Permittee Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete. The generic WTC usage requirements noted below will be adhered to.

PRINT NAME - Gregory Pryor	SIGNATURE - 
TITLE/COMPANY - Environmental Specialist	
TELEPHONE - 718.706.2863	FAX - 718.361.8875

15. WTC Manufacturer Certification - I certify under penalty of law that this notification and all attachments are, to the best of my knowledge and belief, true, accurate and complete.

PRINT NAME -	SIGNATURE -
TITLE/COMPANY -	
TELEPHONE -	FAX -

NYSDEC - Division of Water
WTC Usage Notification Requirements for SPDES Permittees
 Page 3 of 3

1.a. Date Signed by Permittee -	1.b. Date Signed by WTC Manufacturer -
2.b. SPDES No. - NY 0005193	2.c. Contact Name - Gregory Pryor
3.a.. WTC Name - Trisodium Phosphate Anhydrous	6.a. Avg/Max Daily Dosage = 3,600 ~~g~~ / lbs/day

Generic WTC Usage Requirements

- A. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.
- B. The discharge shall not cause or contribute to a violation of water quality or an exceedance of AWQC.
- C. The permittee must maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 3 years. This period may be extended by request of the DEC.
- D. The permittee shall provide an annual report, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

Items 16 - 17 must be completed by NYSDEC permit writer.

16. Review Decision (check the appropriate box). *Fax or mail a copy of the completed form to the person identified in item 2.c and, if appropriate, to the facility inspector.*

☐ The proposed WTC usage may proceed as proposed without permit modification subject to the conditions noted above.

☐ The proposed WTC usage may not proceed for one of the following three reasons:

- ☐ As noted below, the information provided is insufficient to complete our review.
- ☐ As noted below, the SPDES permit must first be modified to add new requirements.
- ☐ As noted below, the proposed use is prohibited.

17. Permit Writer Information:

PRINT NAME -	SIGNATURE -
TITLE -	DATE -
ADDRESS -	
TELEPHONE -	FAX -



**ICL Performance
Products LP**

Material Safety Data Sheet



RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name: TRISODIUM PHOSPHATE ANHYDROUS
Reference Number: AST10064
Date: December 13, 2010

Use of the substance or preparation

Industrial and household cleaners, water conditioner, photograph developer bath ingredient, paint remover, denture cleaners, emulsifier and pH control agent for foods. May be used to treat drinking water.

Company/Undertaking Identification

ICL PERFORMANCE PRODUCTS LP
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Emergency telephone

In USA call CHEMTREC: 1 800 424 9300
In Canada call CANUTEC: 1 613 996 6666

General Information: +1 800 244 6169 (Worldwide)

2. HAZARDS IDENTIFICATION

Classification of the substance/preparation

GHS



Warning

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

ICL Performance Products LP Material Safety Data Sheet

Material: Trisodium Phosphate Anhydrous

Page 2 of 7

Reference No.: AST10064

December 13, 2010

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

Product manufactured and packaged after December 1, 2010 has GHS hazard identification and classification labels reflecting results from recent eye irritation tests, however there may still be product on the market with the former classification on the packaging.

Former EU classification:

XI - Irritant

R34 Causes burns

R37/38 Irritating to respiratory system and skin

R41 Risk of serious damage to eyes

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition

<u>Substance</u>	<u>CAS No.</u>	<u>%w/w</u>	<u>EINECS No.</u>
Trisodium Phosphate Anhydrous	7601-54-9	100	231-509-8

4. FIRST AID MEASURES

General

Treatment is symptomatic and supportive.

Eye contact

In case of contact with eyes, immediately flush the eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation, pain, swelling, lacrimation, or photophobia persists.

Skin contact

Immediately remove this material from skin and wash with plenty of water. Remove contaminated clothing. Wash clothing and thoroughly clean shoes before reuse.

Inhalation

Inhalation of the dust may cause coughing and sneezing. Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention immediately. Contact a Poison Control Center. Swallowing this product may cause severe nausea, vomiting, abdominal discomfort, and burning sensation.

5. FIRE FIGHTING MEASURES

Extinguishing media

Non-combustible. No special requirement. To extinguish fire use water spray, dry chemical, carbon dioxide, or appropriate foam.

Unsuitable extinguishable media

Non-combustible. No special requirement.

Exposure hazards

No special considerations.

Protective equipment

As a general precaution, firefighters and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid unnecessary exposure and remove all material from eyes, skin and clothing.

Environmental precautions

Small quantities: Avoid discharge into the environment

Large quantities: Avoid discharge into the environment – See section 15

Method for cleaning up

Sweep, scoop or vacuum spill material, contaminated soil and other contaminated material and place in clean, dry containers for removal. If possible, complete cleanup on a dry basis.

7. HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Do not taste or swallow. Use only in adequate ventilation. Wash thoroughly after handling. Remove material from clothing.

Engineering measures

Ensure adequate ventilation. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment.

Storage

Store in cool, dry place to maintain product performance. Product should be stored in sealed containers and be kept free of water due to product corrosivity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure limit

OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) which are the least stringent exposure limits applicable to dusts.

ACGIH TLV	10 mg/m ³ (inhalable) 8-hr TWA, 3 mg/m ³ (respirable) 8-hr TWA
OSHA PEL	15 mg/m ³ (total dust) 8-hr TWA, 5 mg/m ³ (respirable) 8-hr TWA

Respiratory protection

Avoid breathing dust. In case of insufficient ventilation, use approved respiratory protective

ICL Performance Products LP Material Safety Data Sheet

Material: Trisodium Phosphate Anhydrous

Reference No.: AST10064

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December 13, 2010

equipment as described in OSHA 29 CFR 1910.134 or European Standard EN149. A vapor respirator is recommended.

Hand/Skin protection

Wear protective gloves is recommended; wash hands and contaminated skin thoroughly after handling.

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described in OSHA eye and face regulation in 29 CFR 1910.133 or European Standard EN166.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Chemical Formula:	Na ₃ PO ₄
Form:	Free-flowing granular product
Color:	White
Odor:	Odorless

Important health, safety and environmental information

pH:	11.5 – 12.0 (as a 1% solution)
Specific Gravity	2.54
Melting Point	1340 °C
Bulk Density:	49-63 lbs./cu. ft.
Solubility in Water:	(g./100 g. H ₂ O): 5.4 @ 0 °C 14.5 @ 25 °C 23.3 @ 40 °C 54.3 @ 60 °C 94.6 @ 100 °C

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Product is stable under normal conditions of storage and handling.

Conditions to avoid

Store product in dry areas away from moisture. This product could be corrosive to aluminum surfaces due to high pH. When wet, mild steel and brass may be corroded.

Materials to avoid

Incompatible with strong mineral acids, aluminum and moisture.

Hazardous decomposition

Oxides of sodium and phosphorus may form when heated to decomposition

11. TOXICOLOGICAL INFORMATION

Laboratory data

Data from ICL Performance Products LP single-dose (acute) animal studies with this material are given below:

ICL Performance Products LP Material Safety Data Sheet

Material: Trisodium Phosphate Anhydrous

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Oral - rat LD ₅₀ :	4,150 mg/kg; slightly toxic
Dermal - rabbit LD ₅₀ :	>7,940 mg/kg; practically nontoxic
Eye Irritation - rabbit:	corrosive
Skin Irritation - rabbit:	2.2/8.0 (24-hr. exp.); slightly irritating

This product produced no mutagenic effects in standard assays using fruit flies.

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

12. ECOLOGICAL INFORMATION**Environmental toxicity**

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity.

Invertebrate: 50-hr EC ₅₀ Daphnia magna:	177 mg/L; Practically Nontoxic
Warmwater fish: 96-hr LC ₅₀ Bluegill sunfish:	220 mg/L; Practically Nontoxic
Coldwater fish: 96-hr LC ₅₀ Rainbow trout:	120 mg/L; Practically Nontoxic

No definitive algal data was available for this material.

Environmental fate

Inorganic compounds in contact with the soil, sub-surface or surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates, usually with calcium or magnesium. The resultant compounds are insoluble in water and become a part of the soil or sediment. The term biodegradability, as such, is not applicable to inorganic compounds.

13. DISPOSAL CONSIDERATIONS**European waste catalog number**

16 03 03 Inorganic wastes containing dangerous substances

Disposal Considerations

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Road/Rail, Sea and Air

IMDG/UN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains sodium phosphate, tribasic), UN 3077, 9, PG III*
ICAO/IATA passenger aircraft	UN 3077, Environmentally hazardous substance, solid, n.o.s. (contains sodium phosphate, tribasic), 9, PG III*
RID/ADR	Unknown

ICL Performance Products LP Material Safety Data Sheet

Material: Trisodium Phosphate Anhydrous

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December 13, 2010

Canadian TDG

Sodium Phosphate Tribasic, NA9148, Class 9.2, PG III⁺

US DOT

Environmentally hazardous substance, solid, n.o.s. (contains sodium phosphate, tribasic), UN 3077, 9, PG III⁺⁺ Applies only to packages containing a Reportable Limit of 230 kg or more^{*} Applies only to a package containing a Reportable Quantity (RQ) of 5000 lbs or more.**15. REGULATORY INFORMATION****EC Label**

Hazard symbol:	XI - Irritant
R34	Causes burns
R37/38	Irritating to respiratory system and skin
R41	Risk of serious damage to eyes
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical attention
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection

Chemical Inventory

USA TSCA:	Listed	Australia	Listed
Canada DSL:	Listed	Korea	Listed
EC:	Listed	Philippines	Listed
Japan	Listed	China	Listed

Other Information

Germany: WGK = 1

WHMIS Classification: D2(B) – Materials Causing Other Toxic Effects

SARA Hazard Notification

Hazard Categories under Title III Rules (40 CFR 370):	Immediate
Section 302 Extremely Hazardous Substances:	Not Applicable
Section 313 Toxic Chemical(s):	Not Applicable

CERCLA Reportable Quantity: 5,000 lb. RQ of sodium phosphate, tribasic

Release of more than 5000 pounds of sodium phosphate, tribasic to the environment in a 24-hour period requires notification to the National Response Center (800-424-8802 or 202-426-2675).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contain all the information required by the Canadian Controlled Products Regulation.

16. OTHER INFORMATION

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>Additional Information</u>
Suggested NFPA Rating	3	0	0	
Suggested HMIS Rating	3	0	0	G G = safety glasses, gloves, vapor respirator

Reason for revision: Revised section 2.

Supersedes MSDS dated: December 8, 2010

Responsible Care ® is a registered trademark of the American Chemistry Council.

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Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, ICL Performance Products LP makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ICL Performance Products LP be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS

AST10064.1640.doc

Ravenswood Generating Station-SPDES Permit NY 0005193 Sampling

Outfall	Descriptor	Priority Pollutants	A. BOD	B. COD	C. TSS	D. TDS	E. O&G	F. TRC	G. TON	H. NH3	I. Flow	k.Temp Summer	L. pH
01A	Floor Drains	Attached	<2	27.8	NMR1	2,960	NMR1	0	0.83	0.26	NMR1	26.8 C	7.04
01C	Yard and Roof Stormwater		NMR2	NMR2	<10	38	<5	0	0.73	0.2	0.16 MGD	NMR2	7.19
01D	Unit 40 Discharge	Attached	<2	<10	NMR1	67	NMR1	0	0.56	NMR1	NMR1	22.7 C	7.38
01E	Carbon Filter Backwash	Attached	<2	<10	NMR1	60	<5	0	0.3	<0.10	NMR1	20.2 C	7.20
01F	Pre-Filter Backwash	Attached	<2	<10	NMR1	54	<5	0.6	0.13	<0.10	NMR1	25.0 C	7.40
01G	Boiler Blowdown	Attached	<2	<10	NMR1	23	NMR1	0	0.13	NMR1	NMR1	27.0 C	9.48
01H	IX Regen	Attached	<2	<10	NMR1	<5	<5	0	<0.10	<0.10	NMR1	21.0 C	7.68
001	Circ Water		<2	84.6	14	22,700	<5	0	1.16	0.29	NMR1	22.0 C	7.26
004	Rainey Tank Farm Stormwater	Attached	<2	12.6	NMR1	282	NMR1	0	0.33	<0.10	NMR1	24.2 C	7.02
006	Gas Turbine Site	Attached	<2	13.9	NMR1	504	NMR1	0	0.17	<0.10	NMR1	22.1 C	7.30
007	Settling Pond stormwater		NMR2	NMR2	<10	256	<5	0	1.79	0.24	NMR1	NMR2	7.28
008	Unit 10 Screenwash	Attached	<2	87.9	18	11100	<5	0	0.74	0.16	1.152 MGD	22.1 C	7.71
009	Unit 20 Screenwash	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	1.152 MGD	NMR 5	NMR 5
010	Unit 30 Screenwash	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	1.728 MGD	NMR 5	NMR 5
011	Stormwater from East Side		NMR2	NMR2	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	0.018 MGD	NMR 2	NMR 6

1.152 Reported in Monthly DMR
NMR2 Table 5 Waiver
NMR3 Included in 126 Priority Pollutants
NMR4 Table 6 parameters are only necessary if believed to exist in outfall
NMR 5 No monitoring required as per DEC
NMR 6 Outfall not connected to NYC DEP discharge. No discharge

Ravenswood Generating Station-SPDES Permit NY 0005193 Sampling

Table 6

Outfall	Descriptor	Benzene	Ethylbenzene	Toluene	Copper	Nickel	Zinc
01A	Floor Drains	<1.0	<1.0	<1.0	0.03	0.29	0.15
01C	Yard and Roof Stormwater	<0.70	<1.0	<1.0	<0.02	<0.04	0.11
01D	Unit 40 Discharge	<1.0	2.3	<1.0	<0.02	<0.04	0.16
01E	Carbon Filter Backwash	<1.0	<1.0	<1.0	<0.02	<0.04	0.03
01F	Pre-Filter Backwash	<1.0	<1.0	<1.0	<0.02	<0.04	<0.02
01G	Boiler Blowdown	<1.0	<1.0	<1.0	<0.02	<0.04	<0.02
01H	IX Regen	<1.0	<1.0	<1.0	<0.02	<0.04	0.02
001	Circ Water	<0.70	<1.0	<1.0	<0.02	<0.04	0.04
004	Rainey Tank Farm Stormwater	<1.0	<1.0	<1.0	<0.02	<0.04	<0.02
006	Gas Turbine Site	<1.0	<1.0	<1.0	<0.02	<0.04	0.07
007	Settling Pond stormwater	<0.70	<1.0	<1.0	<0.02	<0.04	0.18
008	Unit 10 Screenwash	<1.0	<1.0	<1.0	<0.02	<0.04	<0.02
009	Unit 20 Screenwash	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5
010	Unit 30 Screenwash	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5
011	Stormwater from East Side	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6

NMR1 Reported in Monthly DMR

NMR2 Table 5 Waiver

NMR3 Included in 126 Priority Pollutants

NMR4 Table 6 parameters are only necessary if believed to exist in outfall

NMR 5 No monitoring required as per DEC

NMR 6 Outfall not connected to NYC DEP discharge. No discharge

Ravenswood Generating Station-SPDES Permit NY 0005193 Sampling

Table 7

Outfall	Descriptor	Ammonia	Chloride	Color	Fecal Coliform	Total Coliform	Sulfate	Aluminum	Iron	Magnesium	Manganese	Sodium	Vandium	O rtho Xylene	m,p Xylene
01A	Floor Drains	0.26	1420	20	1400	9000	209	0.31	0.49	86.2	0.17	742	<0.05	<1.0	<1.0
01C	Yard and Roof Stormwater	0.2	4.2	15	>1600	>1600	<5.00	0.23	0.43	<5.00	<0.02	6.94	<0.05	<1.0	<1.0
01D	Unit 40 Discharge	NMR1	9.3	<5	130	130	6.88	<0.20	0.2	<5.00	0.02	10.1	<0.05	<1.0	1.2
01E	Carbon Filter Backwash	<0.10	9.2	5	<2	<2	5.03	0.31	0.24	<5.00	0.1	9.26	<0.05	<1.0	<1.0
01F	Pre-Filter Backwash	<0.10	9.9	10	<2	<2	5.17	<0.20	0.07	<5.00	0.02	10.5	<0.05	<1.0	<1.0
01G	Boiler Blowdown	NMR1	<2.0	<5	<2	<2	<5.00	<0.20	<0.02	<5.00	<0.02	<5.00	<0.05	<1.0	<1.0
01H	IX Regen	<0.10	<2.0	<5	<2	<2	<5.00	<0.20	0.04	<5.00	<0.02	<5.00	<0.05	<1.0	<1.0
001	Circ Water	0.29	11,600	15	16000	9000	1,740	0.22	0.27	742	0.05	6,450	<0.05	<1.0	<1.0
004	Rainey Tank Farm Stormwater	<0.10	41.4	<5	130	130	21.4	<0.20	0.72	8.16	0.45	30	<0.05	<1.0	<1.0
006	Gas Turbine Site	<0.10	137	35	9000	9000	11.3	<0.20	0.69	8.4	0.46	110	<0.05	<1.0	<1.0
007	Settling Pond stormwater	0.24	93.4	10	>1600	>1600	15.4	<0.20	0.1	5.05	0.02	61.5	<0.05	<1.0	<2.0
008	Unit 10 Screenwash	0.16	5920	75	>16000	16000	952	1.03	1.56	398	0.1	3470	<0.05	<1.0	<1.0
009	Unit 20 Screenwash	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5
010	Unit 30 Screenwash	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5	NMR 5
011	Stormwater from East Side	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6	NMR 6

NMR1 Reported in Monthly DMR
 NMR2 Table 5 Waiver
 NMR3 Included in Priority Pollutants
 NMR4 Table 7 parameters are only necessary if believed to exist in outfall
 NMR 5 No monitoring required as per DEC
 NMR 6 Outfall not connected to NYC DEP discharge. No discharge.

Ravenswood Generating Station-SPDES Permit NY 0005193 Sampling

Table 8

Outfall	Descriptor	Phosphorus Phosphate	Potassium	Silica Dissolved	
01A	Floor Drains	<0.05	32.4	4.79	
01C	Yard and Roof Stormwater	<0.05	<5	2.02	
01D	Unit 40 Discharge	<0.05	<5	2.27	
01E	Carbon Filter Backwash	<0.05	<5	2.24	
01F	Pre-Filter Backwash	0.06	<5	2.72	
01G	Boiler Blowdown	<0.05	<5	0.45	
01H	IX Regen	<0.05	<5	<0.20	
001	Circ Water	<0.05	249	3.84	
004	Rainey Tank Farm Stormwater	<0.05	<5	20	
006	Gas Turbine Site	<0.05	5.99	12.1	
007	Settling Pond stormwater	NMR4	6.41	0.97	
008	Unit 10 Screenwash	<0.05	141	4.35	
009	Unit 20 Screenwash	NMR 5	NMR 5	NMR 5	
010	Unit 30 Screenwash	NMR 5	NMR 5	NMR 5	
011	Stormwater from East Side	NMR 6	NMR 6	NMR 6	

NMR1 Reported in Monthly DMR
 NMR2 Table 5 Waiver
 NMR3 Included in 126 Priority Pollutants
 NMR4 Table 8 parameters are only necessary if believed to exist in outfall
 NMR 5 No monitoring required as per DEC
 NMR 6 Outfall not connected to NYC DEP discharge. No discharge.

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01A

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	27.8							mg/l				
c. Total Suspended Solids (TSS)	Reported in DMR											
d. Total Dissolved Solids (TDS)	2,960							mg/l				
e. Oil & Grease	Reported in DMR											
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.83							mg/l				
h. Ammonia (as N)	0.26							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 26.8 C		Value		Value					Value		
l. pH	Minimum 7.04	Maximum	Minimum	Maximum						Minimum	Maximum	

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

a. Primary Industries:

i. Does the discharge from this outfall contain process wastewater?

☒ Yes
☐ No

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
☐ No

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
☒ No

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01A

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.

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 1 of 2	
Pollutant and CAS Number	Effluent data							Units		Intake data (optional)		Believed present, no sampling results available	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value			d. Number of analyses
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration	(2) Mass		
Table 6 See attached													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	0.03							mg/l					
Nickel													
CAS Number: 07440-02-0	0.29							mg/l					
Zinc													
CAS Number: 07440-66-6	0.15							mg/l					
Chloride													
CAS Number: 24959-87-9	1,420							mg/l					
Color													
CAS Number:	20							units					
Fecal Coliform													
CAS Number:	1,400							MPN					
Total Coliform													
CAS Number:	9,000							MPN					
Sulfate													
CAS Number: 14808-79-8	209							mg/l					
Aluminum													
CAS Number: 07439-90-5	0.31							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01A

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.

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 2

[illegible]

Project Name Trans Canada
Project Location Ravenswood

Project Contact Greg P. 700
Phone Number (718) 706-2863

Priority

Special Detection Limits

KEY	Matrix:		Container:		Preservative:		Analysis Requested		TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments:					
	S - Soil	D - Solid	P - Poly	G - Glass	H - H ₂ SO ₄	N - NaOH	⇒	No. of Containers												Floor Drains OIA Permit Renewal					
	L - Sludge	O - Oil	B - Tedlar Bag	S - Steel Cylinder	4 - 4°C	C - HCl	↓													Sample Location	Container	Preservative	Sample Comment		
A - Aqueous	G - Gas	T - Teflon Bag	F - Glass w/ Teflon Cap	X - Hexane	O - HNO ₃																				
T - Other					F - 1:1 HCl																				
66147	9-7-11	08:30	A	1															X	OIA Floor Drains	P	-	Chlorides, Sulfate, Color 1109230-001		
66148																			X		G	H	Phenols -002		
66149																			X		G	H	Ammonia, TON -003		
66150																			X		P	-	BOD -004		
66151																			X		P	-	Asbestos -005		
66152																			X		G		COD -006		
66153																			X		G	E	VOA -007		
~~66154~~																			X		~~G~~	~~C~~	~~O.M.P. Xylene~~ -008		
66155																			X		P	-	Phosphate, Silica -009		
66156																			X		G	-	BNA -010		
66157																			X		P	-	TDS -011		
66158	9-7-11	8:30	A	1															X	OIA Floor Drains	P	D	Metals (6010 B) -012		

Samples are retained for
30 days following analysis
unless otherwise
specified

White Copy Lab Coordinator
Yellow Copy Sample Custodian
Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		12:00	9-7-11	Lindsay Paesel		15:00	9-7-11
Lindsay Paesel		18:05	9-7-11	M. Watson		18:05	9-7-11

Priority

Project Name Trans Canada

Project Location Ravenswood

Project Contact Greg Pryor
Phone Number (718) 706-7863

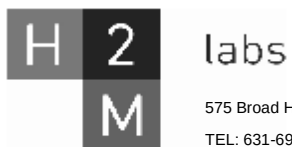
Special Detection Limits

[illegible]

*Samples are retained for
30 days following analysis
unless otherwise
specified*

White Copy	Lab Coordinator
Yellow Copy	Sample Custodian
Pink Copy	Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		12:00	9-7-11	Lindsay Paul		15:00	9-7-11
Lindsay Paul		78:05	9-7-11	M. Watson		18:05	9-7-11
Name	Signature	Time	Date	Name	Signature	Time	Date



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-001**

ClientSample ID. : 66147

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	209	D	5	mg/L	E300.0	09/13/2011 11:15 PM
Chloride	1,420	D	25	mg/L	SM4500-CL- E	09/09/2011 11:56 AM
Color	20		1	units	SM2120B	09/08/2011 12:35 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-002**

ClientSample ID. : 66148

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phenolics, Total Recoverable	14.7		1	µg/L	E420.1	09/12/2011 8:33 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-003**

ClientSample ID. : **66149**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.40	1		mg/L	E353.2	09/08/2011 9:22 AM
Nitrogen, Ammonia (As N)	0.26	1		mg/L	SM4500-NH3 H	09/12/2011 12:46 PM
Nitrogen, Total	0.83	1		mg/L	M4500-N C	09/13/2011
Nitrogen, Kjeldahl, Total	0.43	1		mg/L	E351.2	09/12/2011 3:05 PM

Qualifiers:

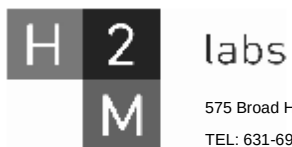
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-004**

ClientSample ID. : 66150

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/08/2011 9:00 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-005**

ClientSample ID. : **66151**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 0.20		1	MFL	E100.2	09/12/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

Date Reported : 9/14/2011

Page 5 of 15



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-006**

ClientSample ID. : 66152

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	27.8	D	2	mg/L	E410.4	09/09/2011 10:29 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-007**

ClientSample ID. : **66153**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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B=Analyte found in Method Blank @ 2.8 µg/L

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dichlorodifluoromethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Chloromethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Vinyl chloride	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Bromomethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Chloroethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Trichlorofluoromethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Acetone	5.6	B	1	µg/L	E624	09/14/2011 1:37 PM
1,1-Dichloroethene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Methylene chloride	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Carbon disulfide	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Methyl tert-butyl ether	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
trans-1,2-Dichloroethene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
cis-1,2-Dichloroethene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Vinyl acetate	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
1,1-Dichloroethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
1,2-Dichloroethene (total)	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
2-Butanone	< 5.0		1	µg/L	E624	09/14/2011 1:37 PM
Ethyl acetate	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Chloroform	6.8		1	µg/L	E624	09/14/2011 1:37 PM
1,2-Dichloroethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
1,1,1-Trichloroethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Isopropyl acetate	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Carbon tetrachloride	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Benzene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Trichloroethene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
1,2-Dichloropropane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Bromodichloromethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
2-Chloroethylvinyl ether	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
cis-1,3-Dichloropropene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
trans-1,3-Dichloropropene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
1,1,2-Trichloroethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Ethylbenzene	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Dibromochloromethane	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
Bromoform	< 1.0		1	µg/L	E624	09/14/2011 1:37 PM
4-Methyl-2-pentanone	< 5.0		1	µg/L	E624	09/14/2011 1:37 PM
2-Hexanone	< 5.0		1	µg/L	E624	09/14/2011 1:37 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-007**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66153

Origin:

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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B=Analyte found in Method Blank @ 2.8 µg/L

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Toluene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Tetrachloroethene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Chlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
m,p-Xylene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
n-Amyl acetate	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
o-Xylene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Styrene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Naphthalene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Xylene (total)	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
1,1,2,2-Tetrachloroethane	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
1,3-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
1,4-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
1,2-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
Acrolein	< 5.0	1		µg/L	E624	09/14/2011 1:37 PM
Acrylonitrile	< 5.0	1		µg/L	E624	09/14/2011 1:37 PM
1,2-Dibromoethane	< 10	1		µg/L	E624	09/14/2011 1:37 PM
Pentachloroethane	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM
1,2,3-Trichloropropane	< 1.0	1		µg/L	E624	09/14/2011 1:37 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

Date Reported : 9/14/2011

Page 8 of 15



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-009**

ClientSample ID. : 66155

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	4.79		1	mg/L	E200.7	09/14/2011 11:10 AM
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/13/2011 11:05 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

Date Reported : 9/14/2011

Page 9 of 15



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-010**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66156

Origin:

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/12/2011 1:20 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/12/2011 1:20 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/12/2011 1:20 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Aniline	< 10	1		µg/L	E625	09/12/2011 1:20 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Phenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Pyridine	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/12/2011 1:20 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Hexachloroethane	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Nitrobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Isophorone	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Naphthalene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Acenaphthylene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Acenaphthene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/12/2011 1:20 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/12/2011 1:20 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/12/2011 1:20 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-010**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66156

Origin:

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Diethylphthalate	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Fluorene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/12/2011 1:20 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/12/2011 1:20 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/12/2011 1:20 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/12/2011 1:20 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/12/2011 1:20 PM
Phenanthrene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Anthracene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Benzidine	< 80	1		µg/L	E625	09/12/2011 1:20 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Fluoranthene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Pyrene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/12/2011 1:20 PM
Chrysene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,2,3,4-Tetrachlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
2-Methylphenol	< 10	1		µg/L	E625	09/12/2011 1:20 PM
Dibenzofuran	< 10	1		µg/L	E625	09/12/2011 1:20 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
Aramite	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM

Qualifiers:

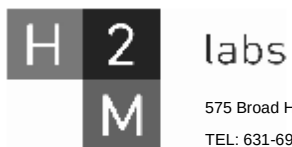
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66156

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexachloropropene	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
o-Toluidine	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
Parathion	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
Pentachlorobenzene	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
Phorate	< 5.0	1		µg/L	E625	09/12/2011 1:20 PM
3/4-Methylphenol	< 20	1		µg/L	E625	09/12/2011 1:20 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-011**

ClientSample ID. : 66157

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Dissolved Solids	2,960		1	mg/L	SM2540C	09/09/2011 11:15 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66158

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	0.31	1		mg/L	SW6010B	09/14/2011 12:08 PM
Copper	0.03	1		mg/L	SW6010B	09/14/2011 12:08 PM
Iron	0.49	1		mg/L	SW6010B	09/14/2011 12:08 PM
Magnesium	86.2	1		mg/L	SW6010B	09/14/2011 12:08 PM
Manganese	0.17	1		mg/L	SW6010B	09/14/2011 12:08 PM
Nickel	0.29	1		mg/L	SW6010B	09/14/2011 12:08 PM
Potassium	32.4	1		mg/L	SW6010B	09/14/2011 12:08 PM
Sodium	742	1		mg/L	SW6010B	09/14/2011 12:08 PM
Vanadium	< 0.05	1		mg/L	SW6010B	09/14/2011 12:08 PM
Zinc	0.15	1		mg/L	SW6010B	09/14/2011 12:08 PM

Qualifiers:

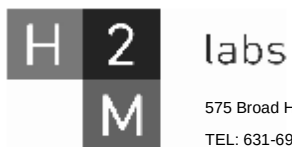
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109230-013**

ClientSample ID. : 66159

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 8:30:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/08/2011 2:14 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01C

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)	NMR per Table 5											
b. Chemical Oxygen Demand (COD)	NMR per Table 5											
c. Total Suspended Solids (TSS)	<10						mg/l					
d. Total Dissolved Solids (TDS)	38						mg/l					
e. Oil & Grease	<5						mg/l					
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.73							mg/l				
h. Ammonia (as N)	0.2							mg/l				
i. Flow	Value 0.160 MGD		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value NMR per Table 5		Value		Value					Value		
l. pH	Minimum 7.19	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01C

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.

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 1 of 2	
Pollutant and CAS Number	Effluent data							Units		Intake data (optional)		Believed present, no sampling results available	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value			d. Number of analyses
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration	(2) Mass		
CAS Number:													
Benzene CAS Number: 00071-43-2	<0.70							ug/l					
Ethylbenzene CAS Number: 00100-41-1	<1.0							ug/l					
Toluene CAS Number: 00108-88-3	<1.0							ug/l					
Copper CAS Number: 07440-50-8	<0.02							mg/l					
Nickel CAS Number: 07440-02-0	<0.04							mg/l					
Zinc CAS Number: 07440-66-6	0.11							mg/l					
Chloride CAS Number: 24959-87-9	4.2							mg/l					
Color CAS Number:	15							units					
Fecal Coliform CAS Number:	>1600							MPN					
Total Coliform CAS Number:	>1600							MPN					
Sulfate CAS Number: 14808-79-8	<5.0							mg/l					
Aluminum CAS Number: 07439-90-5	0.23							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01C

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.

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 2

[illegible]



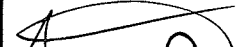
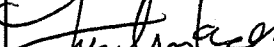
Priority

Phone Number

718-706-2863

Special Detection Limits

[illegible]

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		12:00	9-7-11	Lindsay Faceli		15:00	9-7-11
Lindsay Faceli		18:05	9-7-11	M. Watson		1805	9-7-11
Name	Signature	Time	Date	Name	Signature	Time	Date



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66160

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	0.23		1	mg/L	SW6010B	09/14/2011 12:13 PM
Copper	< 0.02		1	mg/L	SW6010B	09/14/2011 12:13 PM
Iron	0.43		1	mg/L	SW6010B	09/14/2011 12:13 PM
Magnesium	< 5.00		1	mg/L	SW6010B	09/14/2011 12:13 PM
Manganese	< 0.02		1	mg/L	SW6010B	09/14/2011 12:13 PM
Nickel	< 0.04		1	mg/L	SW6010B	09/14/2011 12:13 PM
Potassium	< 5.00		1	mg/L	SW6010B	09/14/2011 12:13 PM
Sodium	6.94		1	mg/L	SW6010B	09/14/2011 12:13 PM
Vanadium	< 0.05		1	mg/L	SW6010B	09/14/2011 12:13 PM
Zinc	0.11		1	mg/L	SW6010B	09/14/2011 12:13 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66161

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Ammonia (As N)	0.20		1	mg/L	SM4500-NH3 H	09/12/2011 12:47 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66162

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.34		1	mg/L	E353.2	09/08/2011 9:23 AM
Nitrogen, Total	0.73		1	mg/L	M4500-N C	09/13/2011
Nitrogen, Kjeldahl, Total	0.39		1	mg/L	E351.2	09/12/2011 3:07 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66163

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexane Extractable Material (O&G)	< 5.0		1	mg/L	E1664A	09/08/2011 4:10 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66164

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/13/2011 11:06 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66165

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	2.02		1	mg/L	E200.7	09/14/2011 11:15 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66166

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Benzene	< 0.70		1	µg/L	SW8021	09/09/2011 2:22 AM
Toluene	< 1.0		1	µg/L	SW8021	09/09/2011 2:22 AM
Ethylbenzene	< 1.0		1	µg/L	SW8021	09/09/2011 2:22 AM
m,p-Xylene	< 2.0		1	µg/L	SW8021	09/09/2011 2:22 AM
o-Xylene	< 1.0		1	µg/L	SW8021	09/09/2011 2:22 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66167

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	< 5.00		1	mg/L	E300.0	09/13/2011 8:33 PM
Chloride	4.2		1	mg/L	250 SM4500-CL- E	09/09/2011 11:57 AM
Color	15		1	units	SM2120B	09/08/2011 12:36 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66168

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Dissolved Solids	38		1	mg/L	SM2540C	09/09/2011 11:18 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109231-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66169

Collected : 9/7/2011 10:45:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Suspended Solids (Residue, Non-Filterable)	< 10		1	mg/L	SM2540D	09/08/2011 12:43 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01D

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	<10							mg/l				
c. Total Suspended Solids (TSS)	NMR-reported in monthly DMR											
d. Total Dissolved Solids (TDS)	67							mg/l				
e. Oil & Grease	NMR-reported in monthly DMR											
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.56							mg/l				
h. Ammonia (as N)	NMR-reported in monthly DMR											
i. Flow	Value	Reported in DMR				Value				Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value	22.7 C		Value		Value				Value		
l. pH	Minimum	Maximum	Minimum	Maximum						Minimum	Maximum	
	7.38											

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01D

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.

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 1 of 2	
Pollutant and CAS Number	Effluent data							Units		Intake data (optional)		Believed present, no sampling results available	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value			d. Number of analyses
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration	(2) Mass		
Table 6 See attached													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	2.3							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	0.16							mg/l					
Chloride													
CAS Number: 24959-87-9	9.3							mg/l					
Color													
CAS Number:	<5							units					
Fecal Coliform													
CAS Number:	130							MPN					
Total Coliform													
CAS Number:	130							MPN					
Sulfate													
CAS Number: 14808-79-8	6.88							mg/l					
Aluminum													
CAS Number: 07439-90-5	<0.2							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01D

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.

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 2

[illegible]

Project Name TransCanada
 Project Location Ravenswood

 Project Contact Greg Poyar
 Phone Number (718) 706-2863

 Priority _____
 Special Detection Limits _____
 1109856-001012

KEY	Matrix:	Container:	Preservative:		Analysis Requested	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS			Comments:			
	S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	→	S - Year SPDES Permit Renewal																	
	No. of Containers	↓	Sample Location	Container	Preservative														Sample Comment			
	Sample ID	Date	Time	Matrix																		
-	66325	9-19-11	12:30	A	1											X		Old Unit 40	G	F	O, M, P, Xylene 1109856-002	
-	66326															X			P	-	BOD -002	
-	66327															X			P	-	Asbestos -001	
-	66328															X			P	-	Dissolved Silica -010	
-	66328 66329															X			P	O	Metals 68108 -006	
-	66329																					
-	66330															X			P	-	Color, Chloride, TDS, SO ₄ -005	
-	66331															X			P	O	Metals 200.7 + H ₂ -009	
-	66332															X			G	H	Phenols, TON, Phosphat -007	
-	66333															X			P	N	Cyanide -011	
-	66334															X			G	-	BNA -004	
-	66335																		G	H	COD -012	

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
G. Karcich	G. Karcich	10 AM	9-20-11	M. Watson	M. Watson	2:00 PM	9/20/11
M. Watson	M. Watson	1730	9/20/11	M. Watson	M. Watson	1730	9-20-11
Name	Signature	Time	Date	Name	Signature	Time	Date

Project Name TransCanada
 Project Location Ravenswood

 Project Contact Greg Pryor
 Phone Number (718) 706-2863

Priority

Special Detection Limits

KEY	Matrix: S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	Container: P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	Preservative: H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested ⇒ No. of Containers ⇓	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments:			
	Sample ID	Date	Time	Matrix												Sample Location	Container	Preservative	Sample Comment
	66336	9-19-11	12:30	A	1										X	Ad Unit 40	G	F	VOA 1109856-008

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
G. Karick	<i>G. Karick</i>	10AM	9-20-11	Maxwell Tsch	<i>Maxwell Tsch</i>	2:00pm	9/20/11
Name	Signature	Time	Date	Name	Signature	Time	Date
Maxwell Tsch	<i>Maxwell Tsch</i>	1:30	9/20/11	M. Watson	<i>M. Watson</i>	1:30	9-20-11
Name	Signature	Time	Date	Name	Signature	Time	Date



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66327

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 0.20		1	MFL	E100.2	09/22/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66326

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/21/2011 8:40 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66334**

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 2:29 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 2:29 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/23/2011 2:29 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Aniline	< 10	1		µg/L	E625	09/23/2011 2:29 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Phenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Pyridine	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/23/2011 2:29 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Hexachloroethane	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Nitrobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Isophorone	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Naphthalene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Acenaphthylene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Acenaphthene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/23/2011 2:29 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/23/2011 2:29 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/23/2011 2:29 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66334**

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Diethylphthalate	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Fluorene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/23/2011 2:29 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/23/2011 2:29 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/23/2011 2:29 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/23/2011 2:29 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/23/2011 2:29 PM
Phenanthrene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Anthracene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Benzidine	< 80	1		µg/L	E625	09/23/2011 2:29 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Fluoranthene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Pyrene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/23/2011 2:29 PM
Chrysene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
2-Methylphenol	< 10	1		µg/L	E625	09/23/2011 2:29 PM
Dibenzofuran	< 10	1		µg/L	E625	09/23/2011 2:29 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/23/2011 2:29 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/23/2011 2:29 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/23/2011 2:29 PM
Aramite	< 5.0	1		µg/L	E625	09/23/2011 2:29 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/23/2011 2:29 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66334

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/23/2011 2:29 PM
Parathion	< 5.0		1	µg/L	E625	09/23/2011 2:29 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/23/2011 2:29 PM
Phorate	< 5.0		1	µg/L	E625	09/23/2011 2:29 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/23/2011 2:29 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66330

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	6.88		1	mg/L	E300.0	09/22/2011 3:26 AM
Chloride	9.3		1	mg/L	SM4500-CL- E	09/21/2011 1:56 PM
Color	< 5		1	units	SM2120B	09/21/2011 7:09 AM
Total Dissolved Solids	67		1	mg/L	SM2540C	09/21/2011 3:21 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66329

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20	1		mg/L	SW6010B	09/22/2011 12:41 AM
Copper	< 0.02	1		mg/L	SW6010B	09/22/2011 12:41 AM
Iron	0.20	1		mg/L	SW6010B	09/22/2011 12:41 AM
Magnesium	< 5.00	1		mg/L	SW6010B	09/22/2011 12:41 AM
Manganese	0.02	1		mg/L	SW6010B	09/22/2011 12:41 AM
Nickel	< 0.04	1		mg/L	SW6010B	09/22/2011 12:41 AM
Potassium	< 5.00	1		mg/L	SW6010B	09/22/2011 12:41 AM
Sodium	10.1	1		mg/L	SW6010B	09/22/2011 12:41 AM
Vanadium	< 0.05	1		mg/L	SW6010B	09/22/2011 12:41 AM
Zinc	0.16	1		mg/L	SW6010B	09/22/2011 12:41 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66332

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.29		1	mg/L	E353.2	09/21/2011 10:10 AM
Nitrogen, Total	0.56		1	mg/L	M4500-N C	09/26/2011
Phenolics, Total Recoverable	8.5		1	µg/L	E420.1	09/22/2011 11:11 AM
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/26/2011 2:07 PM
Nitrogen, Kjeldahl, Total	0.27		1	mg/L	E351.2	09/26/2011 12:59 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-008****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66336**

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Chloromethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Bromomethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Chloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Acetone	5.8	1		µg/L	E624	09/22/2011 1:26 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
2-Butanone	< 5.0	1		µg/L	E624	09/22/2011 1:26 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Chloroform	24	1		µg/L	E624	09/22/2011 1:26 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Benzene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Bromodichloromethane	1.6	1		µg/L	E624	09/22/2011 1:26 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Ethylbenzene	2.3	1		µg/L	E624	09/22/2011 1:26 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Bromoform	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/22/2011 1:26 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/22/2011 1:26 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-008****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66336**

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dibromomethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Toluene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Tetrachloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Chlorobenzene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
m,p-Xylene	1.2	1		µg/L	E624	09/22/2011 1:26 PM
n-Amyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
o-Xylene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Styrene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Naphthalene	8.6	1		µg/L	E624	09/22/2011 1:26 PM
Xylene (total)	2.3	1		µg/L	E624	09/22/2011 1:26 PM
1,1,2,2-Tetrachloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,3-Dichlorobenzene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,4-Dichlorobenzene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,2-Dichlorobenzene	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
Acrolein	< 5.0	1		µg/L	E624	09/22/2011 1:26 PM
Acrylonitrile	< 5.0	1		µg/L	E624	09/22/2011 1:26 PM
1,2-Dibromoethane	< 10	1		µg/L	E624	09/22/2011 1:26 PM
Pentachloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM
1,2,3-Trichloropropane	< 1.0	1		µg/L	E624	09/22/2011 1:26 PM

NOTES:

%RSD >35% in ICAL for methylene chloride

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66331

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0	1		ug/L	E200.7	09/21/2011 11:14 PM
Arsenic	< 10.0	1		ug/L	E200.7	09/21/2011 11:14 PM
Beryllium	< 5.00	1		ug/L	E200.7	09/21/2011 11:14 PM
Cadmium	< 5.00	1		ug/L	E200.7	09/21/2011 11:14 PM
Chromium	< 0.01	1		mg/L	E200.7	09/21/2011 11:14 PM
Copper	< 0.02	1		mg/L	E200.7	09/21/2011 11:14 PM
Lead	7.18	1		ug/L	E200.7	09/21/2011 11:14 PM
Nickel	< 0.04	1		mg/L	E200.7	09/21/2011 11:14 PM
Selenium	< 5.00	1		ug/L	E200.7	09/21/2011 11:14 PM
Silver	< 0.01	1		mg/L	E200.7	09/21/2011 11:14 PM
Thallium	< 10.0	1		ug/L	E200.7	09/21/2011 11:14 PM
Zinc	0.31	1		mg/L	E200.7	09/21/2011 11:14 PM
Mercury	< 0.2	1		ug/L	SW7470	09/26/2011 1:39 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66328

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	2.27		1	mg/L	E200.7	09/22/2011 1:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66333

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/21/2011 2:17 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109856-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66335

Collected : 9/19/2011 12:30:00 PM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	< 10		1	mg/L	E410.4	09/26/2011 9:30 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01E

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	<10							mg/l				
c. Total Suspended Solids (TSS)	NMR-reported in monthly DMR											
d. Total Dissolved Solids (TDS)	60							mg/l				
e. Oil & Grease	<5							mg/l				
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.3							mg/l				
h. Ammonia (as N)	<0.10							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 20.2 C		Value		Value					Value		
l. pH	Minimum 7.20	Maximum	Minimum	Maximum						Minimum	Maximum	

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

a. Primary Industries:

i. Does the discharge from this outfall contain process wastewater?

☒ Yes
☐ No

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
☐ No

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
☐ No

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01E

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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	0.03							mg/l					
Chloride													
CAS Number: 24959-87-9	9.2							mg/l					
Color													
CAS Number:	5							units					
Fecal Coliform													
CAS Number:	<2							MPN					
Total Coliform													
CAS Number:	<2							MPN					
Sulfate													
CAS Number: 14808-79-8	5.03							mg/l					
Aluminum													
CAS Number: 07439-90-5	0.31							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01E

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.

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 2

[illegible]

Project Name TransCanada
 Project Location Ravenswood

 Project Contact Greg Pryor
 Phone Number (718) 706-2863

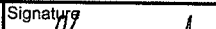
Priority
Special Detection Limits 1109855-001-014

KEY	Matrix: S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	Container: P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	Preservative: H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested →	No. of Containers ↓	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS		Comments: 5 Year SPDES Permit Renewal					
	Sample ID	Date	Time	Matrix														Sample Location	Container	Preservative	Sample Comment		
	66294	9-19-11	8:50	A	1											X		01E Carbon filter backwash	G	F	VOA 1109855-001	013	
	66295															X			G	-	BNA	-002	004
	66296															X			P	-	Asbestos	-003	001
	66297															X			P	-	BOD	-004	002
	66298						X												G	F		-005	003
	66299															X			P	O	Metals (6010 B)	-006	006
	66300															X			P	O	Metals 200.7 + H6	-007	009
	66301															X			P	-	Color, Chlorides, TDS, SD	-008	005
	66302															X			G	H	Phenols, NH ₃ , TON	-009	007
	66303															X			G	H	Phosphate	-010	014
	66304															X			P	N	Cyanide	-011	011
	66305															X			G	H	COD	-012	012

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name <u>G. Karcich</u>	Signature <u>G. Karcich</u>	Time <u>10AM</u>	Date <u>9-20-11</u>	Name <u>M. Watson</u>	Signature <u>M. Watson</u>	Time <u>24PM</u>	Date <u>9/20/11</u>
Name <u>M. Watson</u>	Signature <u>M. Watson</u>	Time <u>1P</u>	Date <u>9/20/11</u>	Name <u>M. Watson</u>	Signature <u>M. Watson</u>	Time <u>1130</u>	Date <u>9-20-11</u>
Name	Signature	Time	Date	Name	Signature	Time	Date

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
G. Karcich		10 AM	9-20-11	Maxwell Rich		2:00 PM	9/20/11
M. Arentz		1:30	9/20/11	M. Watson		1:30	9-20-11
Name	Signature	Time	Date	Name	Signature	Time	Date



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66296

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 0.41		1	MFL	E100.2	09/22/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66297

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/21/2011 8:35 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66298

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexane Extractable Material (O&G)	< 5.0		1	mg/L	E1664A	09/22/2011 11:00 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66295**

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 1:05 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 1:05 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/23/2011 1:05 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Aniline	< 10	1		µg/L	E625	09/23/2011 1:05 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Phenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Pyridine	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/23/2011 1:05 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Hexachloroethane	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Nitrobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Isophorone	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Naphthalene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Acenaphthylene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Acenaphthene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/23/2011 1:05 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/23/2011 1:05 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/23/2011 1:05 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66295**

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Diethylphthalate	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Fluorene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/23/2011 1:05 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/23/2011 1:05 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/23/2011 1:05 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/23/2011 1:05 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/23/2011 1:05 PM
Phenanthrene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Anthracene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Benzidine	< 80	1		µg/L	E625	09/23/2011 1:05 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Fluoranthene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Pyrene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/23/2011 1:05 PM
Chrysene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
2-Methylphenol	< 10	1		µg/L	E625	09/23/2011 1:05 PM
Dibenzofuran	< 10	1		µg/L	E625	09/23/2011 1:05 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/23/2011 1:05 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/23/2011 1:05 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/23/2011 1:05 PM
Aramite	< 5.0	1		µg/L	E625	09/23/2011 1:05 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/23/2011 1:05 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66295

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/23/2011 1:05 PM
Parathion	< 5.0		1	µg/L	E625	09/23/2011 1:05 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/23/2011 1:05 PM
Phorate	< 5.0		1	µg/L	E625	09/23/2011 1:05 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/23/2011 1:05 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66301

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	5.03		1	mg/L	E300.0	09/22/2011 3:13 AM
Chloride	9.2		1	mg/L	SM4500-CL- E	09/21/2011 1:56 PM
Color	5		1	units	SM2120B	09/21/2011 7:08 AM
Total Dissolved Solids	60		1	mg/L	SM2540C	09/21/2011 3:18 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

Date Reported : 9/27/2011

Page 7 of 16



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66299

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	0.31		1	mg/L	SW6010B	09/22/2011 12:22 AM
Copper	< 0.02		1	mg/L	SW6010B	09/22/2011 12:22 AM
Iron	0.24		1	mg/L	SW6010B	09/22/2011 12:22 AM
Magnesium	< 5.00		1	mg/L	SW6010B	09/22/2011 12:22 AM
Manganese	0.10		1	mg/L	SW6010B	09/22/2011 12:22 AM
Nickel	< 0.04		1	mg/L	SW6010B	09/22/2011 12:22 AM
Potassium	< 5.00		1	mg/L	SW6010B	09/22/2011 12:22 AM
Sodium	9.26		1	mg/L	SW6010B	09/22/2011 12:22 AM
Vanadium	< 0.05		1	mg/L	SW6010B	09/22/2011 12:22 AM
Zinc	0.03		1	mg/L	SW6010B	09/22/2011 12:22 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66302

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.13		1	mg/L	E353.2	09/21/2011 10:09 AM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	SM4500-NH3 H	09/22/2011 3:24 PM
Nitrogen, Total	0.30		1	mg/L	M4500-N C	09/26/2011
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	09/22/2011 11:10 AM
Nitrogen, Kjeldahl, Total	0.17		1	mg/L	E351.2	09/26/2011 12:58 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66300

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0		1	ug/L	E200.7	09/21/2011 11:09 PM
Arsenic	< 10.0		1	ug/L	E200.7	09/21/2011 11:09 PM
Beryllium	< 5.00		1	ug/L	E200.7	09/21/2011 11:09 PM
Cadmium	< 5.00		1	ug/L	E200.7	09/21/2011 11:09 PM
Chromium	< 0.01		1	mg/L	E200.7	09/21/2011 11:09 PM
Copper	< 0.02		1	mg/L	E200.7	09/21/2011 11:09 PM
Lead	< 5.00		1	ug/L	E200.7	09/21/2011 11:09 PM
Nickel	< 0.04		1	mg/L	E200.7	09/21/2011 11:09 PM
Selenium	< 5.00		1	ug/L	E200.7	09/21/2011 11:09 PM
Silver	< 0.01		1	mg/L	E200.7	09/21/2011 11:09 PM
Thallium	< 10.0		1	ug/L	E200.7	09/21/2011 11:09 PM
Zinc	0.03		1	mg/L	E200.7	09/21/2011 11:09 PM
Mercury	< 0.2		1	ug/L	SW7470	09/26/2011 1:34 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66307

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	2.24		1	mg/L	E200.7	09/22/2011 1:11 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66304

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/21/2011 2:14 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66305

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	< 10		1	mg/L	E410.4	09/26/2011 9:30 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-013****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66294**

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Chloromethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Bromomethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Chloroethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Acetone	< 5.0	1		µg/L	E624	09/22/2011 12:53 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
2-Butanone	< 5.0	1		µg/L	E624	09/22/2011 12:53 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Chloroform	81	1		µg/L	E624	09/22/2011 12:53 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Benzene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Bromodichloromethane	4.1	1		µg/L	E624	09/22/2011 12:53 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
Bromoform	< 1.0	1		µg/L	E624	09/22/2011 12:53 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/22/2011 12:53 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/22/2011 12:53 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-013**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66294

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Toluene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Tetrachloroethene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Chlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
m,p-Xylene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
n-Amyl acetate	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
o-Xylene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Styrene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Naphthalene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Xylene (total)	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
1,3-Dichlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
1,4-Dichlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
1,2-Dichlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
Acrolein	< 5.0		1	µg/L	E624	09/22/2011 12:53 PM
Acrylonitrile	< 5.0		1	µg/L	E624	09/22/2011 12:53 PM
1,2-Dibromoethane	< 10		1	µg/L	E624	09/22/2011 12:53 PM
Pentachloroethane	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM
1,2,3-Trichloropropane	< 1.0		1	µg/L	E624	09/22/2011 12:53 PM

NOTES:

%RSD >35% in ICAL for methylene chloride

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109855-014**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66303

Collected : 9/19/2011 8:50:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/26/2011 2:06 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01F

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	<10							mg/l				
c. Total Suspended Solids (TSS)	NMR-reported in monthly DMR											
d. Total Dissolved Solids (TDS)	54							mg/l				
e. Oil & Grease	<5							mg/l				
f. Chlorine, Total Residual (TRC)	0.6							mg/l				
g. Total Organic Nitrogen (TON)	0.13							mg/l				
h. Ammonia (as N)	<0.10							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 25.0 C		Value		Value					Value		
l. pH	Minimum 7.40	Maximum	Minimum	Maximum						Minimum	Maximum	

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

a. Primary Industries:

i. Does the discharge from this outfall contain process wastewater?

☒ Yes
☐ No

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
☐ No

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
☒ No

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01F

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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	<0.02							mg/l					
Chloride													
CAS Number: 24959-87-9	9.9							mg/l					
Color													
CAS Number:	10							units					
Fecal Coliform													
CAS Number:	<2							MPN					
Total Coliform													
CAS Number:	<2							MPN					
Sulfate													
CAS Number: 14808-79-8	5.17							mg/l					
Aluminum													
CAS Number: 07439-90-5	<0.20							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01F

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.

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 2

[illegible]

Project Name TransCanada
 Project Location Ravenswood

 Project Contact Greg Pryor
 Phone Number (718) 706-2863

Priority

Special Detection Limits

KEY	Matrix:	Container:	Preservative:	Analysis Requested	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments:				
	S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested ↗												No. of Containers				
	Sample ID	Date	Time	Matrix												↘				
																	Sample Location	Container	Preservative	Sample Comment
	66271	9-15-11	9:45	A	1							1109653	-001				Oil Pre-filt B/W	P	-	Asbestos
	66272												-002					P	-	BOD
	66273						X						-003					G	F	
	66274												-004					G	-	BNA
	~~66274~~																			Disregard
	66275												-005					P	-	Color, Chloride, TDS, SO ₄
	66276												-006					P	O	Metals 6010B
	66277												-007					G	H	Phenyl
	66278												-008					G	H	NH ₃ TON
	66279												-009					P	O	Metals 200.7 + H ₃
	66280												-010					P	-	Silica
	66281												-011					P	N	Cyanide

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. G. H. H.		16:30	9/15/11	Lindsay Paele		14:30	9-15-11
Lindsay Paele		15:45	9-15-11	M. Watson		15:45	9-15-11
Name	Signature	Time	Date	Name	Signature	Time	Date



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66271

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 0.41		1	MFL	E100.2	09/20/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66272

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/16/2011 2:55 PM

NOTES:

Low recovery was observed in LCS for BOD 79.1%. Limits 84.5-115.5%)

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66273

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexane Extractable Material (O&G)	< 5.0		1	mg/L	E1664A	09/16/2011 3:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66274**

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/22/2011 6:05 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/22/2011 6:05 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/22/2011 6:05 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Aniline	< 10	1		µg/L	E625	09/22/2011 6:05 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Phenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Pyridine	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/22/2011 6:05 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Hexachloroethane	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Nitrobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Isophorone	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Naphthalene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Acenaphthylene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Acenaphthene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/22/2011 6:05 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/22/2011 6:05 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/22/2011 6:05 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66274**

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Diethylphthalate	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Fluorene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/22/2011 6:05 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/22/2011 6:05 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/22/2011 6:05 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/22/2011 6:05 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/22/2011 6:05 PM
Phenanthrene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Anthracene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Benzidine	< 80	1		µg/L	E625	09/22/2011 6:05 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Fluoranthene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Pyrene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/22/2011 6:05 PM
Chrysene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
2-Methylphenol	< 10	1		µg/L	E625	09/22/2011 6:05 PM
Dibenzofuran	< 10	1		µg/L	E625	09/22/2011 6:05 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/22/2011 6:05 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/22/2011 6:05 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/22/2011 6:05 PM
Aramite	< 5.0	1		µg/L	E625	09/22/2011 6:05 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/22/2011 6:05 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66274

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/22/2011 6:05 PM
Parathion	< 5.0		1	µg/L	E625	09/22/2011 6:05 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/22/2011 6:05 PM
Phorate	< 5.0		1	µg/L	E625	09/22/2011 6:05 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/22/2011 6:05 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66275

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	5.17		1	mg/L	E300.0	09/20/2011 12:48 PM
Chloride	9.9		1	mg/L	SM4500-CL- E	09/21/2011 1:47 PM
Color	10		1	units	SM2120B	09/15/2011 8:21 AM
Total Dissolved Solids	54		1	mg/L	SM2540C	09/20/2011 11:27 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66276

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20	1		mg/L	SW6010B	09/22/2011 12:07 AM
Copper	< 0.02	1		mg/L	SW6010B	09/22/2011 12:07 AM
Iron	0.07	1		mg/L	SW6010B	09/22/2011 12:07 AM
Magnesium	< 5.00	1		mg/L	SW6010B	09/22/2011 12:07 AM
Manganese	0.02	1		mg/L	SW6010B	09/22/2011 12:07 AM
Nickel	< 0.04	1		mg/L	SW6010B	09/22/2011 12:07 AM
Potassium	< 5.00	1		mg/L	SW6010B	09/22/2011 12:07 AM
Sodium	10.5	1		mg/L	SW6010B	09/22/2011 12:07 AM
Vanadium	< 0.05	1		mg/L	SW6010B	09/22/2011 12:07 AM
Zinc	0.02	1		mg/L	SW6010B	09/22/2011 12:07 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66277

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	09/16/2011 10:12 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66278

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.13		1	mg/L	E353.2	09/16/2011 9:33 AM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	SM4500-NH3 H	09/19/2011 12:16 PM
Nitrogen, Total	0.13		1	mg/L	M4500-N C	09/16/2011
Phosphorus, Total (As P)	0.06		1	mg/L	SM4500-P E	09/19/2011 10:07 AM
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	09/16/2011 2:43 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66279

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0	1		ug/L	E200.7	09/16/2011 1:36 PM
Arsenic	< 10.0	1		ug/L	E200.7	09/16/2011 1:36 PM
Beryllium	< 5.00	1		ug/L	E200.7	09/16/2011 1:36 PM
Cadmium	< 5.00	1		ug/L	E200.7	09/16/2011 1:36 PM
Chromium	< 0.01	1		mg/L	E200.7	09/16/2011 1:36 PM
Copper	< 0.02	1		mg/L	E200.7	09/16/2011 1:36 PM
Lead	< 5.00	1		ug/L	E200.7	09/16/2011 1:36 PM
Nickel	< 0.04	1		mg/L	E200.7	09/16/2011 1:36 PM
Selenium	< 5.00	1		ug/L	E200.7	09/16/2011 1:36 PM
Silver	< 0.01	1		mg/L	E200.7	09/16/2011 1:36 PM
Thallium	< 10.0	1		ug/L	E200.7	09/16/2011 1:36 PM
Zinc	< 0.02	1		mg/L	E200.7	09/16/2011 1:36 PM
Mercury	< 0.2	1		ug/L	SW7470	09/20/2011 2:51 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66280

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	2.72		1	mg/L	E200.7	09/20/2011 11:49 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66281

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/16/2011 1:17 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66282

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	< 10		1	mg/L	E410.4	09/19/2011 10:05 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-013****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66283**

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Chloromethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Bromomethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Chloroethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Acetone	< 5.0	1		µg/L	E624	09/19/2011 8:17 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
2-Butanone	< 5.0	1		µg/L	E624	09/19/2011 8:17 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Chloroform	70	1		µg/L	E624	09/19/2011 8:17 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Benzene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Bromodichloromethane	4.4	1		µg/L	E624	09/19/2011 8:17 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
Bromoform	< 1.0	1		µg/L	E624	09/19/2011 8:17 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/19/2011 8:17 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/19/2011 8:17 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109653-013**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66283

Collected : 9/15/2011 9:45:00 AM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Toluene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Tetrachloroethene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Chlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
m,p-Xylene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
n-Amyl acetate	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
o-Xylene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Styrene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Naphthalene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Xylene (total)	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
1,3-Dichlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
1,4-Dichlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
1,2-Dichlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
Acrolein	< 5.0		1	µg/L	E624	09/19/2011 8:17 PM
Acrylonitrile	< 5.0		1	µg/L	E624	09/19/2011 8:17 PM
1,2-Dibromoethane	< 10		1	µg/L	E624	09/19/2011 8:17 PM
Pentachloroethane	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM
1,2,3-Trichloropropane	< 1.0		1	µg/L	E624	09/19/2011 8:17 PM

NOTES:

%RSD >35% in ICAL for methylene chloride

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01G

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	<10							mg/l				
c. Total Suspended Solids (TSS)	NMR-reported in monthly DMR											
d. Total Dissolved Solids (TDS)	23							mg/l				
e. Oil & Grease	NMR-reported in monthly DMR											
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.13							mg/l				
h. Ammonia (as N)	NMR-reported in monthly DMR											
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 27.0 C		Value		Value					Value		
l. pH	Minimum 9.48	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01G

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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene CAS Number: 00100-41-1	<1.0							ug/l					
Toluene CAS Number: 00108-88-3	<1.0							ug/l					
Copper CAS Number: 07440-50-8	<0.02							mg/l					
Nickel CAS Number: 07440-02-0	<0.04							mg/l					
Zinc CAS Number: 07440-66-6	<0.02							mg/l					
Chloride CAS Number: 24959-87-9	<2.0							mg/l					
Color CAS Number:	<5							units					
Fecal Coliform CAS Number:	<2							MPN					
Total Coliform CAS Number:	<2							MPN					
Sulfate CAS Number: 14808-79-8	<5.0							mg/l					
Aluminum CAS Number: 07439-90-5	<0.20							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01G

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.

[illegible]

Project Name Trans Canada
 Project Location Ravenswood

 Project Contact Greg Pryor
 Phone Number (718) 706-2863

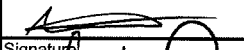
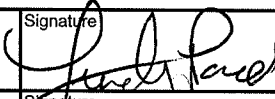
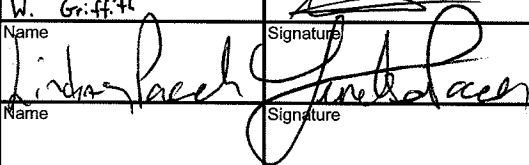
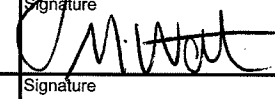
Priority

Special Detection Limits

KEY	Matrix: S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	Container: P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	Preservative: H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested →	No. of Containers ↓	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments: SPDES Permit Renewal OIG unit #10 BLR Blowdown			
	Sample ID	Date	Time	Matrix													Sample Location	Container	Preservative	Sample Comment
	66170	9-7-11	12:15	A	1											X	OIG Unit 10 Blowdown	P	-	BOD 1109232-001
	66171															X		G	-	BNA -002
	66172															X		P	-	Asbestos -003
	66173															X		P	O	Metals 200.7 + Mercury -004
	66174															X		P	O	Metals 6010B -005
	66175															X		G		Phosphate -006
	66176															X		G	H	Total Nitrogen -007
	66177															X		G	H	Phenols -008
	66178															X		P	-	TDS -009
	66179															X		P	-	Color, Chloride, Sulfate -010
	66180															X		P	NH ₄ OH	Cyanide -011
	66181	9-7-11	12:15	A	1											X	OIG Unit 10 Blowdown	P	-	Silica -012

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		12:00	9-7-11	Linda Paeck		15:00	9-7-11
Linda Paeck		18:05	9-7-11	M. Watson		18:05	9-7-11
Name	Signature	Time	Date	Name	Signature	Time	Date

Project Name TransCanada
 Project Location Ravenswood

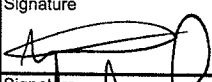
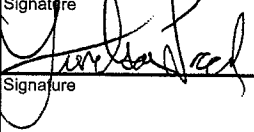
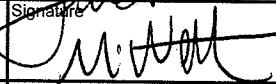
 Project Contact Greg Pryor
 Phone Number (718) 706-2863

Priority
Special Detection Limits

KEY	Matrix:	Container:	Preservative:	Analysis Requested	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENT	Comments:
	S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	No. of Containers												
	Sample ID	Date	Time	Matrix												
	~~66182~~	~~9-7-11~~	~~12:15~~	~~A~~	~~1~~											~~Unit 10 blow down~~
	66183	9-7-11														G H C.O.D. ↓ -014
	66184	9-7-11														G C VOA ↓ -015

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		12:00	9-7-11	Linda Pacer		18:00	9-7-11
Linda Pacer		18:05	9-7-11	M. Watson		1805	9-7-11
Name	Signature	Time	Date	Name	Signature	Time	Date



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-001**

ClientSample ID. : 66170

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/08/2011 9:05 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-002**

Sample Information...

Type : Aqueous

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

ClientSample ID. : 66171

Origin:

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

CC

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/12/2011 1:48 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/12/2011 1:48 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/12/2011 1:48 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Aniline	18	1		µg/L	E625	09/12/2011 1:48 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Phenol	27	1		µg/L	E625	09/12/2011 1:48 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Pyridine	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/12/2011 1:48 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Hexachloroethane	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Nitrobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Isophorone	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Naphthalene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Acenaphthylene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Acenaphthene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/12/2011 1:48 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/12/2011 1:48 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/12/2011 1:48 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-002**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66171

Origin:

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Diethylphthalate	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Fluorene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/12/2011 1:48 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/12/2011 1:48 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/12/2011 1:48 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/12/2011 1:48 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/12/2011 1:48 PM
Phenanthrene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Anthracene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Benzidine	< 80	1		µg/L	E625	09/12/2011 1:48 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Fluoranthene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Pyrene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/12/2011 1:48 PM
Chrysene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,2,3,4-Tetrachlorobenzene	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
2-Methylphenol	< 10	1		µg/L	E625	09/12/2011 1:48 PM
Dibenzofuran	< 10	1		µg/L	E625	09/12/2011 1:48 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
Aramite	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-002**

ClientSample ID. : **66171**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexachloropropene	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
o-Toluidine	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
Parathion	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
Pentachlorobenzene	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
Phorate	< 5.0	1		µg/L	E625	09/12/2011 1:48 PM
3/4-Methylphenol	< 20	1		µg/L	E625	09/12/2011 1:48 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-003**

ClientSample ID. : 66172

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 0.17		1	MFL	E100.2	09/12/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-004**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66173

Origin:

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0	1		ug/L	E200.7	09/08/2011 9:52 PM
Arsenic	< 10.0	1		ug/L	E200.7	09/08/2011 9:52 PM
Beryllium	< 5.00	1		ug/L	E200.7	09/08/2011 9:52 PM
Cadmium	< 5.00	1		ug/L	E200.7	09/08/2011 9:52 PM
Chromium	< 0.01	1		mg/L	E200.7	09/08/2011 9:52 PM
Copper	< 0.02	1		mg/L	E200.7	09/08/2011 9:52 PM
Lead	< 5.00	1		ug/L	E200.7	09/08/2011 9:52 PM
Nickel	< 0.04	1		mg/L	E200.7	09/08/2011 9:52 PM
Selenium	< 5.00	1		ug/L	E200.7	09/08/2011 9:52 PM
Silver	< 0.01	1		mg/L	E200.7	09/08/2011 9:52 PM
Thallium	< 10.0	1		ug/L	E200.7	09/08/2011 9:52 PM
Zinc	< 0.02	1		mg/L	E200.7	09/08/2011 9:52 PM
Mercury	< 0.2	1		ug/L	SW7470	09/13/2011 12:52 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66174

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20	1		mg/L	SW6010B	09/14/2011 12:18 PM
Copper	< 0.02	1		mg/L	SW6010B	09/14/2011 12:18 PM
Iron	< 0.02	1		mg/L	SW6010B	09/14/2011 12:18 PM
Magnesium	< 5.00	1		mg/L	SW6010B	09/14/2011 12:18 PM
Manganese	< 0.02	1		mg/L	SW6010B	09/14/2011 12:18 PM
Nickel	< 0.04	1		mg/L	SW6010B	09/14/2011 12:18 PM
Potassium	< 5.00	1		mg/L	SW6010B	09/14/2011 12:18 PM
Sodium	< 5.00	1		mg/L	SW6010B	09/14/2011 12:18 PM
Vanadium	< 0.05	1		mg/L	SW6010B	09/14/2011 12:18 PM
Zinc	< 0.02	1		mg/L	SW6010B	09/14/2011 12:18 PM

Qualifiers:

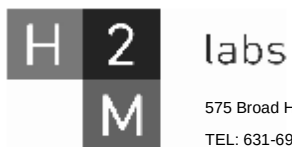
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-006**

ClientSample ID. : 66175

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/13/2011 11:07 AM

Qualifiers:

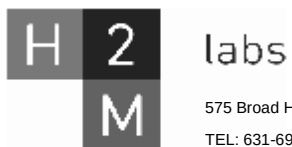
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-007**

ClientSample ID. : 66176

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	< 0.10		1	mg/L	E353.2	09/08/2011 9:24 AM
Nitrogen, Total	0.13		1	mg/L	M4500-N C	09/13/2011
Nitrogen, Kjeldahl, Total	0.13		1	mg/L	E351.2	09/12/2011 3:08 PM

Qualifiers:

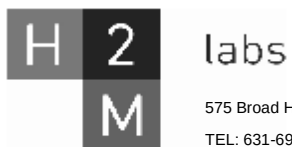
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-008**

ClientSample ID. : 66177

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phenolics, Total Recoverable	62.4	D	2	µg/L	E420.1	09/12/2011 8:34 AM

Qualifiers:

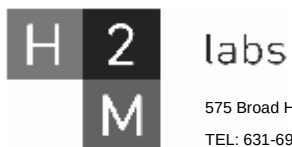
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-009**

ClientSample ID. : 66178

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Dissolved Solids	23		1	mg/L	SM2540C	09/09/2011 11:21 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-010**

ClientSample ID. : 66179

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	< 5.00		1	mg/L	E300.0	09/13/2011 8:47 PM
Chloride	< 2.0		1	mg/L	SM4500-CL- E	09/09/2011 11:58 AM
Color	< 5		1	units	SM2120B	09/08/2011 12:37 PM

Qualifiers:

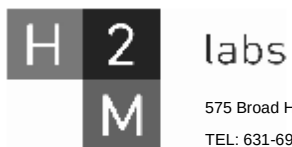
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-011**

ClientSample ID. : 66180

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/08/2011 2:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-012**

ClientSample ID. : **66181**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	0.45		1	mg/L	E200.7	09/14/2011 11:20 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-014**

ClientSample ID. : 66183

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	< 10		1	mg/L	E410.4	09/09/2011 10:30 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-015**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66184

Origin:

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Chloromethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Bromomethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Chloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Acetone	< 5.0	1		µg/L	E624	09/14/2011 2:10 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
2-Butanone	< 5.0	1		µg/L	E624	09/14/2011 2:10 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Chloroform	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Benzene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Bromodichloromethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Bromoform	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/14/2011 2:10 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/14/2011 2:10 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109232-015**

Sample Information...

Type : Aqueous

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66184

Origin:

Collected : 9/7/2011 12:15:00 PM

Received : 9/7/2011 6:05:00 PM

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Toluene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Tetrachloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Chlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
m,p-Xylene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
n-Amyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
o-Xylene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Styrene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Naphthalene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Xylene (total)	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,1,2,2-Tetrachloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,3-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,4-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,2-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
Acrolein	< 5.0	1		µg/L	E624	09/14/2011 2:10 PM
Acrylonitrile	< 5.0	1		µg/L	E624	09/14/2011 2:10 PM
1,2-Dibromoethane	< 10	1		µg/L	E624	09/14/2011 2:10 PM
Pentachloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM
1,2,3-Trichloropropane	< 1.0	1		µg/L	E624	09/14/2011 2:10 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01H

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	<10							mg/l				
c. Total Suspended Solids (TSS)	NMR-reported in monthly DMR											
d. Total Dissolved Solids (TDS)	<5							mg/l				
e. Oil & Grease	<5							mg/l				
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	<0.10							mg/l				
h. Ammonia (as N)	<0.10							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 21.0 C		Value		Value					Value		
l. pH	Minimum 7.68	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01H

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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	0.02							mg/l					
Chloride													
CAS Number: 24959-87-9	<2.0							mg/l					
Color													
CAS Number:	<5							units					
Fecal Coliform													
CAS Number:	<2							MPN					
Total Coliform													
CAS Number:	<2							MPN					
Sulfate													
CAS Number: 14808-79-8	<5.0							mg/l					
Aluminum													
CAS Number: 07439-90-5	<0.20							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 01H

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.

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 2

[illegible]

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
G Karach		10AM	9-20-11	M Maxwell Solch		240 ^{hr}	9/20
M Maxwell Solch		1730	9/20/11	M. Watson		1730	9-20-11
Name	Signature	Time	Date	Name	Signature	Time	Date



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575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66314

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 0.17		1	MFL	E100.2	09/22/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66317

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/21/2011 8:45 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66318

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexane Extractable Material (O&G)	< 5.0		1	mg/L	E1664A	09/22/2011 11:10 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66311**

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 2:57 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 2:57 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/23/2011 2:57 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Aniline	< 10	1		µg/L	E625	09/23/2011 2:57 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Phenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Pyridine	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/23/2011 2:57 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Hexachloroethane	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Nitrobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Isophorone	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Naphthalene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Acenaphthylene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Acenaphthene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/23/2011 2:57 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/23/2011 2:57 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/23/2011 2:57 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66311**

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Diethylphthalate	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Fluorene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/23/2011 2:57 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/23/2011 2:57 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/23/2011 2:57 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/23/2011 2:57 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/23/2011 2:57 PM
Phenanthrene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Anthracene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Benzidine	< 80	1		µg/L	E625	09/23/2011 2:57 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Fluoranthene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Pyrene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/23/2011 2:57 PM
Chrysene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
2-Methylphenol	< 10	1		µg/L	E625	09/23/2011 2:57 PM
Dibenzofuran	< 10	1		µg/L	E625	09/23/2011 2:57 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/23/2011 2:57 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/23/2011 2:57 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/23/2011 2:57 PM
Aramite	< 5.0	1		µg/L	E625	09/23/2011 2:57 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/23/2011 2:57 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66311

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/23/2011 2:57 PM
Parathion	< 5.0		1	µg/L	E625	09/23/2011 2:57 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/23/2011 2:57 PM
Phorate	< 5.0		1	µg/L	E625	09/23/2011 2:57 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/23/2011 2:57 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66319

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	< 5.00		1	mg/L	E300.0	09/22/2011 3:40 AM
Chloride	< 2.0		1	mg/L	SM4500-CL- E	09/21/2011 1:57 PM
Color	< 5		1	units	SM2120B	09/21/2011 7:10 AM
Total Dissolved Solids	< 10		1	mg/L	SM2540C	09/21/2011 3:24 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66315

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	SW6010B	09/22/2011 12:46 AM
Copper	< 0.02		1	mg/L	SW6010B	09/22/2011 12:46 AM
Iron	0.04		1	mg/L	SW6010B	09/22/2011 12:46 AM
Magnesium	< 5.00		1	mg/L	SW6010B	09/22/2011 12:46 AM
Manganese	< 0.02		1	mg/L	SW6010B	09/22/2011 12:46 AM
Nickel	< 0.04		1	mg/L	SW6010B	09/22/2011 12:46 AM
Potassium	< 5.00		1	mg/L	SW6010B	09/22/2011 12:46 AM
Sodium	< 5.00		1	mg/L	SW6010B	09/22/2011 12:46 AM
Vanadium	< 0.05		1	mg/L	SW6010B	09/22/2011 12:46 AM
Zinc	0.02		1	mg/L	SW6010B	09/22/2011 12:46 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66313

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	< 0.10		1	mg/L	E353.2	09/21/2011 10:11 AM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	SM4500-NH3 H	09/22/2011 3:25 PM
Nitrogen, Total	< 0.10		1	mg/L	M4500-N C	09/26/2011
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	09/22/2011 11:12 AM
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	09/26/2011 12:59 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66320

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/26/2011 2:10 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66316

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0	1		ug/L	E200.7	09/21/2011 11:18 PM
Arsenic	< 10.0	1		ug/L	E200.7	09/21/2011 11:18 PM
Beryllium	< 5.00	1		ug/L	E200.7	09/21/2011 11:18 PM
Cadmium	< 5.00	1		ug/L	E200.7	09/21/2011 11:18 PM
Chromium	< 0.01	1		mg/L	E200.7	09/21/2011 11:18 PM
Copper	< 0.02	1		mg/L	E200.7	09/21/2011 11:18 PM
Lead	< 5.00	1		ug/L	E200.7	09/21/2011 11:18 PM
Nickel	< 0.04	1		mg/L	E200.7	09/21/2011 11:18 PM
Selenium	< 5.00	1		ug/L	E200.7	09/21/2011 11:18 PM
Silver	< 0.01	1		mg/L	E200.7	09/21/2011 11:18 PM
Thallium	< 10.0	1		ug/L	E200.7	09/21/2011 11:18 PM
Zinc	0.06	1		mg/L	E200.7	09/21/2011 11:18 PM
Mercury	< 0.2	1		ug/L	SW7470	09/26/2011 1:41 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66321

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	< 0.20		1	mg/L	E200.7	09/22/2011 1:20 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66312

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/21/2011 2:18 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66323

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	< 10		1	mg/L	E410.4	09/26/2011 9:30 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-013****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66310**

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Chloromethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Bromomethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Chloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Acetone	< 5.0	1		µg/L	E624	09/22/2011 1:58 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
2-Butanone	< 5.0	1		µg/L	E624	09/22/2011 1:58 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Chloroform	93	1		µg/L	E624	09/22/2011 1:58 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Benzene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Bromodichloromethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
Bromoform	< 1.0	1		µg/L	E624	09/22/2011 1:58 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/22/2011 1:58 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/22/2011 1:58 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109857-013**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66310

Collected : 9/19/2011 10:15:00 AM

Received : 9/20/2011 5:30:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Toluene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Tetrachloroethene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Chlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
m,p-Xylene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
n-Amyl acetate	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
o-Xylene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Styrene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Naphthalene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Xylene (total)	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
1,3-Dichlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
1,4-Dichlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
1,2-Dichlorobenzene	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
Acrolein	< 5.0		1	µg/L	E624	09/22/2011 1:58 PM
Acrylonitrile	< 5.0		1	µg/L	E624	09/22/2011 1:58 PM
1,2-Dibromoethane	< 10		1	µg/L	E624	09/22/2011 1:58 PM
Pentachloroethane	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM
1,2,3-Trichloropropane	< 1.0		1	µg/L	E624	09/22/2011 1:58 PM

NOTES:

%RSD >35% in ICAL for methylene chloride

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 001

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	84.6							mg/l				
c. Total Suspended Solids (TSS)	14							mg/l				
d. Total Dissolved Solids (TDS)	22,700							mg/l				
e. Oil & Grease	<5							mg/l				
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	1.16							mg/l				
h. Ammonia (as N)	0.29							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 22.0 C		Value		Value					Value		
l. pH	Minimum 7.26	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 001

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.

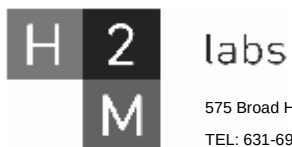
List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow 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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<0.7							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	0.04							mg/l					
Chloride													
CAS Number: 24959-87-9	11,600							mg/l					
Color													
CAS Number:	15							units					
Fecal Coliform													
CAS Number:	16,000							MPN					
Total Coliform													
CAS Number:	9,000							MPN					
Sulfate													
CAS Number: 14808-79-8	1,740							mg/l					
Aluminum													
CAS Number: 07439-90-5	0.22							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 001

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.

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 2

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575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-001**

ClientSample ID. : 66337

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/22/2011 3:35 PM

Qualifiers:

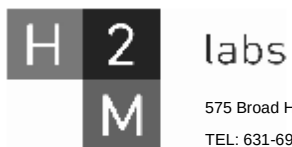
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-002**

ClientSample ID. : 66338

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexane Extractable Material (O&G)	< 5.0		1	mg/L	E1664A	09/26/2011 11:30 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-003**

ClientSample ID. : 66339

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	1,740	D	100	mg/L	E300.0	09/28/2011 1:01 PM
Chloride	11,600	D	200	mg/L	SM4500-CL- E	09/29/2011 2:18 PM
Color	15		1	units	SM2120B	09/23/2011 5:57 AM
Total Dissolved Solids	22,700	D	100	mg/L	SM2540C	09/27/2011 8:18 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-004**

ClientSample ID. : 66340

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Suspended Solids (Residue, Non-Filterable)	14		1	mg/L	SM2540D	09/27/2011 11:11 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66341

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	0.22		1	mg/L	SW6010B	09/27/2011 10:34 AM
Copper	< 0.02		1	mg/L	SW6010B	09/27/2011 10:34 AM
Iron	0.27		1	mg/L	SW6010B	09/27/2011 10:34 AM
Magnesium	742		1	mg/L	SW6010B	09/27/2011 10:34 AM
Manganese	0.05		1	mg/L	SW6010B	09/27/2011 10:34 AM
Nickel	< 0.04		1	mg/L	SW6010B	09/27/2011 10:34 AM
Potassium	249		1	mg/L	SW6010B	09/27/2011 10:34 AM
Sodium	6,450	D	20	mg/L	SW6010B	09/27/2011 11:42 AM
Vanadium	< 0.05		1	mg/L	SW6010B	09/27/2011 10:34 AM
Zinc	0.04		1	mg/L	SW6010B	09/27/2011 10:34 AM

Qualifiers:

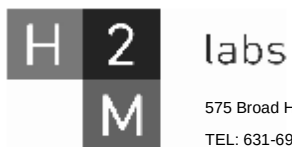
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-006**

ClientSample ID. : 66342

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC
38-54 Vernon Blvd.
Long Island City, New York 11101
Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Ammonia (As N)	0.29		1	mg/L	SM4500-NH3 H	09/23/2011 11:58 AM
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/26/2011 2:11 PM

Qualifiers:

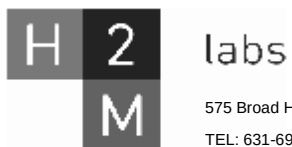
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-007**

ClientSample ID. : 66343

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	3.84		1	mg/L	E200.7	09/29/2011 2:19 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-008**

ClientSample ID. : 66344

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

Copies To :

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	84.6	D	8	mg/L	E410.4	09/26/2011 9:30 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747
TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109944-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66345

Collected : 9/21/2011 11:45:00 AM

Received : 9/22/2011 1:25:00 PM

Collected By CLIENT

Copies To :

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Methyl tert-butyl ether	< 1.0	1		µg/L	SW8021	09/23/2011 3:42 PM
Benzene	< 0.70	1		µg/L	SW8021	09/23/2011 3:42 PM
Toluene	< 1.0	1		µg/L	SW8021	09/23/2011 3:42 PM
Ethylbenzene	< 1.0	1		µg/L	SW8021	09/23/2011 3:42 PM
m,p-Xylene	< 2.0	1		µg/L	SW8021	09/23/2011 3:42 PM
o-Xylene	< 1.0	1		µg/L	SW8021	09/23/2011 3:42 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 004

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	12.6							mg/l				
c. Total Suspended Solids (TSS)	NMR reported in DMR											
d. Total Dissolved Solids (TDS)	282							mg/l				
e. Oil & Grease	NMR reported in DMR											
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.33							mg/l				
h. Ammonia (as N)	<0.10							mg/l				
i. Flow	Value Reported in DMR				Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 24.2 C		Value		Value					Value		
l. pH	Minimum 7.02	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 004

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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	<0.02							mg/l					
Chloride													
CAS Number: 24959-87-9	41.4							mg/l					
Color													
CAS Number:	<5							units					
Fecal Coliform													
CAS Number:	130							MPN					
Total Coliform													
CAS Number:	130							MPN					
Sulfate													
CAS Number: 14808-79-8	21.4							mg/l					
Aluminum													
CAS Number: 07439-90-5	<0.20							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 004

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.

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 2

[illegible]

Project Name Trans Canada
 Project Location Ravenswood

 Project Contact Greg Pryor
 Phone Number (718) 706-2863

Priority
Special Detection Limits

KEY	Matrix: S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	Container: P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	Preservative: H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested	No. of Containers	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments:
				→													
	Sample ID	Date	Time	Matrix	↓												
	66227	9-12-11	10:06	A	1											X	004 Rainey Affr. G F VOA 1109498-001
	66228															X	G - BNA 002
	66229															X	P N Cyanide 003
	66230															X	G H Phenol 004
	66231															X	P - Asbestos 005
	66232															X	P O Metals (200.7) & Mercury 006
	66233															X	P O Metals (6010 B) 007
	66234															X	G H COD 008
	66235							X								X	G H Ammonia 009
	66236															X	P - BOD 010
	66237															X	P - Color, TDS, SO ₄ , Chloride 011
	66238	9-12-11	10:06	A	1												004 Rainey Affr. G H TON 012

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
J Karich	J Karich	10 AM	9-13-11	M Karich	M Karich	9:55 AM	9-13-11
Name	Signature	Time	Date	Name	Signature	Time	Date
		10:10	9/13/11	Tarika Licks	J Karich	10:10	9/13/11
Name	Signature	Time	Date	Name	Signature	Time	Date

Project Name TransCanada
Project Location Ravenswood

Project Contact Greg Poyor
Phone Number (718) 706-2863

Priority _____

Special Detection Limits _____

KEY	Matrix:	Container:	Preservative:		Analysis Requested	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments:			
	S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	⇨	SPDES S- Year Permit															
	No. of Containers	⇩																		
Sample ID	Date	Time	Matrix														Sample Location	Container	Preservative	Sample Comment
66239	9-12-11	10:00	A	1												X	004 Rainey After	G	F	O, M, P, Xylene 1109498-013
66240	9-12-11	10:00	A	1												X	004 Rainey After	P	-	Silica ↓ -014
66241																				
6																				



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-001****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66227**

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Chloromethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Bromomethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Chloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Acetone	< 5.0	1		µg/L	E624	09/14/2011 2:42 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
2-Butanone	< 5.0	1		µg/L	E624	09/14/2011 2:42 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Chloroform	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Benzene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Bromodichloromethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
Bromoform	< 1.0	1		µg/L	E624	09/14/2011 2:42 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/14/2011 2:42 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/14/2011 2:42 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66227

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

CC

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Toluene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Tetrachloroethene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Chlorobenzene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
m,p-Xylene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
n-Amyl acetate	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
o-Xylene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Styrene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Naphthalene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Xylene (total)	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
1,3-Dichlorobenzene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
1,4-Dichlorobenzene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
1,2-Dichlorobenzene	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
Acrolein	< 5.0		1	µg/L	E624	09/14/2011 2:42 PM
Acrylonitrile	< 5.0		1	µg/L	E624	09/14/2011 2:42 PM
1,2-Dibromoethane	< 10		1	µg/L	E624	09/14/2011 2:42 PM
Pentachloroethane	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM
1,2,3-Trichloropropane	< 1.0		1	µg/L	E624	09/14/2011 2:42 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-002****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66228**

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/15/2011 9:43 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/15/2011 9:43 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/15/2011 9:43 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Aniline	< 10	1		µg/L	E625	09/15/2011 9:43 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Phenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Pyridine	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/15/2011 9:43 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Hexachloroethane	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Nitrobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Isophorone	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Naphthalene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Acenaphthylene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Acenaphthene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/15/2011 9:43 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/15/2011 9:43 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/15/2011 9:43 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-002****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66228**

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Diethylphthalate	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Fluorene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/15/2011 9:43 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/15/2011 9:43 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/15/2011 9:43 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/15/2011 9:43 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/15/2011 9:43 PM
Phenanthrene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Anthracene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Benzidine	< 80	1		µg/L	E625	09/15/2011 9:43 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Fluoranthene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Pyrene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/15/2011 9:43 PM
Chrysene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
2-Methylphenol	< 10	1		µg/L	E625	09/15/2011 9:43 PM
Dibenzofuran	< 10	1		µg/L	E625	09/15/2011 9:43 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/15/2011 9:43 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/15/2011 9:43 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/15/2011 9:43 PM
Aramite	< 5.0	1		µg/L	E625	09/15/2011 9:43 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/15/2011 9:43 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66228

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/15/2011 9:43 PM
Parathion	< 5.0		1	µg/L	E625	09/15/2011 9:43 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/15/2011 9:43 PM
Phorate	< 5.0		1	µg/L	E625	09/15/2011 9:43 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/15/2011 9:43 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66229

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/14/2011 2:19 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66230

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	09/16/2011 9:16 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66231

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 1.0		1	MFL	E100.2	09/20/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66232

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0	1		ug/L	E200.7	09/14/2011 6:34 PM
Arsenic	< 10.0	1		ug/L	E200.7	09/14/2011 6:34 PM
Beryllium	< 5.00	1		ug/L	E200.7	09/14/2011 6:34 PM
Cadmium	< 5.00	1		ug/L	E200.7	09/14/2011 6:34 PM
Chromium	< 0.01	1		mg/L	E200.7	09/14/2011 6:34 PM
Copper	< 0.02	1		mg/L	E200.7	09/14/2011 6:34 PM
Lead	10.2	1		ug/L	E200.7	09/14/2011 6:34 PM
Nickel	< 0.04	1		mg/L	E200.7	09/14/2011 6:34 PM
Selenium	< 5.00	1		ug/L	E200.7	09/14/2011 6:34 PM
Silver	< 0.01	1		mg/L	E200.7	09/14/2011 6:34 PM
Thallium	< 10.0	1		ug/L	E200.7	09/14/2011 6:34 PM
Zinc	< 0.02	1		mg/L	E200.7	09/14/2011 6:34 PM
Mercury	< 0.2	1		ug/L	SW7470	09/20/2011 2:30 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66233

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20	1		mg/L	SW6010B	09/20/2011 12:09 PM
Copper	< 0.02	1		mg/L	SW6010B	09/20/2011 12:09 PM
Iron	0.72	1		mg/L	SW6010B	09/20/2011 12:09 PM
Magnesium	8.16	1		mg/L	SW6010B	09/20/2011 12:09 PM
Manganese	0.45	1		mg/L	SW6010B	09/20/2011 12:09 PM
Nickel	< 0.04	1		mg/L	SW6010B	09/20/2011 12:09 PM
Potassium	< 5.00	1		mg/L	SW6010B	09/20/2011 12:09 PM
Sodium	30.0	1		mg/L	SW6010B	09/20/2011 12:09 PM
Vanadium	< 0.05	1		mg/L	SW6010B	09/20/2011 12:09 PM
Zinc	< 0.02	1		mg/L	SW6010B	09/20/2011 12:09 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66234

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	12.6		1	mg/L	E410.4	09/19/2011 10:02 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66235

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	SM4500-NH3 H	09/14/2011 3:55 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66236

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/14/2011 9:55 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66237

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	21.4		1	mg/L	E300.0	09/16/2011 1:34 AM
Chloride	41.4		1	mg/L	SM4500-CL- E	09/15/2011 11:24 AM
Color	< 5		1	units	SM2120B	09/14/2011 7:36 AM
Total Dissolved Solids	282		1	mg/L	SM2540C	09/15/2011 1:24 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66238

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.33		1	mg/L	E353.2	09/14/2011 8:56 AM
Nitrogen, Total	0.33		1	mg/L	M4500-N C	09/16/2011
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	09/14/2011 3:12 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109498-014**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66240

Collected : 9/12/2011 10:00:00 AM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	20.0		1	mg/L	E200.7	09/20/2011 11:35 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 006

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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	13.9							mg/l				
c. Total Suspended Solids (TSS)	NMR reported in DMR											
d. Total Dissolved Solids (TDS)	504							mg/l				
e. Oil & Grease	NMR reported in DMR											
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.17							mg/l				
h. Ammonia (as N)	<0.10							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 22.1 C		Value		Value					Value		
l. pH	Minimum 7.30	Maximum	Minimum	Maximum						Minimum	Maximum	

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

a. Primary Industries:

i. Does the discharge from this outfall contain process wastewater?

☒ Yes
☐ No

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
☐ No

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
☒ No

Yes - Source or reason for presence in discharge attached

Yes - Quantitative or qualitative data attached

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 006

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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	0.07							mg/l					
Chloride													
CAS Number: 24959-87-9	137							mg/l					
Color													
CAS Number:	35							units					
Fecal Coliform													
CAS Number:	9000							MPN					
Total Coliform													
CAS Number:	9000							MPN					
Sulfate													
CAS Number: 14808-79-8	11.3							mg/l					
Aluminum													
CAS Number: 07439-90-5	<0.20							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 006

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.

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 2

[illegible]

Project Name

TransCanada
Ravenswood P.S.

Project Location

Project Contact

Gregory Pryor
718-706-2863

Phone Number

Priority

Special Detection Limits

KEY	Matrix:	Container:	Preservative:		Analysis Requested	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA			Comments:			
	S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	→	5 YEAR Permit Renewal																
	No. of Containers	↓	Sample Location	Container	Preservative													Sample Comment			
	Sample ID	Date	Time	Matrix																	
	66257	9/13	130pm	A	1							1109652	-001					G.T.F	P	—	SiO ₂
	66258				2													~~G.T.F~~	~~G~~	~~F~~	~~o,m,p xylene~~
	66259				1										-003				G	H	COD
	66260				2										-004				G	F	VOA
	66261				1										-005				G	H	PO ₄ , TON
	66262				1										~~-006~~				~~P~~		~~BOD~~
	66263				1										-007				P	O	metals method 6010 B
	66264				1										-008				P	O	metals method 200.7 & Hg
	66265				1										-009				P	—	asbestos
	66266				1										-010				G	—	BNA
	66267				1										-011				G	H	Phenols
	66268	↓	↓	↓	1										-012			↓	G	H	NH ₃

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
G. Karcich	<i>G. Karcich</i>	10AM	9/15/11	Linda Paele	<i>Linda Paele</i>	14:30	9-15-11
Name	Signature	Time	Date	Name	Signature	Time	Date
Linda Paele	<i>Linda Paele</i>	1545	9/15/11	M. Watson	<i>M. Watson</i>	1545	9-15-11
Name	Signature	Time	Date	Name	Signature	Time	Date

Project Name

Transcanada

Project Location

Ravenswood P.S.

Project Contact

Gregory Pryor

Phone Number

718-706-2863

Priority

Special Detection Limits

[illegible]

*Samples are retained for
30 days following analysis
unless otherwise
specified*

White Copy	Lab Coordinator
Yellow Copy	Sample Custodian
Pink Copy	Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
G. Karcich		10 Am	9/15/11	Lindsay Pcelli		14:30	9-15-11
Lindsay Pcelli		1545	9/15/11	M. Watson		1545	9-15-11
Name	Signature	Time	Date	Name	Signature	Time	Date

Project Name TransCanada
 Project Location Ravenswood

 Project Contact Greg Pryor
 Phone Number (718) 706-2863

Priority
Special Detection Limits

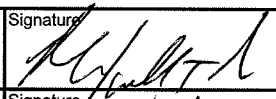
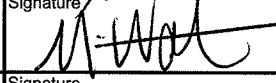
KEY	Matrix: S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	Container: P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	Preservative: H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested ⇒	No. of Containers ↓	TSS	Oil & Grease	Ammonia	BTEX + Naphthalene	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	BOD	Color, Chloride, SO ₄	Comments:			
	Sample ID	Date	Time	Matrix														Sample Location	Container	Preservative	Sample Comment
	66285	9-16-11	7:45	A	2				X									Remediation trailer - between	G	C	1109712-001
	66286	9-16-11		A	1											X		006 GTs	P	-	-002
	66287	9-16-11		A	1											X		006 GTs	P	-	↓ -003

Samples are retained for 30 days following analysis unless otherwise specified

White Copy Lab Coordinator

Yellow Copy Sample Custodian

Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		10:00	9/16/11	Maxwell Tsch		2PM	9/16/11
Maxwell Tsch		1705	9/16/11	M. Watson		1705	9-16-11
Name	Signature	Time	Date	Name	Signature	Time	Date



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66257

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	12.1		1	mg/L	E200.7	09/20/2011 11:44 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66259

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	13.9		1	mg/L	E410.4	09/19/2011 10:04 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-004****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66260**

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Chloromethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Bromomethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Chloroethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Acetone	< 5.0	1		µg/L	E624	09/19/2011 7:45 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
2-Butanone	< 5.0	1		µg/L	E624	09/19/2011 7:45 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Chloroform	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Benzene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Bromodichloromethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
Bromoform	< 1.0	1		µg/L	E624	09/19/2011 7:45 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/19/2011 7:45 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/19/2011 7:45 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66260

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Toluene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Tetrachloroethene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Chlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
m,p-Xylene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
n-Amyl acetate	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
o-Xylene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Styrene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Naphthalene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Xylene (total)	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
1,3-Dichlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
1,4-Dichlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
1,2-Dichlorobenzene	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
Acrolein	< 5.0		1	µg/L	E624	09/19/2011 7:45 PM
Acrylonitrile	< 5.0		1	µg/L	E624	09/19/2011 7:45 PM
1,2-Dibromoethane	< 10		1	µg/L	E624	09/19/2011 7:45 PM
Pentachloroethane	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM
1,2,3-Trichloropropane	< 1.0		1	µg/L	E624	09/19/2011 7:45 PM

NOTES:

%RSD >35% in ICAL for methylene chloride

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66261

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	< 0.10		1	mg/L	E353.2	09/16/2011 9:32 AM
Nitrogen, Total	0.17		1	mg/L	M4500-N C	09/21/2011
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/19/2011 10:06 AM
Nitrogen, Kjeldahl, Total	0.11		1	mg/L	E351.2	09/20/2011 1:14 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66263

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20	1		mg/L	SW6010B	09/21/2011 11:48 PM
Copper	< 0.02	1		mg/L	SW6010B	09/21/2011 11:48 PM
Iron	0.69	1		mg/L	SW6010B	09/21/2011 11:48 PM
Magnesium	8.40	1		mg/L	SW6010B	09/21/2011 11:48 PM
Manganese	0.46	1		mg/L	SW6010B	09/21/2011 11:48 PM
Nickel	< 0.04	1		mg/L	SW6010B	09/21/2011 11:48 PM
Potassium	5.99	1		mg/L	SW6010B	09/21/2011 11:48 PM
Sodium	110	1		mg/L	SW6010B	09/21/2011 11:48 PM
Vanadium	< 0.05	1		mg/L	SW6010B	09/21/2011 11:48 PM
Zinc	0.07	1		mg/L	SW6010B	09/21/2011 11:48 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66264

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0	1		ug/L	E200.7	09/16/2011 1:16 PM
Arsenic	< 10.0	1		ug/L	E200.7	09/16/2011 1:16 PM
Beryllium	< 5.00	1		ug/L	E200.7	09/16/2011 1:16 PM
Cadmium	< 5.00	1		ug/L	E200.7	09/16/2011 1:16 PM
Chromium	< 0.01	1		mg/L	E200.7	09/16/2011 1:16 PM
Copper	< 0.02	1		mg/L	E200.7	09/16/2011 1:16 PM
Lead	8.25	1		ug/L	E200.7	09/16/2011 1:16 PM
Nickel	< 0.04	1		mg/L	E200.7	09/16/2011 1:16 PM
Selenium	< 5.00	1		ug/L	E200.7	09/16/2011 1:16 PM
Silver	< 0.01	1		mg/L	E200.7	09/16/2011 1:16 PM
Thallium	< 10.0	1		ug/L	E200.7	09/16/2011 1:16 PM
Zinc	0.07	1		mg/L	E200.7	09/16/2011 1:16 PM
Mercury	< 0.2	1		ug/L	SW7470	09/20/2011 2:42 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66265

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 1.0		1	MFL	E100.2	09/20/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-010****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66266**

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/22/2011 5:37 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/22/2011 5:37 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/22/2011 5:37 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Aniline	< 10	1		µg/L	E625	09/22/2011 5:37 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Phenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Pyridine	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/22/2011 5:37 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Hexachloroethane	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Nitrobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Isophorone	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Naphthalene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Acenaphthylene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Acenaphthene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/22/2011 5:37 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/22/2011 5:37 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/22/2011 5:37 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-010****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66266**

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Diethylphthalate	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Fluorene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/22/2011 5:37 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/22/2011 5:37 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/22/2011 5:37 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/22/2011 5:37 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/22/2011 5:37 PM
Phenanthrene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Anthracene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Benzidine	< 80	1		µg/L	E625	09/22/2011 5:37 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Fluoranthene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Pyrene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/22/2011 5:37 PM
Chrysene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
2-Methylphenol	< 10	1		µg/L	E625	09/22/2011 5:37 PM
Dibenzofuran	< 10	1		µg/L	E625	09/22/2011 5:37 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/22/2011 5:37 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/22/2011 5:37 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/22/2011 5:37 PM
Aramite	< 5.0	1		µg/L	E625	09/22/2011 5:37 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/22/2011 5:37 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66266

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/22/2011 5:37 PM
Parathion	< 5.0		1	µg/L	E625	09/22/2011 5:37 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/22/2011 5:37 PM
Phorate	< 5.0		1	µg/L	E625	09/22/2011 5:37 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/22/2011 5:37 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66267

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	09/16/2011 10:04 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66268

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	SM4500-NH3 H	09/19/2011 12:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-013**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66269

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/16/2011 1:16 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109652-014**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66270

Collected : 9/13/2011 1:30:00 PM

Received : 9/15/2011 3:45:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	14.5		1	mg/L	E300.0	09/20/2011 12:35 PM
Chloride	117	D	10	mg/L	SM4500-CL- E	09/21/2011 1:47 PM
Total Dissolved Solids	504		1	mg/L	SM2540C	09/20/2011 11:24 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109712-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66286

Collected : 9/16/2011 7:45:00 AM

Received : 9/16/2011 5:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/16/2011 5:30 PM

NOTES:

Low recovery was observed in LCS for BOD (79.1%). Limits 84.5-115.5%

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109712-003**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66287

Collected : 9/16/2011 7:45:00 AM

Received : 9/16/2011 5:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	11.3		1	mg/L	E300.0	09/20/2011 1:02 PM
Chloride	137	D	10	mg/L	SM4500-CL- E	09/21/2011 1:50 PM
Color	35		1	units	SM2120B	09/17/2011 8:03 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

INDUSTRIAL APPLICATION FORM NY-2C

Section III - Sampling Information

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 007

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)	NMR-	Table 5	Waiver									
b. Chemical Oxygen Demand (COD)	NMR-	Table 5	Waiver									
c. Total Suspended Solids (TSS)	<10							mg/l				
d. Total Dissolved Solids (TDS)	256							mg/l				
e. Oil & Grease	<5							mg/l				
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	1.79							mg/l				
h. Ammonia (as N)	0.24							mg/l				
i. Flow	Value Reported in DMR		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value NMR-Table 5 waiver		Value		Value					Value		
l. pH	Minimum 7.28	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 007

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.

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 1 of 2	
Pollutant and CAS Number	Effluent data							Units		Intake data (optional)		Believed present, no sampling results available	
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value			d. Number of analyses
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration	(2) Mass		
CAS Number:													
Benzene CAS Number: 00071-43-2	<0.70							ug/l					
Ethylbenzene CAS Number: 00100-41-1	<1.0							ug/l					
Toluene CAS Number: 00108-88-3	<1.0							ug/l					
Copper CAS Number: 07440-50-8	<0.02							mg/l					
Nickel CAS Number: 07440-02-0	<0.04							mg/l					
Zinc CAS Number: 07440-66-6	0.18							mg/l					
Chloride CAS Number: 24959-87-9	93.4							mg/l					
Color CAS Number:	10							units					
Fecal Coliform CAS Number:	>1600							MPN					
Total Coliform CAS Number:	>1600							MPN					
Sulfate CAS Number: 14808-79-8	15.4							mg/l					
Aluminum CAS Number: 07439-90-5	<0.20							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 007

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.

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 2

[illegible]

Project Name Trans Canada
 Project Location Ravenswood

 Project Contact Greg Poyor
 Phone Number (718) ~~887~~ 706-2863

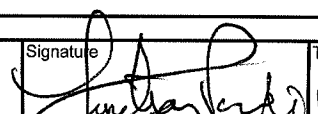
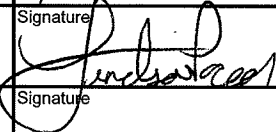
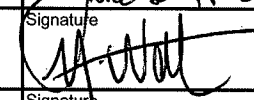
Priority

Special Detection Limits

KEY	Matrix:	Container:	Preservative:		Analysis Requested	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS			Comments:			
	S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	No. of Containers	Settling Pond 007 Permit Renewal																	
	Sample ID	Date	Time	Matrix	↓														Sample Location	Container	Preservative	Sample Comment
	66137	9-7-11	08:20	A	1											X		007 Settling Pond	P	O	Metals 60108 1109229-001	
	66138															X			P	-	Sulfate / Silica -002	
	66139							X											P	H	-003	
	66140															X			P	-	TDS -004	
	66141						X												G	F	-005	
	66142					X													P		-006	
	66143															X			P		Color -007	
	66144															X			G	H	TON -008	
	66145															X			P		Chloride -009	
	66146	9-7-11	08:20	A	1				X									007 Settling Pond	G	F	-010	

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
W. Griffith		12:00	9-7-11	Linda Pouch		15:00	9-7-11
Linda Pouch		18:05	9-7-11	M. Watson		1805	9-7-11
Name	Signature	Time	Date	Name	Signature	Time	Date



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66137

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20	1		mg/L	SW6010B	09/14/2011 11:34 AM
Copper	< 0.02	1		mg/L	SW6010B	09/14/2011 11:34 AM
Iron	0.10	1		mg/L	SW6010B	09/14/2011 11:34 AM
Magnesium	5.05	1		mg/L	SW6010B	09/14/2011 11:34 AM
Manganese	0.02	1		mg/L	SW6010B	09/14/2011 11:34 AM
Nickel	< 0.04	1		mg/L	SW6010B	09/14/2011 11:34 AM
Potassium	6.41	1		mg/L	SW6010B	09/14/2011 11:34 AM
Sodium	61.5	1		mg/L	SW6010B	09/14/2011 11:34 AM
Vanadium	< 0.05	1		mg/L	SW6010B	09/14/2011 11:34 AM
Zinc	0.18	1		mg/L	SW6010B	09/14/2011 11:34 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66138

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	0.97		1	mg/L	E200.7	09/14/2011 11:05 AM
Sulfate	15.4		1	mg/L	E300.0	09/13/2011 8:06 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : 1109229-003

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66139

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Ammonia (As N)	0.24		1	mg/L	SM4500-NH3 H	09/12/2011 12:45 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66140

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Dissolved Solids	256		1	mg/L	SM2540C	09/09/2011 11:12 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66141

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Hexane Extractable Material (O&G)	< 5.0		1	mg/L	E1664A	09/08/2011 4:00 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66142

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Suspended Solids (Residue, Non-Filterable)	< 10		1	mg/L	SM2540D	09/08/2011 12:41 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66143

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Color	10		1	units	SM2120B	09/08/2011 12:34 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66144

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	1.48	D	5	mg/L	E353.2	09/08/2011 9:20 AM
Nitrogen, Total	1.79		1	mg/L	M4500-N C	09/13/2011
Nitrogen, Kjeldahl, Total	0.31		1	mg/L	E351.2	09/12/2011 3:04 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66145

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chloride	93.4	D	5	mg/L	250 SM4500-CL- E	09/09/2011 11:56 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109229-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66146

Collected : 9/7/2011 8:20:00 AM

Received : 9/7/2011 6:05:00 PM

Collected By CLIENT

Copies To

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Benzene	< 0.70		1	µg/L	SW8021	09/09/2011 1:21 AM
Toluene	< 1.0		1	µg/L	SW8021	09/09/2011 1:21 AM
Ethylbenzene	< 1.0		1	µg/L	SW8021	09/09/2011 1:21 AM
m,p-Xylene	< 2.0		1	µg/L	SW8021	09/09/2011 1:21 AM
o-Xylene	< 1.0		1	µg/L	SW8021	09/09/2011 1:21 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager

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

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	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)	<2							mg/l				
b. Chemical Oxygen Demand (COD)	87.9							mg/l				
c. Total Suspended Solids (TSS)	18							mg/l				
d. Total Dissolved Solids (TDS)	11,100							mg/l				
e. Oil & Grease	<5							mg/l				
f. Chlorine, Total Residual (TRC)	0.0							mg/l				
g. Total Organic Nitrogen (TON)	0.74							mg/l				
h. Ammonia (as N)	0.16							mg/l				
i. Flow	Value 1.152		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value 22.1 C		Value		Value					Value		
l. pH	Minimum 7.70	Maximum	Minimum	Maximum						Minimum	Maximum	

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: Ravenswood Generating Station	SPDES No.: NY 0005193	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.

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 1 of 2		
Pollutant and CAS Number	Effluent data						Units		Intake data (optional)		Believed present, no sampling results available		
	a. Maximum daily value		b. Maximum 30 day value (if available)		c. Long term average value (if available)		d. Number of analyses	a. Concentration	b. Mass	a. Long term average value		d. Number of analyses	
	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass	(1)Concentration	(2) Mass				(1)Concentration			(2) Mass
Table 6 See attached sample sheets													
CAS Number:													
Benzene													
CAS Number: 00071-43-2	<1.0							ug/l					
Ethylbenzene													
CAS Number: 00100-41-1	<1.0							ug/l					
Toluene													
CAS Number: 00108-88-3	<1.0							ug/l					
Copper													
CAS Number: 07440-50-8	<0.02							mg/l					
Nickel													
CAS Number: 07440-02-0	<0.04							mg/l					
Zinc													
CAS Number: 07440-66-6	<0.02							mg/l					
Chloride													
CAS Number: 24959-87-9	5,920							mg/l					
Color													
CAS Number:	75							units					
Fecal Coliform													
CAS Number:	>16,000							MPN					
Total Coliform													
CAS Number:	16,000							MPN					
Sulfate													
CAS Number: 14808-79-8	952							mg/l					
Aluminum													
CAS Number: 07439-90-5	1.03							mg/l					

Facility Name: Ravenswood Generating Station	SPDES No.: NY 0005193	Outfall No.: 006

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.

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 2

[illegible]

Project Name TransCanada
 Project Location Ravenswood

 Project Contact Greg Peyer
 Phone Number (718) ~~706-2773~~ 706-2863

Priority
Special Detection Limits

KEY	Matrix: S - Soil D - Solid L - Sludge O - Oil A - Aqueous G - Gas T - Other	Container: P - Poly G - Glass B - Tedlar Bag S - Steel Cylinder T - Teflon Bag F - Glass w/ Teflon Cap	Preservative: H - H ₂ SO ₄ N - NaOH 4 - 4°C C - HCl X - Hexane O - HNO ₃ F - 1:1 HCl	Analysis Requested	No. of Containers	TSS	Oil & Grease	Ammonia	BTEX	PCBs	Copper & Iron (Cu & Fe)	#6 Fuel Oil Analysis	Petroleum ID	Waste Fuel A	TCLP Metals RCRA	SEE COMMENTS	Comments:	
				⇒														
	Sample ID	Date	Time	Matrix	↓												5 - Year SPDES Permit Renewal 1109501	
	66253	9-12-11		A	1													008 Screens
	66254	9-12-11		A	1													008 Screens

 Samples are retained for
 30 days following analysis
 unless otherwise
 specified

 White Copy Lab Coordinator
 Yellow Copy Sample Custodian
 Pink Copy Ravenswood

Relinquished By:				Received By:			
Name	Signature	Time	Date	Name	Signature	Time	Date
Y Karach	Y Karach	10 AM	9-13-11	Maxwell Birch	[Signature]	9/13/11	2:35 PM
Name	Signature	Time	Date	Name	Signature	Time	Date
		10:10	9/13/11	Tanika Ricks	[Signature]	10:10	9/13/11
Name	Signature	Time	Date	Name	Signature	Time	Date



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-001**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66241

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Chemical Oxygen Demand	87.9	D	4	mg/L	E410.4	09/19/2011 10:03 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-002****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66242**

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dichlorodifluoromethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Chloromethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Vinyl chloride	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Bromomethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Chloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Trichlorofluoromethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Acetone	< 5.0	1		µg/L	E624	09/14/2011 3:15 PM
1,1-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Methylene chloride	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Carbon disulfide	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Methyl tert-butyl ether	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
trans-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
cis-1,2-Dichloroethene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Vinyl acetate	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,1-Dichloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,2-Dichloroethene (total)	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
2-Butanone	< 5.0	1		µg/L	E624	09/14/2011 3:15 PM
Ethyl acetate	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Chloroform	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,2-Dichloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,1,1-Trichloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Isopropyl acetate	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Carbon tetrachloride	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Benzene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Trichloroethene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,2-Dichloropropane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Bromodichloromethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
2-Chloroethylvinyl ether	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
cis-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
trans-1,3-Dichloropropene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,1,2-Trichloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Ethylbenzene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Dibromochloromethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Bromoform	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
4-Methyl-2-pentanone	< 5.0	1		µg/L	E624	09/14/2011 3:15 PM
2-Hexanone	< 5.0	1		µg/L	E624	09/14/2011 3:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-002**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66242

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
Dibromomethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Toluene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Tetrachloroethene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Chlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
m,p-Xylene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
n-Amyl acetate	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
o-Xylene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Styrene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Naphthalene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Xylene (total)	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,1,2,2-Tetrachloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,3-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,4-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,2-Dichlorobenzene	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
Acrolein	< 5.0	1		µg/L	E624	09/14/2011 3:15 PM
Acrylonitrile	< 5.0	1		µg/L	E624	09/14/2011 3:15 PM
1,2-Dibromoethane	< 10	1		µg/L	E624	09/14/2011 3:15 PM
Pentachloroethane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM
1,2,3-Trichloropropane	< 1.0	1		µg/L	E624	09/14/2011 3:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-004**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66244

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	09/16/2011 9:24 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-005**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66245

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Ammonia (As N)	0.16		1	mg/L	SM4500-NH3 H	09/14/2011 3:56 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-006**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66246

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Nitrogen, Nitrate-Nitrite	0.44		1	mg/L	E353.2	09/14/2011 8:57 AM
Nitrogen, Total	0.74		1	mg/L	M4500-N C	09/16/2011
Phosphorus, Total (As P)	< 0.05		1	mg/L	SM4500-P E	09/19/2011 10:02 AM
Nitrogen, Kjeldahl, Total	0.30		1	mg/L	E351.2	09/14/2011 3:13 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-007****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66247**

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	Units	Method Number	Analyzed
2-Nitroaniline	< 10	1		µg/L	E625	09/15/2011 10:15 PM
3-Nitroaniline	< 10	1		µg/L	E625	09/15/2011 10:15 PM
4-Chloroaniline	< 10	1		µg/L	E625	09/15/2011 10:15 PM
4-Nitroaniline	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Aniline	< 10	1		µg/L	E625	09/15/2011 10:15 PM
N-Nitrosodimethylamine	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Phenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Bis(2-chloroethyl)ether	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Pyridine	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2-Chlorophenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
1,3-Dichlorobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
1,4-Dichlorobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
1,2-Dichlorobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,2'-oxybis(1-Chloropropane)	< 10	1		µg/L	E625	09/15/2011 10:15 PM
N-Nitroso-di-n-propylamine	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Hexachloroethane	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Nitrobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Isophorone	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2-Nitrophenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,4-Dimethylphenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Bis(2-chloroethoxy)methane	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,4-Dichlorophenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
1,2,4-Trichlorobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Naphthalene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Hexachlorobutadiene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
4-Chloro-3-methylphenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Hexachlorocyclopentadiene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,4,6-Trichlorophenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2-Chloronaphthalene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Dimethylphthalate	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Acenaphthylene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,6-Dinitrotoluene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Acenaphthene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,4-Dinitrophenol	< 25	1		µg/L	E625	09/15/2011 10:15 PM
4-Nitrophenol	< 25	1		µg/L	E625	09/15/2011 10:15 PM
2,4-Dinitrotoluene	< 10	1		µg/L	E625	09/15/2011 10:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-007****Sample Information...**

Type : Aqueous

Origin:

TC Ravenswood LLC**38-54 Vernon Blvd.****Long Island City, New York 11101****Attn To : Greg Pryor****ClientSample ID. : 66247**

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Diethylphthalate	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Fluorene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
4-Chlorophenyl-phenylether	< 10	1		µg/L	E625	09/15/2011 10:15 PM
4,6-Dinitro-2-methylphenol	< 25	1		µg/L	E625	09/15/2011 10:15 PM
1,2,4,5-Tetrachlorobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
1,2-Diphenylhydrazine	< 10	1		µg/L	E625	09/15/2011 10:15 PM
N-Nitrosodiphenylamine	< 10	1		µg/L	E625	09/15/2011 10:15 PM
4-Bromophenyl-phenylether	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Hexachlorobenzene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Pentachlorophenol	< 25	1		µg/L	E625	09/15/2011 10:15 PM
Phenanthrene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Anthracene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Benzidine	< 80	1		µg/L	E625	09/15/2011 10:15 PM
Di-n-butyl phthalate	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Fluoranthene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Pyrene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Butyl benzyl phthalate	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Benzo(a)anthracene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
3,3'-Dichlorobenzidine	< 20	1		µg/L	E625	09/15/2011 10:15 PM
Chrysene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Di-n-octyl phthalate	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Benzo(b)fluoranthene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Bis(2-ethylhexyl)phthalate	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Benzo(k)fluoranthene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Benzo(a)pyrene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Indeno(1,2,3-cd)pyrene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Dibenzo(a,h)anthracene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Benzo(g,h,i)perylene	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2,4,5-Trichlorophenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
2-Methylphenol	< 10	1		µg/L	E625	09/15/2011 10:15 PM
Dibenzofuran	< 10	1		µg/L	E625	09/15/2011 10:15 PM
1,3-Dinitrobenzene	< 5.0	1		µg/L	E625	09/15/2011 10:15 PM
4-Aminobiphenyl	< 5.0	1		µg/L	E625	09/15/2011 10:15 PM
5-Nitro-o-toluidine	< 5.0	1		µg/L	E625	09/15/2011 10:15 PM
Aramite	< 5.0	1		µg/L	E625	09/15/2011 10:15 PM
Hexachloropropene	< 5.0	1		µg/L	E625	09/15/2011 10:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-007**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66247

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
o-Toluidine	< 5.0		1	µg/L	E625	09/15/2011 10:15 PM
Parathion	< 5.0		1	µg/L	E625	09/15/2011 10:15 PM
Pentachlorobenzene	< 5.0		1	µg/L	E625	09/15/2011 10:15 PM
Phorate	< 5.0		1	µg/L	E625	09/15/2011 10:15 PM
3/4-Methylphenol	< 20		1	µg/L	E625	09/15/2011 10:15 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-008**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66248

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

Copies To

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Cyanide	< 10		1	µg/L	SM4500-CN E	09/14/2011 2:22 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-009**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66249

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Biochemical Oxygen Demand	< 2		1	mg/L	SM5210B	09/14/2011 10:20 AM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-010**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66250

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Asbestos (See Attached)	< 1.0		1	MFL	E100.2	09/20/2011

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-011**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66251

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	1.03		1	mg/L	SW6010B	09/20/2011 12:04 PM
Copper	< 0.02		1	mg/L	SW6010B	09/20/2011 12:04 PM
Iron	1.56		1	mg/L	SW6010B	09/20/2011 12:04 PM
Magnesium	398		1	mg/L	SW6010B	09/20/2011 12:04 PM
Manganese	0.10		1	mg/L	SW6010B	09/20/2011 12:04 PM
Nickel	< 0.04		1	mg/L	SW6010B	09/20/2011 12:04 PM
Potassium	141		1	mg/L	SW6010B	09/20/2011 12:04 PM
Sodium	3,470	D	20	mg/L	SW6010B	09/20/2011 3:14 PM
Vanadium	< 0.05		1	mg/L	SW6010B	09/20/2011 12:04 PM
Zinc	< 0.02		1	mg/L	SW6010B	09/20/2011 12:04 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-012**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66252

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Antimony	< 60.0		1	ug/L	E200.7	09/14/2011 6:39 PM
Arsenic	< 10.0		1	ug/L	E200.7	09/14/2011 6:39 PM
Beryllium	< 5.00		1	ug/L	E200.7	09/14/2011 6:39 PM
Cadmium	< 5.00		1	ug/L	E200.7	09/14/2011 6:39 PM
Chromium	< 0.01		1	mg/L	E200.7	09/14/2011 6:39 PM
Copper	< 0.02		1	mg/L	E200.7	09/14/2011 6:39 PM
Lead	6.31		1	ug/L	E200.7	09/14/2011 6:39 PM
Nickel	< 0.04		1	mg/L	E200.7	09/14/2011 6:39 PM
Selenium	< 5.00		1	ug/L	E200.7	09/14/2011 6:39 PM
Silver	< 0.01		1	mg/L	E200.7	09/14/2011 6:39 PM
Thallium	< 10.0		1	ug/L	E200.7	09/14/2011 6:39 PM
Zinc	< 0.02		1	mg/L	E200.7	09/14/2011 6:39 PM
Mercury	< 0.2		1	ug/L	SW7470	09/20/2011 2:32 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040

FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-013**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66253

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Sulfate	952	D	50	mg/L	E300.0	09/20/2011 11:54 AM
Chloride	5,920	D	200	mg/L	SM4500-CL- E	09/15/2011 11:25 AM
Color	75	D	5	units	SM2120B	09/14/2011 7:38 AM
Total Dissolved Solids	11,100		1	mg/L	SM2540C	09/15/2011 1:30 PM

Qualifiers:

E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

H = Received/analyzed outside of analytical holding time

Laboratory Manager



labs

575 Broad Hollow Melville, NY 11747

TEL: 631-694-3040 FAX: 631-420-8436 NYSDOH ID#10478

LABORATORY RESULTS

For the submitted sample

Lab No. : **1109501-014**

Sample Information...

Type : Aqueous

Origin:

TC Ravenswood LLC

38-54 Vernon Blvd.

Long Island City, New York 11101

Attn To : Greg Pryor

ClientSample ID. : 66254

Collected : 9/12/2011 12:00:00 PM

Received : 9/13/2011 6:10:00 PM

Collected By CLIENT

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Dissolved Silica	4.35		1	mg/L	E200.7	09/20/2011 11:39 AM

Qualifiers:

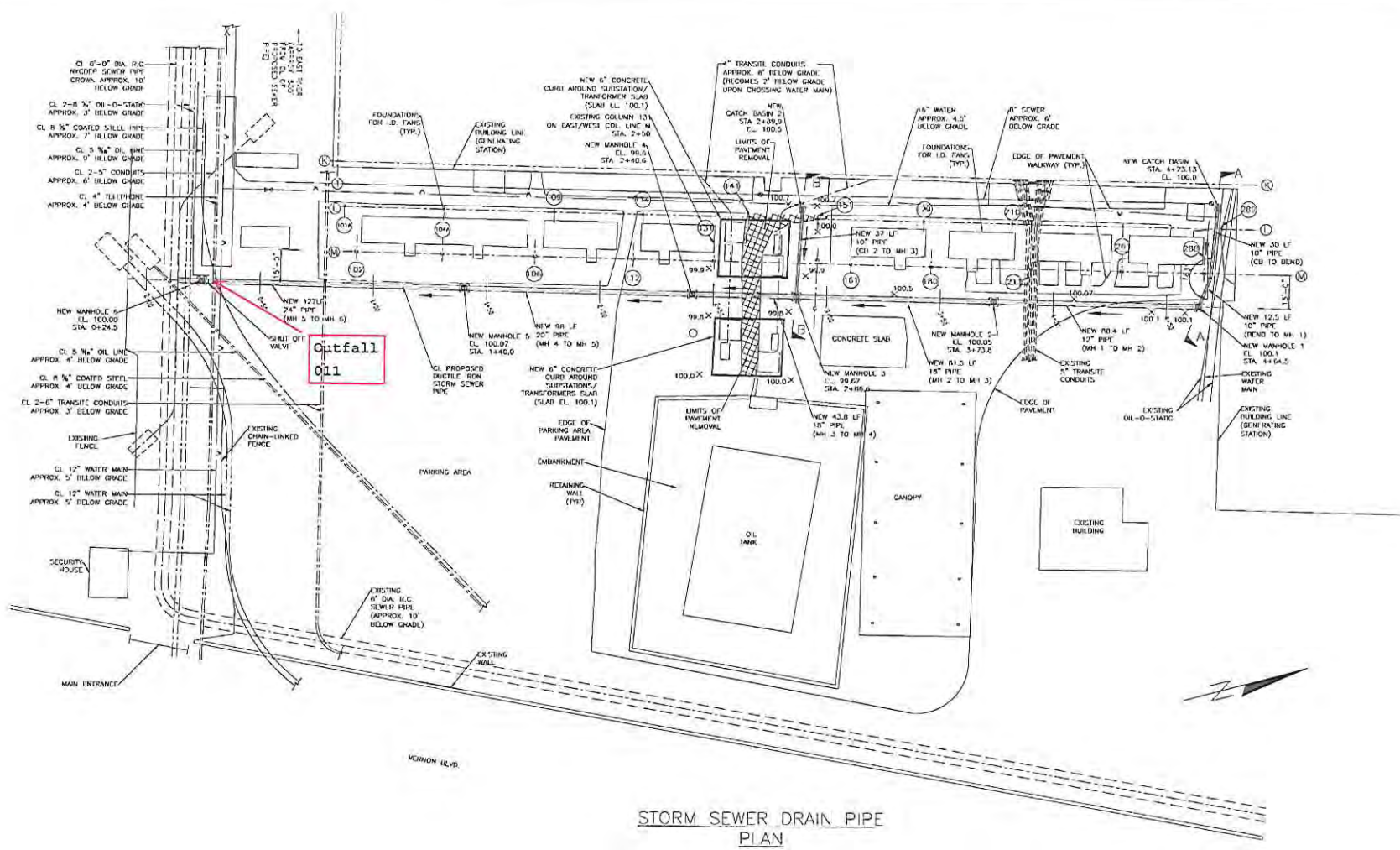
E = Value above quantitation range

D = Results for Dilution

D.F. = Dilution Factor

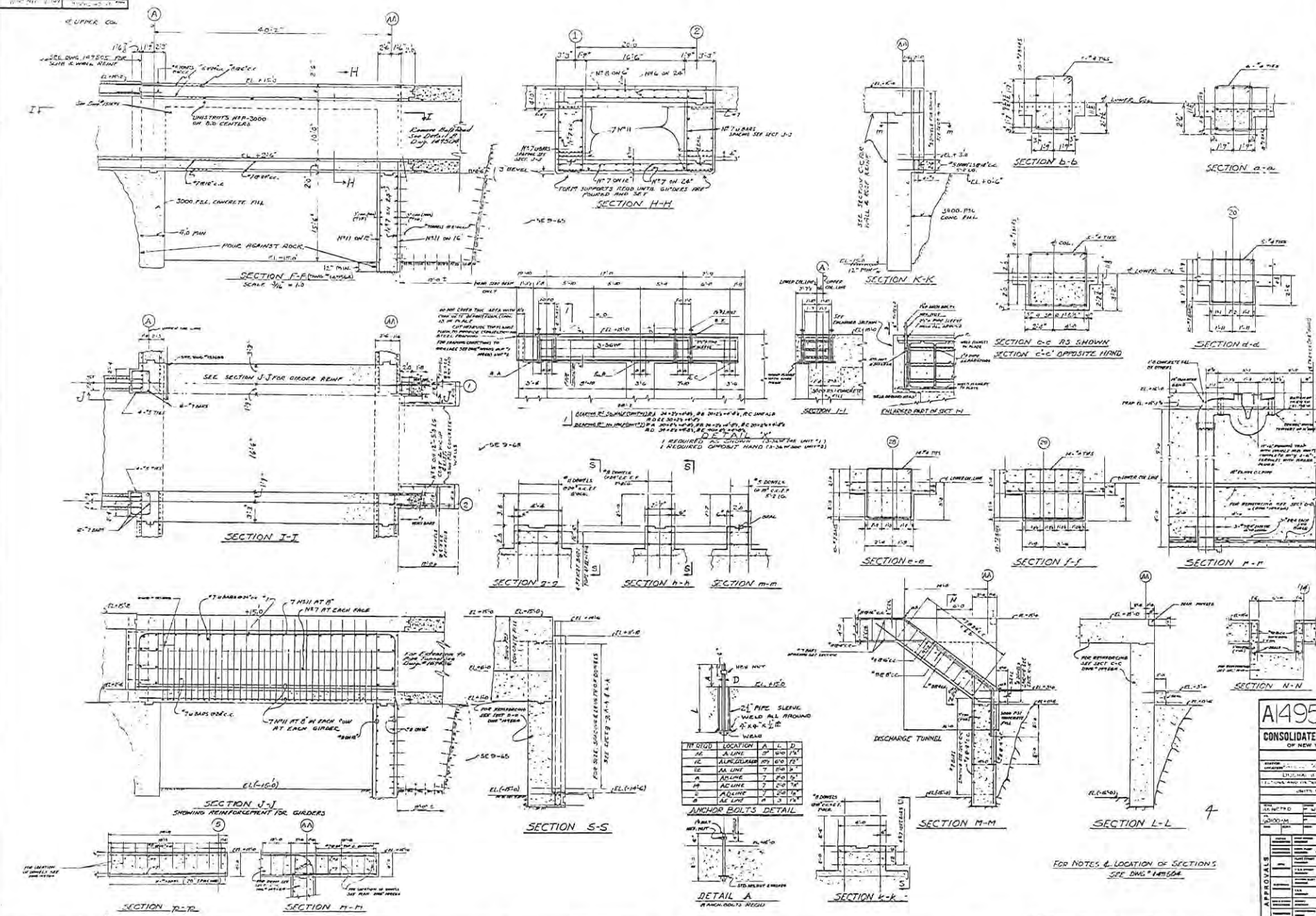
H = Received/analyzed outside of analytical holding time

Laboratory Manager

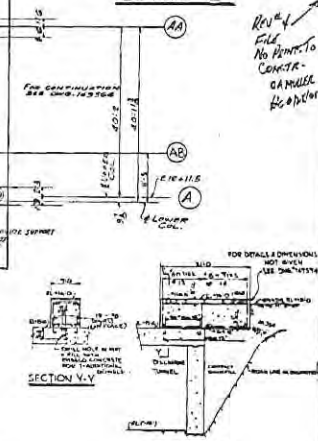


STORM SEWER DRAIN PIPE
PLAN
SCALE 1"=20'

NO. DATE REVISIONS		DESIGN: ACN DRAWN: ACN CHECKED: KH	SPECIAL NOTE:	 LIRo ENGINEERS, INC. SYOSSET, N.Y. 3 Ariel Way Syosset, New York 11791 516/785-6791 516/337-5421 (F) © The Lir Group All Rights Reserved		TRANSCANADA RAVENSWOOD POWER STATION UNIT 10 AND 20 EAST YARD DRAINAGE ALT A PLAN	SCALE: AS NOTED DATE: 12/21/09 DWG. NO.: 5102 FILE NO.: SHEET NO. 2 OF 4



REV 4
File
No PRINT. TO
COMPTON
CAMER
11/01/01



SECTION T-T

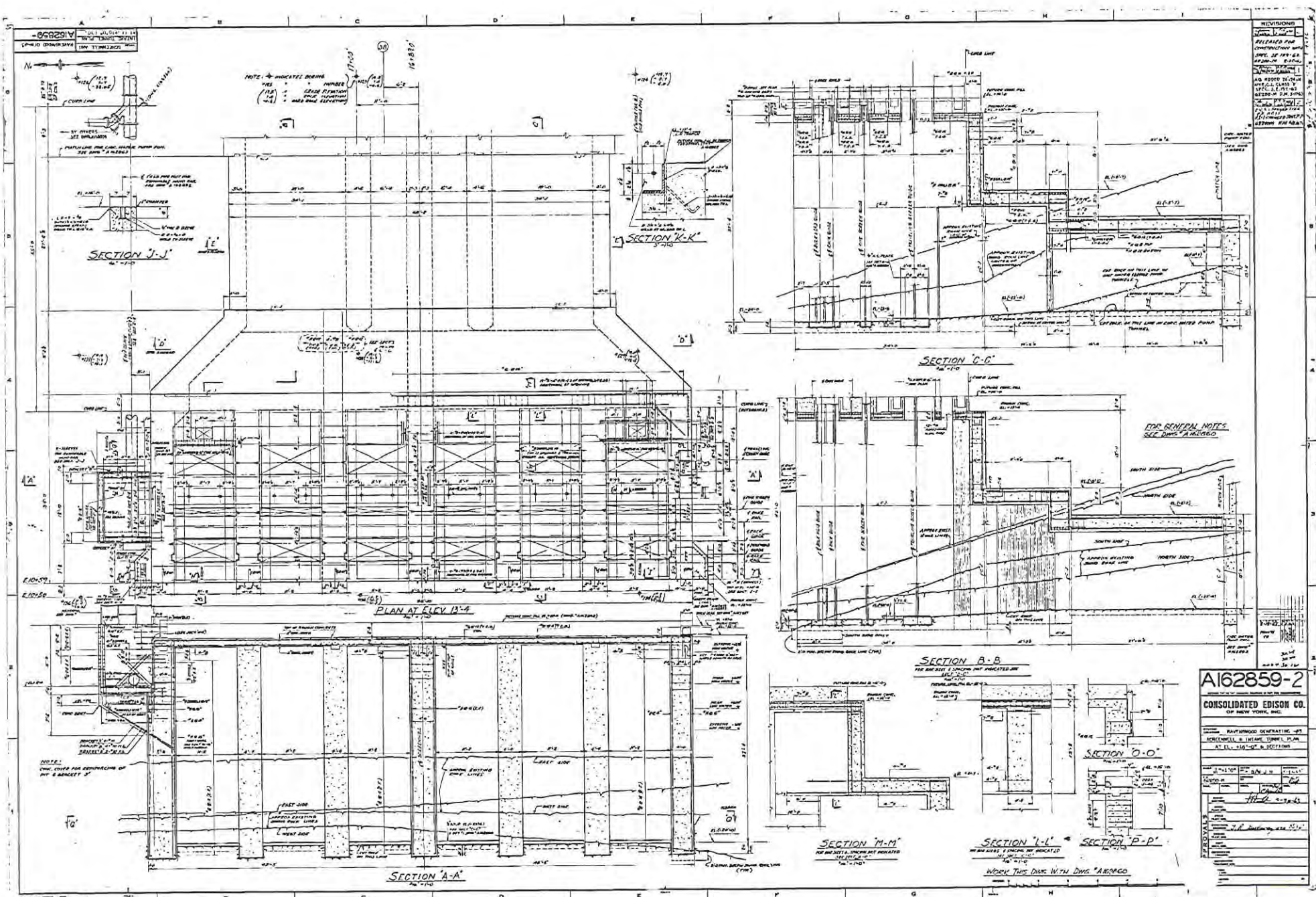
SECTION W-W

SECTION V-V

SECTION 2-2

SECTION 0-0

AI49566-4	
CONSOLIDATED EDISON CO. OF NEW YORK, INC.	
APPROVAL DATE: 10/1/54 BY: [Signature] REASON: RADIATION EXPERIMENT UNUSUAL TUNNEL PLAS AND SUTURING LEADS, COORDINATE 11000 TO ENG. 11017-3 11018-2 AND 11019-2 11020-2 11021-2 11022-2 11023-2 11024-2 11025-2 11026-2 11027-2 11028-2 11029-2 11030-2 11031-2 11032-2 11033-2 11034-2 11035-2 11036-2 11037-2 11038-2 11039-2 11040-2 11041-2 11042-2 11043-2 11044-2 11045-2 11046-2 11047-2 11048-2 11049-2 11050-2 11051-2 11052-2 11053-2 11054-2 11055-2 11056-2 11057-2 11058-2 11059-2 11060-2 11061-2 11062-2 11063-2 11064-2 11065-2 11066-2 11067-2 11068-2 11069-2 11070-2 11071-2 11072-2 11073-2 11074-2 11075-2 11076-2 11077-2 11078-2 11079-2 11080-2 11081-2 11082-2 11083-2 11084-2 11085-2 11086-2 11087-2 11088-2 11089-2 11090-2 11091-2 11092-2 11093-2 11094-2 11095-2 11096-2 11097-2 11098-2 11099-2 11100-2 11101-2 11102-2 11103-2 11104-2 11105-2 11106-2 11107-2 11108-2 11109-2 11110-2 11111-2 11112-2 11113-2 11114-2 11115-2 11116-2 11117-2 11118-2 11119-2 11120-2 11121-2 11122-2 11123-2 11124-2 11125-2 11126-2 11127-2 11128-2 11129-2 11130-2 11131-2 11132-2 11133-2 11134-2 11135-2 11136-2 11137-2 11138-2 11139-2 11140-2 11141-2 11142-2 11143-2 11144-2 11145-2 11146-2 11147-2 11148-2 11149-2 11150-2 11151-2 11152-2 11153-2 11154-2 11155-2 11156-2 11157-2 11158-2 11159-2 11160-2 11161-2 11162-2 11163-2 11164-2 11165-2 11166-2 11167-2 11168-2 11169-2 11170-2 11171-2 11172-2 11173-2 11174-2 11175-2 11176-2 11177-2 11178-2 11179-2 11180-2 11181-2 11182-2 11183-2 11184-2 11185-2 11186-2 11187-2 11188-2 11189-2 11190-2 11191-2 11192-2 11193-2 11194-2 11195-2 11196-2 11197-2 11198-2 11199-2 11200-2 11201-2 11202-2 11203-2 11204-2 11205-2 11206-2 11207-2 11208-2 11209-2 11210-2 11211-2 11212-2 11213-2 11214-2 11215-2 11216-2 11217-2 11218-2 11219-2 11220-2 11221-2 11222-2 11223-2 11224-2 11225-2 11226-2 11227-2 11228-2 11229-2 11230-2 11231-2 11232-2 11233-2 11234-2 11235-2 11236-2 11237-2 11238-2 11239-2 11240-2 11241-2 11242-2 11243-2 11244-2 11245-2 11246-2 11247-2 11248-2 11249-2 11250-2 11251-2 11252-2 11253-2 11254-2 11255-2 11256-2 11257-2 11258-2 11259-2 11260-2 11261-2 11262-2 11263-2 11264-2 11265-2 11266-2 11267-2 11268-2 11269-2 11270-2 11271-2 11272-2 11273-2 11274-2 11275-2 11276-2 11277-2 11278-2 11279-2 11280-2 11281-2 11282-2 11283-2 11284-2 11285-2 11286-2 11287-2 11288-2 11289-2 11290-2 11291-2 11292-2 11293-2 11294-2 11295-2 11296-2 11297-2 11298-2 11299-2 11300-2 11301-2 11302-2 11303-2 11304-2 11305-2 11306-2 11307-2 11308-2 11309-2 11310-2 11311-2 11312-2 11313-2 11314-2 11315-2 11316-2 11317-2 11318-2 11319-2 11320-2 11321-2 11322-2 11323-2 11324-2 11325-2 11326-2 11327-2 11328-2 11329-2 11330-2 11331-2 11332-2 11333-2 11334-2 11335-2 11336-2 11337-2 11338-2 11339-2 11340-2 11341-2 11342-2 11343-2 	



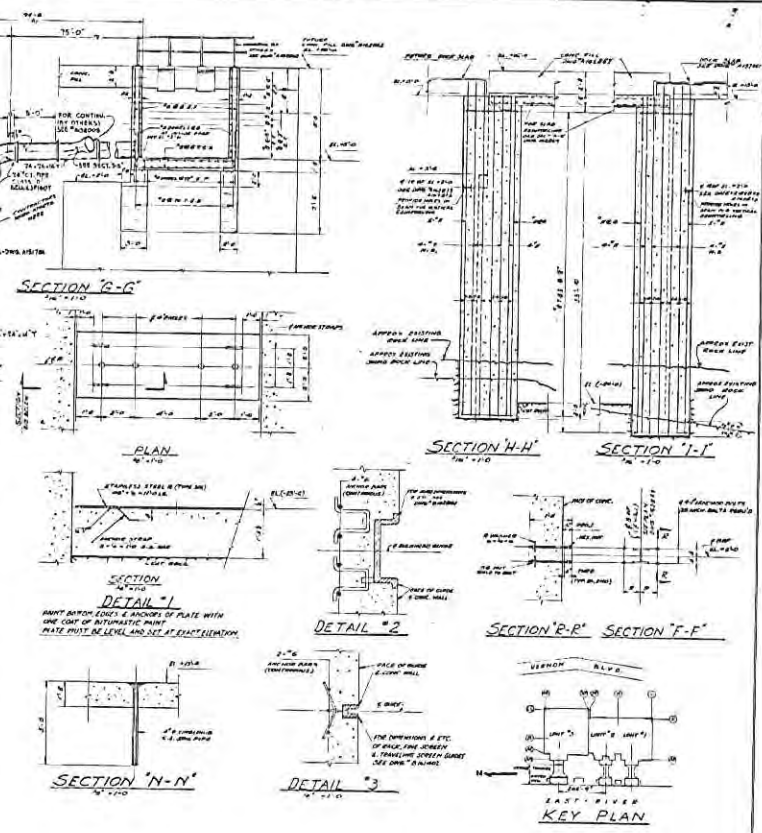
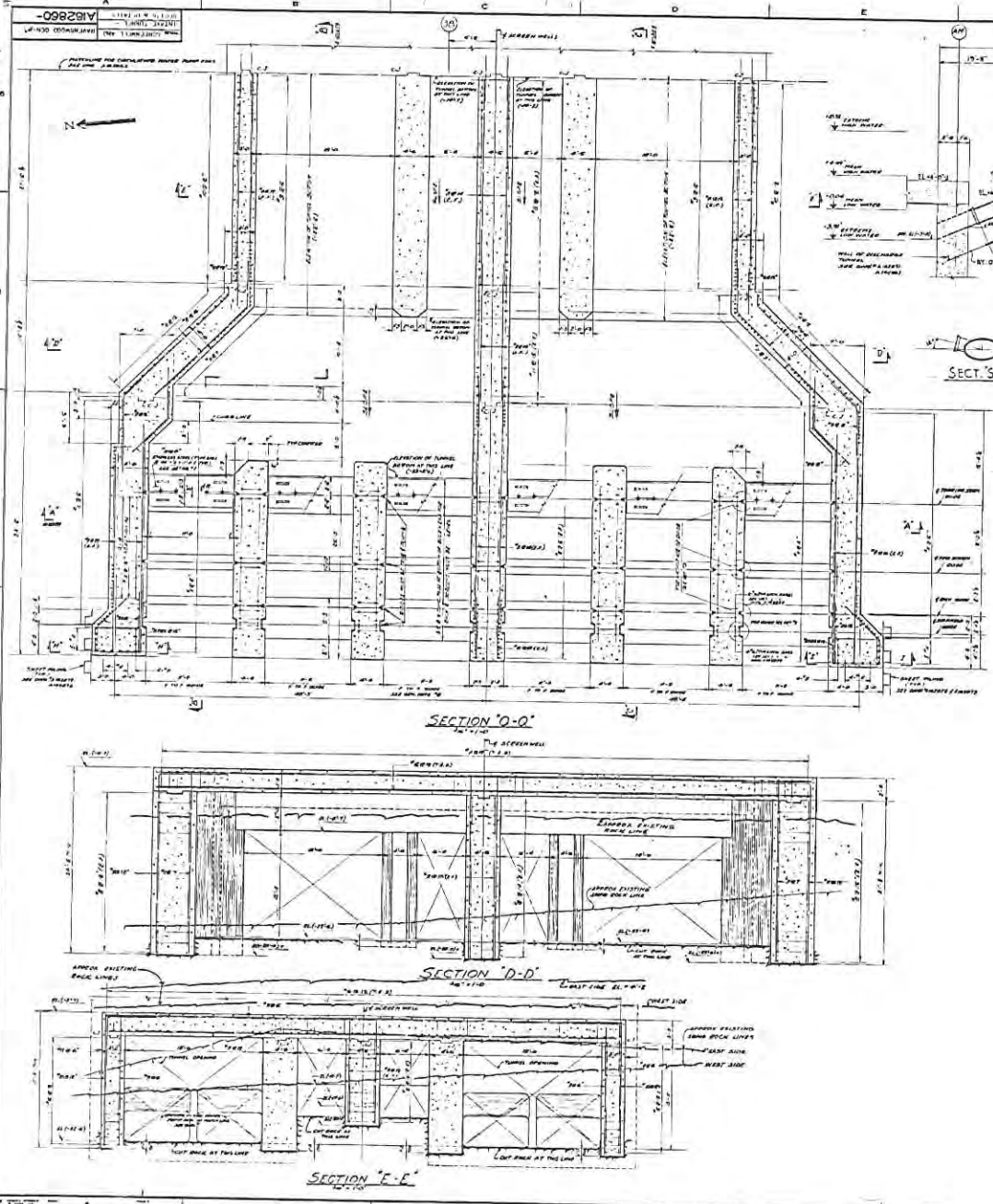
REVISIONS

NO.	DATE	DESCRIPTION
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2	10-1-23	AS NOTED
3	10-1-23	AS NOTED
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8	10-1-23	AS NOTED
9	10-1-23	AS NOTED
10	10-1-23	AS NOTED

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CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

RAUTHWOOD SEPARATING-80
SCOTCHMAN'S INTRINSIC TUNNEL PLUM
AT 111-113-115-117-119-121-123-125-127-129-131-133-135-137-139-141-143-145-147-149-151-153-155-157-159-161-163-165-167-169-171-173-175-177-179-181-183-185-187-189-191-193-195-197-199-201-203-205-207-209-211-213-215-217-219-221-223-225-227-229-231-233-235-237-239-241-243-245-247-249-251-253-255-257-259-261-263-265-267-269-271-273-275-277-279-281-283-285-287-289-291-293-295-297-299-301-303-305-307-309-311-313-315-317-319-321-323-325-327-329-331-333-335-337-339-341-343-345-347-349-351-353-355-357-359-361-363-365-367-369-371-373-375-377-379-381-383-385-387-389-391-393-395-397-399-401-403-405-407-409-411-413-415-417-419-421-423-425-427-429-431-433-435-437-439-441-443-445-447-449-451-453-455-457-459-461-463-465-467-469-471-473-475-477-479-481-483-485-487-489-491-493-495-497-499-501-503-505-507-509-511-513-515-517-519-521-523-525-527-529-531-533-535-537-539-541-543-545-547-549-551-553-555-557-559-561-563-565-567-569-571-573-575-577-579-581-583-585-587-589-591-593-595-597-599-601-603-605-607-609-611-613-615-617-619-621-623-625-627-629-631-633-635-637-639-641-643-645-647-649-651-653-655-657-659-661-663-665-667-669-671-673-675-677-679-681-683-685-687-689-691-693-695-697-699-701-703-705-707-709-711-713-715-717-719-721-723-725-727-729-731-733-735-737-739-741-743-745-747-749-751-753-755-757-759-761-763-765-767-769-771-773-775-777-779-781-783-785-787-789-791-793-795-797-799-801-803-805-807-809-811-813-815-817-819-821-823-825-827-829-831-833-835-837-839-841-843-845-847-849-851-853-855-857-859-861-863-865-867-869-871-873-875-877-879-881-883-885-887-889-891-893-895-897-899-901-903-905-907-909-911-913-915-917-919-921-923-925-927-929-931-933-935-937-939-941-943-945-947-949-951-953-955-957-959-961-963-965-967-969-971-973-975-977-979-981-983-985-987-989-991-993-995-997-999-1001-1003-1005-1007-1009-1011-1013-1015-1017-1019-1021-1023-1025-1027-1029-1031-1033-1035-1037-1039-1041-1043-1045-1047-1049-1051-1053-1055-1057-1059-1061-1063-1065-1067-1069-1071-1073-1075-1077-1079-1081-1083-1085-1087-1089-1091-1093-1095-1097-1099-1101-1103-1105-1107-1109-1111-1113-1115-1117-1119-1121-1123-1125-1127-1129-1131-1133-1135-1137-1139-1141-1143-1145-1147-1149-1151-1153-1155-1157-1159-1161-1163-1165-1167-1169-1171-1173-1175-1177-1179-1181-1183-1185-1187-1189-1191-1193-1195-1197-1199-1201-1203-1205-1207-1209-1211-1213-1215-1217-1219-1221-1223-1225-1227-1229-1231-1233-1235-1237-1239-1241-1243-1245-1247-1249-1251-1253-1255-1257-1259-1261-1263-1265-1267-1269-1271-1273-1275-1277-1279-1281-1283-1285-1287-1289-1291-1293-1295-1297-1299-1301-1303-1305-1307-1309-1311-1313-1315-1317-1319-1321-1323-1325-1327-1329-1331-1333-1335-1337-1339-1341-1343-1345-1347-1349-1351-1353-1355-1357-1359-1361-1363-1365-1367-1369-1371-1373-1375-1377-1379-1381-1383-1385-1387-1389-1391-1393-1395-1397-1399-1401-1403-1405-1407-1409-1411-1413-1415-1417-1419-1421-1423-1425-1427-1429-1431-1433-1435-1437-1439-1441-1443-1445-1447-1449-1451-1453-1455-1457-1459-1461-1463-1465-1467-1469-1471-1473-1475-1477-1479-1481-1483-1485-1487-1489-1491-1493-1495-1497-1499-1501-1503-1505-1507-1509-1511-1513-1515-1517-1519-1521-1523-1525-1527-1529-1531-1533-1535-1537-1539-1541-1543-1545-1547-1549-1551-1553-1555-1557-1559-1561-1563-1565-1567-1569-1571-1573-1575-1577-1579-1581-1583-1585-1587-1589-1591-1593-1595-1597-1599-1601-1603-1605-1607-1609-1611-1613-1615-1617-1619-1621-1623-1625-1627-1629-1631-1633-1635-1637-1639-1641-1643-1645-1647-1649-1651-1653-1655-1657-1659-1661-1663-1665-1667-1669-1671-1673-1675-1677-1679-1681-1683-1685-1687-1689-1691-1693-1695-1697-1699-1701-1703-1705-1707-1709-1711-1713-1715-1717-1719-1721-1723-1725-1727-1729-1731-1733-1735-1737-1739-1741-1743-1745-1747-1749-1751-1753-1755-1757-1759-1761-1763-1765-1767-1769-1771-1773-1775-1777-1779-1781-1783-1785-1787-1789-1791-1793-1795-1797-1799-1801-1803-1805-1807-1809-1811-1813-1815-1817-1819-1821-1823-1825-1827-1829-1831-1833-1835-1837-1839-1841-1843-1845-1847-1849-1851-1853-1855-1857-1859-1861-1863-1865-1867-1869-1871-1873-1875-1877-1879-1881-1883-1885-1887-1889-1891-1893-1895-1897-1899-1901-1903-1905-1907-1909-1911-1913-1915-1917-1919-1921-1923-1925-1927-1929-1931-1933-1935-1937-1939-1941-1943-1945-1947-1949-1951-1953-1955-1957-1959-1961-1963-1965-1967-1969-1971-1973-1975-1977-1979-1981-1983-1985-1987-1989-1991-1993-1995-1997-1999-2001-2003-2005-2007-2009-2011-2013-2015-2017-2019-2021-2023-2025-2027-2029-2031-2033-2035-2037-2039-2041-2043-2045-2047-2049-2051-2053-2055-2057-2059-2061-2063-2065-2067-2069-2071-2073-2075-2077-2079-2081-2083-2085-2087-2089-2091-2093-2095-2097-2099-2101-2103-2105-2107-2109-2111-2113-2115-2117-2119-2121-2123-2125-2127-2129-2131-2133-2135-2137-2139-2141-2143-2145-2147-2149-2151-2153-2155-2157-2159-2161-2163-2165-2167-2169-2171-2173-2175-2177-2179-2181-2183-2185-2187-2189-2191-2193-2195-2197-2199-2201-2203-2205-2207-2209-2211-2213-2215-2217-2219-2221-2223-2225-2227-2229-2231-2233-2235-2237-2239-2241-2243-2245-2247-2249-2251-2253-2255-2257-2259-2261-2263-2265-2267-2269-2271-2273-2275-2277-2279-2281-2283-2285-2287-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GENERAL NOTES

1. ALL ELEVATIONS REFER TO LEFT OF PAVEMENT.
2. ELEVATIONS REFER TO BASE OF PAVEMENT.
3. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
4. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
5. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
6. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
7. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
8. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
9. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.
10. ALL ROADS TO BE DETERMINED INTERMEDIATE GRADE.

REFERENCE DRAWINGS & SPECIFICATIONS

1. FOR THE NEW BRIDGE.
2. FOR THE OLD BRIDGE.
3. FOR THE OLD BRIDGE.
4. FOR THE OLD BRIDGE.
5. FOR THE OLD BRIDGE.
6. FOR THE OLD BRIDGE.
7. FOR THE OLD BRIDGE.
8. FOR THE OLD BRIDGE.
9. FOR THE OLD BRIDGE.
10. FOR THE OLD BRIDGE.

A162860-1

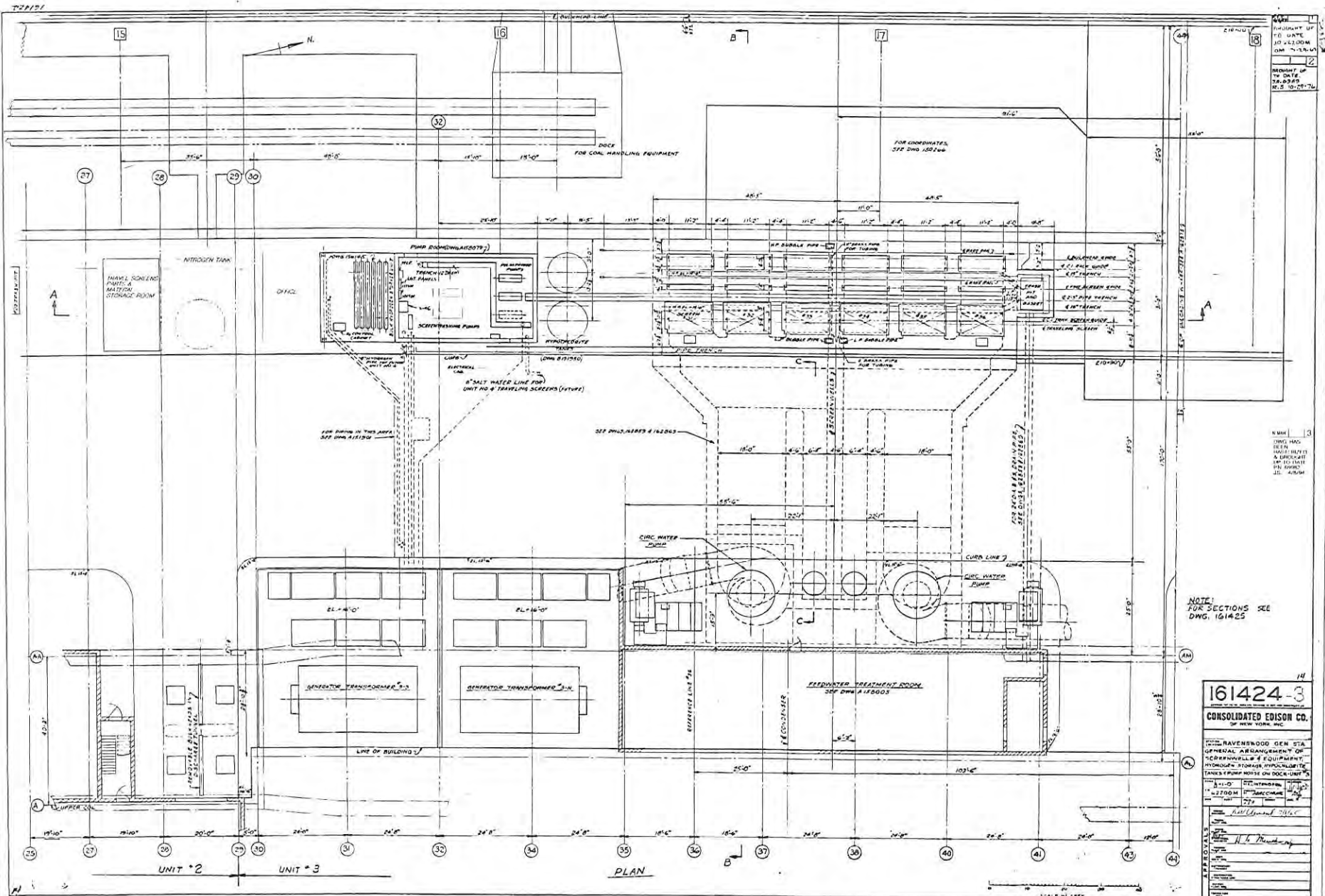
CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

DATE: 1/1/1914

BY: [Signature]

CHECKED BY: [Signature]

APPROVED BY: [Signature]



NOTE:
FOR SECTIONS SEE
DWG. 161425

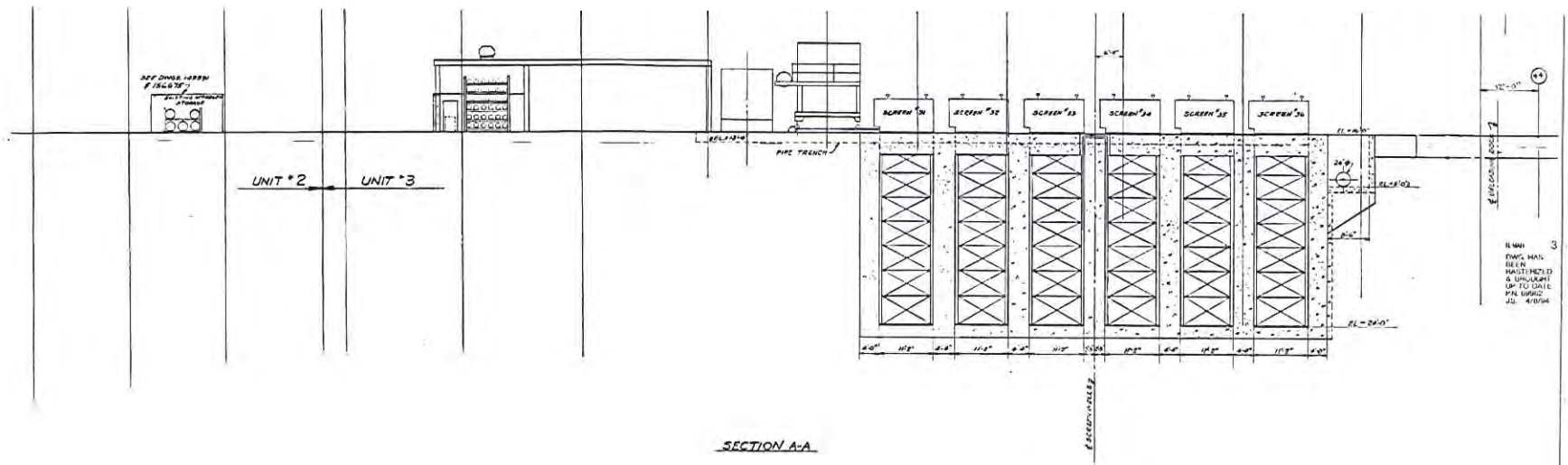
161424-3

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

FOR RAVENSWOOD GEN. STA.
OPTIONAL ARRANGEMENT OF
HYDRO-PUMP STORAGE, HYDRO-PUMP
TANKS, PUMP HOUSE, AND DOCK UNIT.

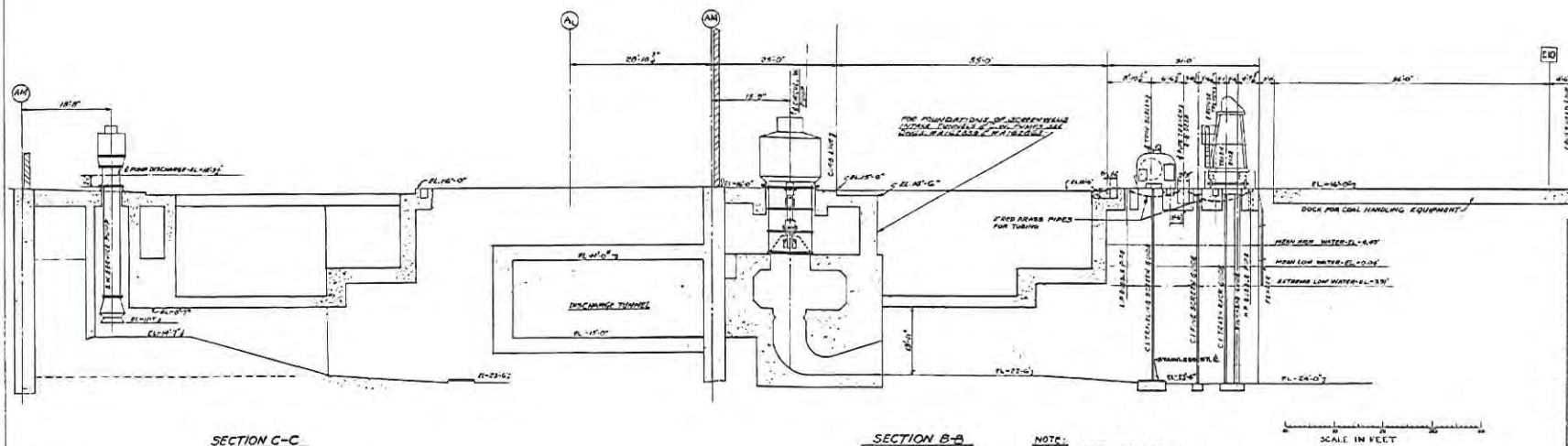
DATE: 11-10-33
BY: J. H. Mendenhall
CHECKED: J. H. Mendenhall
APPROVED: J. H. Mendenhall

SCALE: 1/4" = 1'-0"



11 MAY 1944
 DWG. NO. 16426
 MASTERED
 UP TO DATE
 J.D. 4/10/44

SECTION A-A



SECTION C-C

SECTION B-B

NOTE:
 FOR LOCATION OF SECTIONS
 SEE DWG. A-16426

SCALE IN FEET

16425	
CONSOLIDATED EDISON CO. OF NEW YORK, INC.	
GENERAL ARRANGEMENT OF SCREEN WALLS & EQUIPMENT HOUSING STORAGE HYDRO-ELECTRIC TANKS TUNNEL HOUSE ON DOCK (SEE UNIT 2)	
DATE	10/1/44
BY	J. D. MALCOLM
CHECKED BY	J. D. MALCOLM
APPROVED BY	J. D. MALCOLM
DATE	10/1/44