

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site :		Facility/site address:		
Location of facility/site : longitude: _____ latitude: _____	Facility SIC code(s):	Street:		
b) Name of facility/site owner :		Town:		
Email address of owner:		State:	Zip:	County:
Telephone no. of facility/site owner :				
Fax no. of facility/site owner :	Owner is (check one): 1. Federal _____ 2. State/Tribal _____ 3. Private _____ 4. other, if so, describe:			
Address of owner (if different from site):				
Street:				
Town:	State:	Zip:	County:	
c) Legal name of operator :	Operator telephone no:			
	Operator fax no.:		Operator email:	
Operator contact name and title:				

Address of operator (if different from owner):		Street:	
Town:	State:	Zip:	County:
d) Check "yes" or "no" for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes___ No___, if "yes," number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes___ No___, if "yes," date and tracking #: 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes___ No___ 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes___ No___			
e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes___ No___ If "yes," please list: 1. site identification # assigned by the state of NH or MA: 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number:		f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y___ N___, if Y, number: 2. phase I or II construction storm water general permit? Y___ N___, if Y, number: 3. individual NPDES permit? Y___ N___, if Y, number: 4. any other water quality related permit? Y___ N___, if Y, number:	

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:		
b) Provide the following information about each discharge:	1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow_____ Average flow_____. Is maximum flow a design value ? Y___ N___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
3) Latitude and longitude of each discharge within 100 feet: pt.1:long.____ lat.____; pt.2: long.____ lat.____; pt.3: long.____ lat.____; pt.4:long.____ lat.____; pt.5: long.____ lat.____; pt.6:long.____ lat.____; pt.7: long.____ lat.____; pt.8:long.____ lat.____; etc.		

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent _____ or seasonal _____? Is discharge ongoing Yes _____ No _____?
c) Expected dates of discharge (mm/dd/yy): start _____ end _____	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids										
2. Total Residual Chlorine										
3. Total Petroleum Hydrocarbons										
4. Cyanide										
5. Benzene										
6. Toluene										
7. Ethylbenzene										
8. (m,p,o) Xylenes										
9. Total BTEX ⁴										

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)										
11. Methyl-tert-Butyl Ether (MtBE)										
12. tert-Butyl Alcohol (TBA)										
13. tert-Amyl Methyl Ether (TAME)										
14. Naphthalene										
15. Carbon Tetra- chloride										
16. 1,4 Dichlorobenzene										
17. 1,2 Dichlorobenzene										
18. 1,3 Dichlorobenzene										
19. 1,1 Dichloroethane										
20. 1,2 Dichloroethane										
21. 1,1 Dichloroethylene										
22. cis-1,2 Dichloro- ethylene										
23. Dichloromethane (Methylene Chloride)										
24. Tetrachloroethylene										

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane										
26. 1,1,2 Trichloroethane										
27. Trichloroethylene										
28. Vinyl Chloride										
29. Acetone										
30. 1,4 Dioxane										
31. Total Phenols										
32. Pentachlorophenol										
33. Total Phthalates ⁵ (Phthalate esthers)										
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)										
a. Benzo(a) Anthracene										
b. Benzo(a) Pyrene										
c. Benzo(b)Fluoranthene										
d. Benzo(k) Fluoranthene										
e. Chrysene										

⁵The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene										
g. Indeno(1,2,3-cd) Pyrene										
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)										
h. Acenaphthene										
i. Acenaphthylene										
j. Anthracene										
k. Benzo(ghi) Perylene										
l. Fluoranthene										
m. Fluorene										
n. Naphthalene-										
o. Phenanthrene										
p. Pyrene										
37. Total Polychlorinated Biphenyls (PCBs)										
38. Antimony										
39. Arsenic										
40. Cadmium										
41. Chromium III										
42. Chromium VI										

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper										
44. Lead										
45. Mercury										
46. Nickel										
47. Selenium										
48. Silver										
49. Zinc										
50. Iron										
Other (describe):										

c) For discharges where **metals** are believed present, please fill out the following:

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: _____	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y____ N____ If “Yes,” list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	Dechlorination	Other (please describe):			
c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system: Average flow rate of discharge _____ Maximum flow rate of treatment system _____ Design flow rate of treatment system _____						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets):						

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct _____	Within facility__	Storm drain____	River/brook____	Wetlands _____	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:						

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:

1. For multiple discharges, number the discharges sequentially.

2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water

The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water _____,

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs

Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes____ No____ If yes, for which pollutant(s)?

Is there a TMDL? Yes____ No____ If yes, for which pollutant(s)?

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes____ No____

Has any consultation with the federal services been completed? No____ or is consultation underway? No____

What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service? Yes (check one):

a “no jeopardy” opinion? _____ or written concurrence _____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?

Yes____ No____ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes____ No____

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: North Washington Wharf

Operator signature: 

Title: Vice President

Date: 05/05/06

B. Submission of NOI to EPA - All operators applying for coverage under this General Permit must submit a written Notice of Intent (NOI) to EPA. Signed and completed NOI forms and attachments must be submitted to EPA-NE at:

US Environmental Protection Agency
RGP-NOC Processing
Municipal Assistance Unit (CMU),
1 Congress Street, Suite 1100
Boston, MA 02114-2023

or electronically mailed to NPDES.Generalpermits@epa.gov,
or faxed to the EPA Office at 617-918-0505.

If filling out the suggested NOI form electronically on EPA's website, the signature page must be signed and faxed or mailed to EPA at the phone number or address listed in Section I.B. below.

1. Filing with the states - A copy of any NOI form filed with EPA-NE must also be filed with state agencies. The state agency may elect to develop a state specific form or other information requirements.

a) Discharges in Massachusetts - In addition to the NOI, permit applicants must submit copies of the State Application Form BRPWM 12, Request for General Permit coverage for the RGP. The application form and the Transmittal Form for Permit Application and Payment, may be obtained from the Massachusetts Department of Environmental Protection (MA DEP) website at www.state.ma.us/dep. Municipalities are fee-exempt, but should send a copy of the transmittal form to that address for project tracking purposes. All applicants should keep a copy of the transmittal form and a copy of the application package for their records.

1) A copy of the NOI, the transmittal form, a copy of the check, and Form BRPWM 12 should be sent to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

2) A copy of the transmittal form and the appropriate fee should be sent to:

Massachusetts Department of Environmental Protection
P.O. Box 4062
Boston, MA 02111

Please note: Applicants for discharges in Massachusetts should note that under 310 CMR 40.000, *as a matter of state law*, the general permit only applies to discharges that are **not** subject to the Massachusetts Contingency Plan (MCP) and 310 CMR 40.000. Therefore, discharges subject to the MCP are **not** required to fill out and submit the State Application Form BRPWM 12 or pay the state fees. However, they must submit a NOI to EPA.

b) Discharges in New Hampshire - applicants must provide a copy of the Notice of Intent to:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095.

2. Filing with Municipalities - A copy of the NOI must be submitted to the municipality in which the proposed discharge would be located.

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:

The Hoffman Building
160 North Washington Street
Boston, MA 02421
4692612n 330427ew



Site Location

The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.



Massachusetts Executive Office of Environmental Affairs - 2006

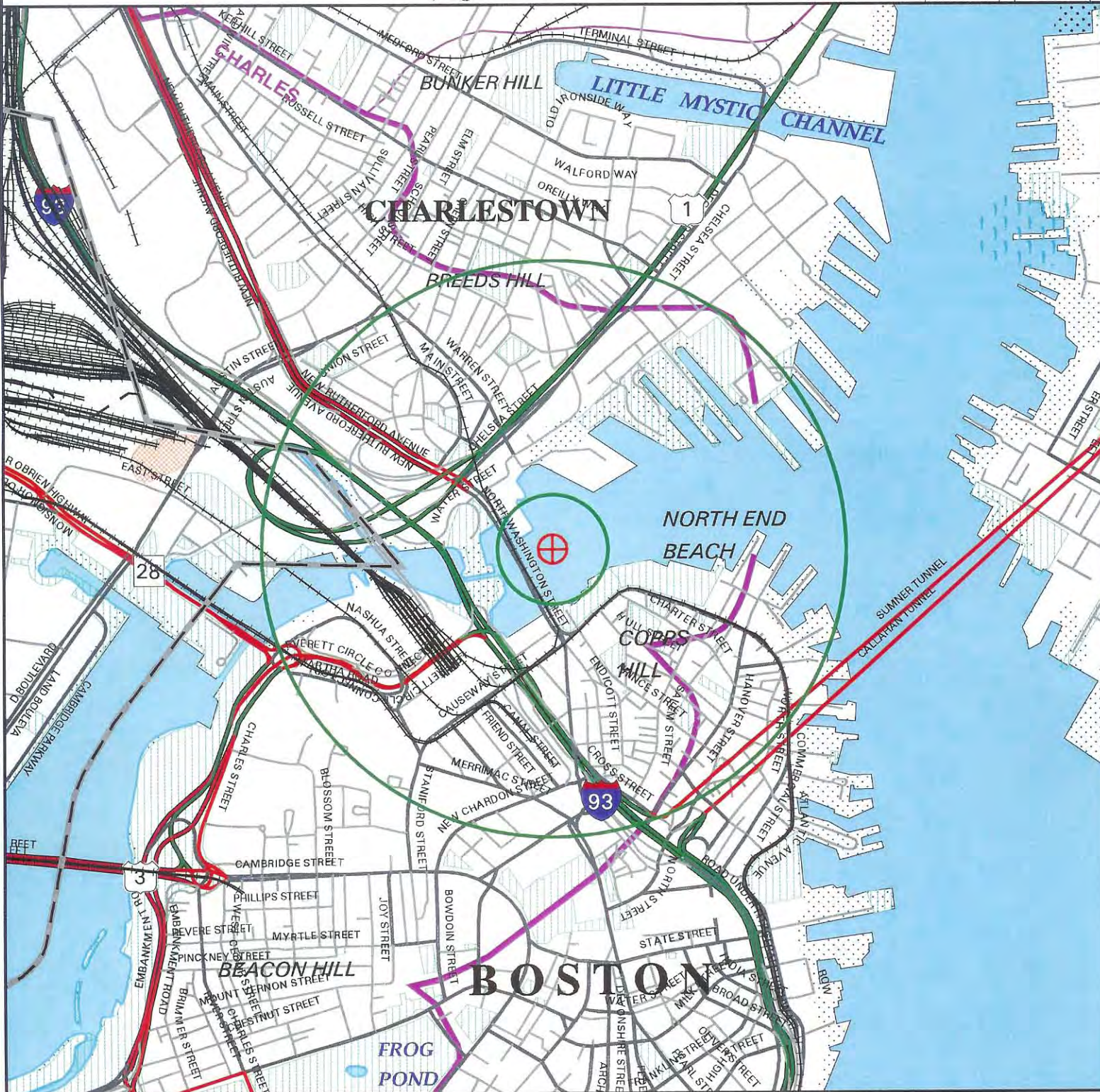
Office of Geographic and Environmental Information



MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION



EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS



Roads: Limited Access, Divided, Major Road, Connector, Street, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dams

Potentially Productive Aquifers: Medium, High Yield

Non-Potential Drinking Water Source Area: Medium, High Yield

EPA Sole Source Aquifer; FEMA 100-year floodplain

Public Water Supplies: Ground, Surface, Non Community

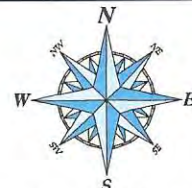
Approved Zone 2; IVPA; Surface Water Supply Zone A

Hydrography: Water Features, Public Surface Water Supply

Wetlands: Fresh, Salt, NHESP Wetlands Habitat

Protected Open Space; ACEC

DEP Permitted Solid Waste Facilities; Certified Vernal Pools

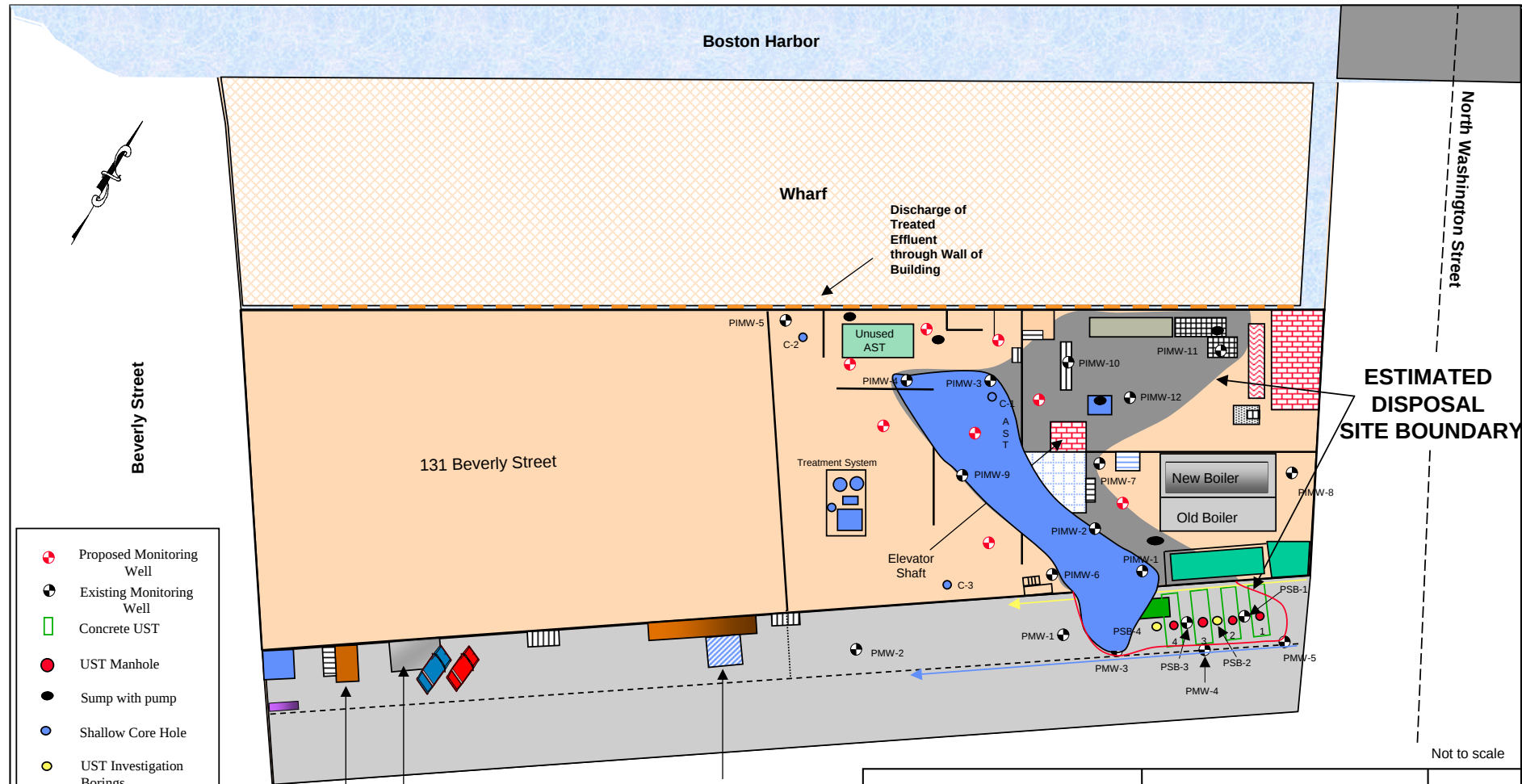


SCALE 1:15000

0 1/2 1 KILOMETERS

MILES

April 14, 2006

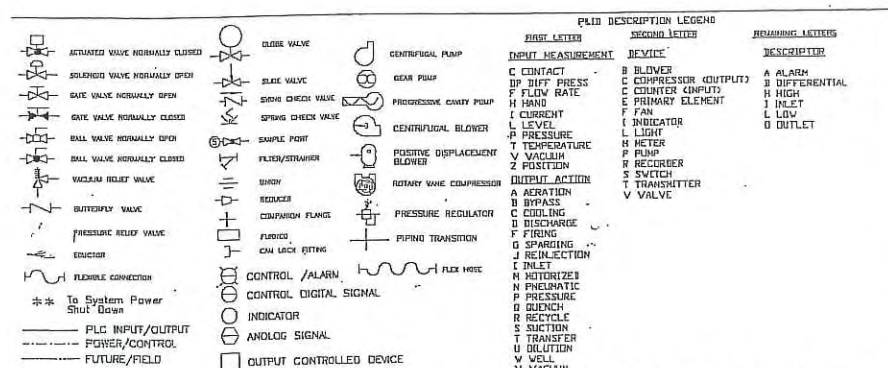
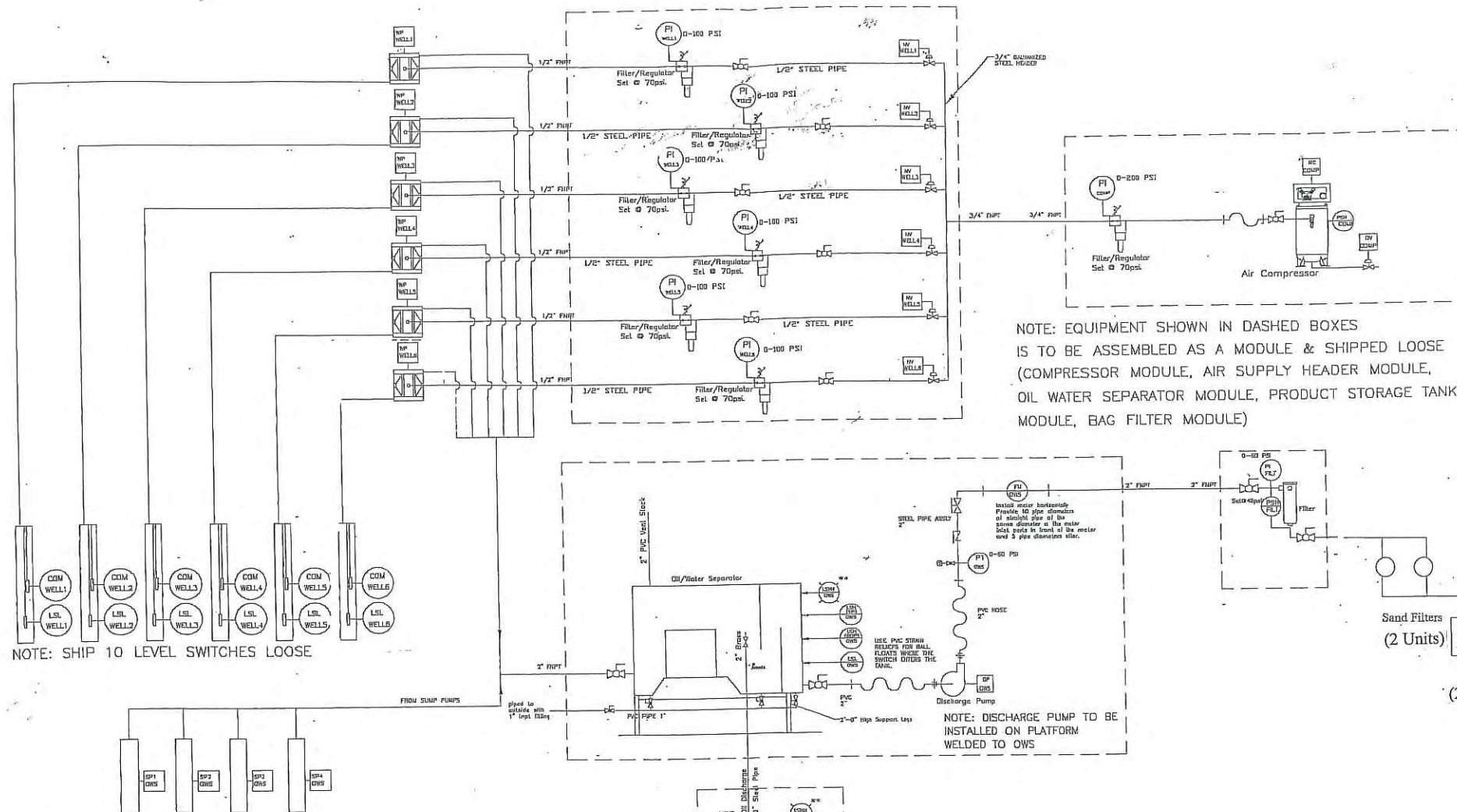


Not to scale

PARAGON
 10 Cottage Street
 Norwood, MA 02062
 Tel: 888-660-9975
 Fax: 781-278-0910

SITE PLAN
 160 North Washington Street
 Boston, Massachusetts

FIGURE
 2
 PROJECT
 03-48360



All Level Switches Normally Open (N.O.) unless otherwise specified. ie. (N.C.) Normally Closed.

B MAY 8, 06 CS: REVISED TO INCLUDE SAND AND CARBON FILTERS
A DEC 15, 03 JK FOR APPROVAL

DWG. NO: 8920-01
Process Flow & Instrumentation
CUSTOMER: Paragon Environmental
Hoffman Building

March 14, 2006

Mr. Craig Nicholson
Paragon Environmental Services
10 Cottage Street
Suite B
Norwood, MA 02062

LABORATORY REPORT

Project: **N. Washington St/5384**
Lab ID: **92065**
Received: **02-27-06**

Dear Craig:

Enclosed are the analytical results for the above referenced project. The project was processed for Standard turnaround.

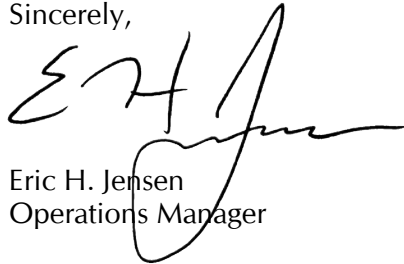
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/kh
Enclosures

Sample Receipt Report

Project: **N. Washington St/5384**
 Client: **Paragon Environmental Services**
 Lab ID: **92065**

Delivery: **GWA Courier**
 Airbill: **n/a**
 Lab Receipt: **02-27-06**

Temperature: **2.0'C**
 Chain of Custody: **Present**
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-1	INF 01		Aqueous	2/24/06 11:00	EPA 8260B Volatile Organics with Oxygenates			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C784313	40 mL VOA Vial	Proline	BX19737	HCl	R-4601F	01-30-06	02-07-06	
C784366	40 mL VOA Vial	Proline	BX19737	HCl	R-4601F	01-30-06	02-07-06	
C784354	40 mL VOA Vial	Proline	BX19737	HCl	R-4601F	01-30-06	02-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-2	INF 01		Aqueous	2/24/06 11:00	EPA 504.1 EDB and DBCP			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C716336	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-07-06	
C716320	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-07-06	
C716317	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-3	EFF 01		Aqueous	2/24/06 11:30	EPA 624 Volatile Organics			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C539362	40 mL VOA Vial	Proline	BX15505	HCl	R-4297A	01-11-05	02-08-05	
C539399	40 mL VOA Vial	Proline	BX15505	HCl	R-4297A	01-11-05	02-08-05	
C539363	40 mL VOA Vial	Proline	BX15505	HCl	R-4297A	01-11-05	02-08-05	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-4	INF 01		Aqueous	2/24/06 11:00	EPA 8270C Semivolatile Organics (Low Level)			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C742389	1 L Amber Glass	Proline	BX19815	None	n/a	n/a	02-07-06	
C742387	1 L Amber Glass	Proline	BX19815	None	n/a	n/a	02-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-5	INF 01		Aqueous	2/24/06 11:00	EPA 1664 Hexane Extractable Material			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C742391	1 L Amber Glass	Proline	BX19815	H2SO4	n/a	n/a	02-07-06	
C742385	1 L Amber Glass	Proline	BX19815	H2SO4	n/a	n/a	02-07-06	
C742455	1 L Amber Glass	Proline	BX19820	H2SO4	R-4796A	01-31-06	02-07-06	
C742454	1 L Amber Glass	Proline	BX19820	H2SO4	R-4796A	01-31-06	02-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-6	INF 01		Aqueous	2/24/06 11:00	SM 2540 D Total Suspended Solids			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C742127	1 L Plastic	Proline	BX19768	None	n/a	n/a	02-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-7	INF 01		Aqueous	2/24/06 11:00	Lachat 10-204-00-1-A (EPA 335.3) Total Cyanide			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C711941	500 mL Plastic	Proline	BX19389	NaOH	R-4387A	01-13-06	02-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
92065-8	INF 01		Aqueous	2/24/06 11:00	EPA 6010B As Cd Cr Cu Fe Ni Ag Zn Total EPA 7041 Antimony by GFAA Sb EPA 7421 Lead by GFAA Lead by GFAA EPA 7470A Hg Total EPA 7740 Selenium by GFAA Selenium by GFAA			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C764216	250 mL Plastic	Proline	BX19595	HNO3	R-4550E	01-13-06	02-07-06	

Sample Receipt Report (Continued)

Project: **N. Washington St/5384**
 Client: **Paragon Environmental Services**
 Lab ID: **92065**

Delivery: **GWA Courier**
 Airbill: **n/a**
 Lab Receipt: **02-27-06**

Temperature: **2.0'C**
 Chain of Custody: **Present**
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
92065-9	INF 01		Aqueous	2/24/06 11:00	SM 4500-Cl G Total Residual Chlorine				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C772583	250 mL Glass	Proline	BX19346	None	n/a	n/a	02-07-06		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
92065-10	INF 01		Aqueous	2/24/06 11:00	SM 3500-Cr D Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C798598	250 mL Plastic	Proline	BX19868	None	n/a	n/a	02-07-06		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
92065-11	EFF 01		Aqueous	2/24/06 11:30	EPA 625 PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C680073	1 L Amber Glass	Proline	BX17354	H2SO4	R-4432A	07-29-05	08-03-05		
C680072	1 L Amber Glass	Proline	BX17354	H2SO4	R-4432A	07-29-05	08-03-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
92065-12	EFF 01		Aqueous	2/24/06 11:30	SM 5520 CF Total Petroleum Hydrocarbons by IR				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C680077	1 L Amber Glass	Proline	BX17354	H2SO4	R-4432A	07-29-05	08-03-05		
C680074	1 L Amber Glass	Proline	BX17354	H2SO4	R-4432A	07-29-05	08-03-05		

Data Certification

Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Lab ID: **92065**
Received: **02-27-06 17:00**

MA DEP Compendium of Analytical Methods						
Project Location: n/a		MA DEP RTN: n/a				
This Form provides certifications for the following data set:						
EPA 8260B:	92065-01					
EPA 8270C:	92065-04,-04,-04					
EPA 6010B:	92065-08					
EPA 7470A/1A:	92065-08					
Sample Matrices:	Groundwater (X)	Soil/Sediment ()	Drinking Water ()	Other ()		
MCP SW-846	8260B (X)	8151A ()	8330 ()	6010B (X)	7470A/1A (X)	
Methods Used	8270C (X)	8081A ()	VPH ()	6020 ()	9012A ² ()	
As specified in MA DEP Compendium of Analytical Methods. (check all that apply)	8082 ()	8021B ()	EPH ()	7000 S ³ ()	Other ()	
	1. List Release Tracking Number (RTN), if known.					
	2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method					
	3. S - SW-846 Methods 7000 Series. List individual method and analyte.					
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.						
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?					Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?					Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?					Yes
D.	<u>VPH and EPH methods only:</u> Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?					n/a
A response to questions E and F below is required for "Presumptive Certainty" status.						
E.	Were all QC performance standards and recommendations for the specified methods achieved?					No
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?					No
All No answers are addressed in the attached Project Narrative.						
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.						
Signature:			Position:	Operations Manager		
Printed Name:	Eric H. Jensen		Date:	03-14-06		

EPA Method 8260B Volatile Organics by GC/MS

Field ID: **INF 01**
Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Laboratory ID: **92065-01**
Sampled: **02-24-06 11:00**
Received: **02-27-06 17:00**
Analyzed: **03-08-06 22:02**
Analyst: **KMC**

Matrix: **Aqueous**
Container: **40 mL VOA Vial**
Preservation: **HCl/Cool**

QC Batch ID: **VM4-3464-W**
Instrument ID: **MS-4 HP 6890**
Sample Volume: **25 mL**
Dilution Factor: **1**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	<i>trans</i> - 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl <i>tert</i> - butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	<i>cis</i> - 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	<i>cis</i> - 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	<i>trans</i> - 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	<i>meta</i> - Xylene and <i>para</i> - Xylene	BRL		ug/L	0.5
95-47-6	<i>ortho</i> - Xylene	BRL		ug/L	0.5

EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: **INF 01**
Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Laboratory ID: **92065-01**
Sampled: **02-24-06 11:00**
Received: **02-27-06 17:00**
Analyzed: **03-08-06 22:02**
Analyst: **KMC**

Matrix: **Aqueous**
Container: **40 mL VOA Vial**
Preservation: **HCl/Cool**

QC Batch ID: **VM4-3464-W**
Instrument ID: **MS-4 HP 6890**
Sample Volume: **25 mL**
Dilution Factor: **1**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	<i>n</i> -Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	<i>tert</i> -Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	<i>sec</i> -Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	<i>n</i> -Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	<i>tert</i> -Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl <i>tert</i> -butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	<i>tert</i> -Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	104 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.5	95 %	70 - 130 %
Toluene-d ₈	10	11	106 %	70 - 130 %
4-Bromofluorobenzene	10	9.1	91 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**EPA Method 504.1
EDB and DBCP by GC/ECD**

Field ID:	INF 01	Matrix:	Aqueous
Project:	N. Washington St/5384	Container:	40 mL VOA Vial
Client:	Paragon Environmental Services	Preservation:	Cool
Laboratory ID:	92065-02	QC Batch ID:	PV-0819-E
Sampled:	02-24-06 11:00	Instrument ID:	GC-5 HP 5890
Received:	02-27-06 17:00	Sample Volume:	34 mL
Extracted:	02-28-06 17:00	Final Volume:	1 mL
Analyzed:	02-28-06 18:08	Dilution Factor:	1
Analyst:	CRL		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**EPA Method 624
Volatile Organics by GC/MS**

Field ID: **EFF 01**
 Project: **N. Washington St/5384**
 Client: **Paragon Environmental Services**
 Laboratory ID: **92065-03**
 Sampled: **02-24-06 11:30**
 Received: **02-27-06 17:00**
 Analyzed: **03-07-06 11:27**
 Analyst: **KMC**

Matrix: **Aqueous**
 Container: **40 mL VOA Vial**
 Preservation: **HCl/Cool**
 QC Batch ID: **VM4-3462-W**
 Instrument ID: **MS-4 HP 6890**
 Sample Volume: **25 mL**
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
1634-04-4	Methyl <i>tert</i> -butyl Ether (MTBE)	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
108-88-3	Toluene	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	<i>meta</i> -Xylene and <i>para</i> -Xylene	BRL		ug/L	0.5
95-47-6	<i>ortho</i> -Xylene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.4	84 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	8	80 %	70 - 130 %
Toluene-d ₈	10	8.9	89 %	70 - 130 %
4-Bromofluorobenzene	10	8.7	87 %	70 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 C.F.R. 136, Appendix A (1986).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

EPA Method 8270C Semivolatile Organics by GC/MS

Field ID: **INF 01**
Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Laboratory ID: **92065-04**
Sampled: **02-24-06 11:00**
Received: **02-27-06 17:00**
Extracted: **03-01-06 16:00**
Analyzed: **03-11-06 19:38**
Analyst: **CMM**

Matrix: **Aqueous**
Container: **1 L Amber Glass**
Preservation: **Cool**

QC Batch ID: **SV-1845-F**
Instrument ID: **MS-3 HP 5890**
Sample Volume: **900 mL**
Final Volume: **1 mL**
Dilution Factor: **1**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	6
110-86-1	Pyridine	BRL		ug/L	6
108-95-2	Phenol	BRL		ug/L	6
62-53-3	Aniline	BRL		ug/L	6
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	6
95-57-8	2-Chlorophenol	BRL		ug/L	6
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	6
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	6
100-51-6	Benzyl Alcohol	BRL		ug/L	6
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	6
95-48-7	2-Methylphenol	BRL		ug/L	6
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	6
108-39-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	6
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	6
98-86-2	Acetophenone	BRL		ug/L	6
67-72-1	Hexachloroethane	BRL		ug/L	6
98-95-3	Nitrobenzene	BRL		ug/L	6
78-59-1	Isophorone	BRL		ug/L	6
88-75-5	2-Nitrophenol	BRL		ug/L	6
105-67-9	2,4-Dimethylphenol	BRL		ug/L	6
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	6
120-83-2	2,4-Dichlorophenol	BRL		ug/L	6
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	6
91-20-3	Naphthalene	BRL		ug/L	6
106-47-8	4-Chloroaniline	BRL		ug/L	6
87-68-3	Hexachlorobutadiene	BRL		ug/L	6
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	6
91-57-6	2-Methylnaphthalene	BRL		ug/L	6
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	6
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	6
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	6
91-58-7	2-Chloronaphthalene	BRL		ug/L	6
88-74-4	2-Nitroaniline	BRL		ug/L	6
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	6
131-11-3	Dimethyl phthalate	BRL		ug/L	6
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	6
208-96-8	Acenaphthylene	BRL		ug/L	6
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	6
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	6
99-09-2	3-Nitroaniline	BRL		ug/L	6
83-32-9	Acenaphthene	BRL		ug/L	6
51-28-5	2,4-Dinitrophenol	BRL		ug/L	6
100-02-7	4-Nitrophenol	BRL		ug/L	6
132-64-9	Dibenzofuran	BRL		ug/L	6
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	6

EPA Method 8270C (Continued) Semivolatile Organics by GC/MS

Field ID: **INF 01**
Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Laboratory ID: **92065-04**
Sampled: **02-24-06 11:00**
Received: **02-27-06 17:00**
Extracted: **03-01-06 16:00**
Analyzed: **03-11-06 19:38**
Analyst: **CMM**

Matrix: **Aqueous**
Container: **1 L Amber Glass**
Preservation: **Cool**

QC Batch ID: **SV-1845-F**
Instrument ID: **MS-3 HP 5890**
Sample Volume: **900 mL**
Final Volume: **1 mL**
Dilution Factor: **1**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
84-66-2	Diethyl phthalate	BRL		ug/L	6
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	6
86-73-7	Fluorene	BRL		ug/L	6
100-01-6	4-Nitroaniline	BRL		ug/L	6
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	6
86-30-6	N-Nitrosodiphenylamine [†]	BRL		ug/L	6
122-66-7	1,2-Diphenylhydrazine [◇]	BRL		ug/L	6
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	6
118-74-1	Hexachlorobenzene	BRL		ug/L	6
87-86-5	Pentachlorophenol	BRL		ug/L	6
85-01-8	Phenanthrene	BRL		ug/L	6
120-12-7	Anthracene	BRL		ug/L	6
86-74-8	Carbazole	BRL		ug/L	6
84-74-2	Di-n-butyl phthalate	BRL		ug/L	6
206-44-0	Fluoranthene	BRL		ug/L	6
129-00-0	Pyrene	BRL		ug/L	6
85-68-7	Butyl benzyl phthalate	BRL		ug/L	6
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	6
56-55-3	Benzo[a]anthracene	BRL		ug/L	6
218-01-9	Chrysene	BRL		ug/L	6
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	6
117-84-0	Di-n-octyl phthalate	BRL		ug/L	6
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	6
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	6
50-32-8	Benzo[a]pyrene	BRL		ug/L	6
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	6
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	6
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	6

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	22	11	49 %	15 - 110 %
Phenol-d5	22	9.6	43 %	15 - 110 %
Nitrobenzene-d5	11	6.7	60 %	30 - 130 %
2-Fluorobiphenyl	11	7.8	71 %	30 - 130 %
2,4,6-Tribromophenol	22	15	68 %	15 - 110 %
Terphenyl-d14	11	8.3	75 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

* Analyzed as 4-Methylphenol.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◇ Analyzed as Azobenzene.

**EPA Method 8270C
Semivolatile Organics by GC/MS-SIM (Part 2)**

Field ID: **INF 01**
 Project: **N. Washington St/5384**
 Client: **Paragon Environmental Services**
 Laboratory ID: **92065-04**
 Sampled: **02-24-06 11:00**
 Received: **02-27-06 17:00**
 Extracted: **03-01-06 10:00**
 Analyzed: **03-13-06 14:50**
 Analyst: **MJB**

Matrix: **Aqueous**
 Container: **1 L Amber Glass**
 Preservation: **Cool**
 QC Batch ID: **SV-1845-F**
 Instrument ID: **MS-6 HP 6890**
 Sample Volume: **900 mL**
 Final Volume: **1 mL**
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	2.8
91-57-6	2-Methylnaphthalene	BRL		ug/L	2.8
208-96-8	Acenaphthylene	BRL		ug/L	2.8
83-32-9	Acenaphthene	BRL		ug/L	2.8
86-73-7	Fluorene	BRL		ug/L	2.8
85-01-8	Phenanthrene	BRL		ug/L	2.8
120-12-7	Anthracene	BRL		ug/L	2.8
206-44-0	Fluoranthene	BRL		ug/L	2.8
129-00-0	Pyrene	BRL		ug/L	2.8
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.6
218-01-9	Chrysene	BRL		ug/L	0.6
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	0.6
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.6
50-32-8	Benzo[a]pyrene	BRL		ug/L	0.6
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	0.6
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	0.6
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	0.6
87-68-3	Hexachlorobutadiene	BRL		ug/L	2.8
118-74-1	Hexachlorobenzene	BRL		ug/L	2.8
87-86-5	Pentachlorophenol	BRL		ug/L	5.6

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	22	11	50 %	15 - 110 %
Phenol-d5	22	10	46 %	15 - 110 %
Nitrobenzene-d5	11	6.6	59 %	30 - 130 %
2-Fluorobiphenyl	11	8.4	76 %	30 - 130 %
2,4,6-Tribromophenol	22	17	77 %	15 - 110 %
Terphenyl-d14	11	9	81 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
 Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Inorganic Chemistry

Field ID: **INF 01**
 Project: **N. Washington St/5384**
 Client: **Paragon Environmental Services**

Matrix: **Aqueous**
 Received: **02-27-06 17:00**

Lab ID: **92065-05** Sampled: **02-24-06 11:00** Container: **1 L Amber Glass** Preservation: **H2SO4/Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Oil and Grease, Total	BRL	mg/L	6	1	850 mL	03-09-06 14:00	HO-0208-W	EPA 1664	3	DEB

Lab ID: **92065-06** Sampled: **02-24-06 11:00** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	70	mg/L	10	5	100 mL	03-01-06 15:34	TSS-1196-W	SM 2540 D	3	DB

Lab ID: **92065-07** Sampled: **02-24-06 11:00** Container: **500 mL Plastic** Preservation: **NaOH/Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Cyanide, Total	BRL	mg/L	0.01	1	50 mL	03-07-06 14:33	TCN-1169-W	Lachat 10-204-00-1-A (EPA 335.3)	1	AVB

Lab ID: **92065-09** Sampled: **02-24-06 11:00** Container: **250 mL Glass** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	BRL	mg/L	0.2	1	5 mL	02-27-06 21:30	TRC-0412-W	SM 4500-Cl G	2	IJD

Lab ID: **92065-10** Sampled: **02-24-06 11:00** Container: **250 mL Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	0.05	mg/L	0.01	1	5 mL	02-27-06 21:24	HC-0254-W	SM 3500-Cr D	1	DDW

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations:

- BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
- RL Reporting Limit.
- DF Dilution Factor.
- 1 Instrument ID: Lachat 8000 Autoanalyzer
- 2 Instrument ID: Milton Roy Spectronic 401
- 3 Instrument ID: Mettler AT 200 Balance

Trace Metals

Field ID: **INF 01**
Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Matrix: **Aqueous**
Container: **250 mL Plastic**
Preservation: **HNO₃ / Cool**
Preserved: **02-24-06 11:00**

Laboratory ID: **92065-08**
Sampled: **02-24-06 11:00**
Received: **02-27-06 17:00**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 7041 ¹	MB-1961-W	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100	MWR
EPA 6010B ²	MB-1961-W	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100	MWR
EPA 7421 ³	MB-1961-W	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100	MWR
EPA 7470A ⁴	MP-1807-W	EPA 7470A	03-02-06 09:15	25 mL	CVAA-1 PE FIMS	KLB
EPA 7740 ⁵	MB-1961-W	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Total	BRL		mg/L	0.006	1	03-07-06 15:15	EPA 7041 ¹
7440-38-2	Arsenic, Total	BRL		mg/L	0.01	1	03-07-06 22:13	EPA 6010B ²
7440-43-9	Cadmium, Total	BRL		mg/L	0.005	1	03-08-06 18:02	EPA 6010B ²
7440-47-3	Chromium, Total	BRL		mg/L	0.01	1	03-08-06 18:02	EPA 6010B ²
7440-50-8	Copper, Total	0.042		mg/L	0.025	1	03-08-06 18:02	EPA 6010B ²
7439-89-6	Iron, Total	2.1		mg/L	0.1	1	03-08-06 18:02	EPA 6010B ²
7439-92-1	Lead, Total	0.008		mg/L	0.001	1	03-13-06 16:46	EPA 7421 ³
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	03-02-06 13:13	EPA 7470A ⁴
7440-02-0	Nickel, Total	BRL		mg/L	0.04	1	03-08-06 18:02	EPA 6010B ²
7782-49-2	Selenium, Total	BRL		mg/L	0.05	10	03-14-06 14:23	EPA 7740 ⁵
7440-22-4	Silver, Total	BRL		mg/L	0.007	1	03-08-06 18:02	EPA 6010B ²
7440-66-6	Zinc, Total	BRL		mg/L	0.2	1	03-08-06 18:02	EPA 6010B ²

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

**EPA Method 625
Polynuclear Aromatic Hydrocarbons by GC/MS**

Field ID: **EFF 01**
 Project: **N. Washington St/5384**
 Client: **Paragon Environmental Services**
 Laboratory ID: **92065-11**
 Sampled: **02-24-06 11:30**
 Received: **02-27-06 17:00**
 Extracted: **03-03-06 09:00**
 Analyzed: **03-07-06 18:30**
 Analyst: **CMM**

Matrix: **Aqueous**
 Container: **1 L Amber Glass**
 Preservation: **Cool**
 QC Batch ID: **SV-1847-L**
 Instrument ID: **MS-3 HP 5890**
 Sample Volume: **950 mL**
 Final Volume: **1 mL**
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	11
208-96-8	Acenaphthylene	BRL		ug/L	11
83-32-9	Acenaphthene	BRL		ug/L	11
86-73-7	Fluorene	BRL		ug/L	11
85-01-8	Phenanthrene	BRL		ug/L	11
120-12-7	Anthracene	BRL		ug/L	11
206-44-0	Fluoranthene	BRL		ug/L	11
129-00-0	Pyrene	BRL		ug/L	11
56-55-3	Benzo[a]anthracene	BRL		ug/L	11
218-01-9	Chrysene	BRL		ug/L	11
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	11
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	11
50-32-8	Benzo[a]pyrene	BRL		ug/L	11
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	11
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	11
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	11

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	110	70	67 %	30 - 130 %
2-Fluorobiphenyl	110	81	77 %	30 - 130 %
Terphenyl-d14	110	81	77 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Inorganic Chemistry

Field ID: **EFF 01**
Project: **N. Washington St/5384**
Client: **Paragon Environmental Services**

Matrix: **Aqueous**
Received: **02-27-06 17:00**

Lab ID: **92065-12** Sampled: **02-24-06 11:30** Container: **1 L Amber Glass** Preservation: **H2SO4/Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Total Petroleum Hydrocarbons	BRL	mg/L	0.5	1	1000 mL	03-03-06 09:00	HI-1351-W	SM 5520 CF	1	MW

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

RL Reporting Limit.

DF Dilution Factor.

1 Instrument ID: PE 1625 FT-IR

Project Narrative

Project: N. Washington St/5384
Client: Paragon Environmental Services

Lab ID: 92065
Received: 02-27-06 17:00

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. EPA 624 Note: Sample 92065-03. Sample was analyzed by EPA 624 versus EPA 602 due to instrument repair.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 6010B Note: Samples 92065-08. Samples were analyzed for selected target analytes, as requested by client.
2. EPA 8260B Non-conformance: Sample 92065-01. Laboratory control sample (LCS) analyte Methylene Chloride was above recommended recovery limits for QC batch VM4-3464-W.
3. EPA 8270C Modification: Samples 92065-04. Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. GC/MS-SIM was used to achieve low quantification limits necessary for regulatory compliance.
4. EPA 8270C Note: Sample 92065-04. Sample was diluted prior to analysis. Dilution was required due to presence of non-target analyte interference.

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

Quality Control Report Laboratory Control Samples

Category: **Inorganics**

Matrix: **Aqueous**

Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	SM 3500 Cr D	HC-0254-W	SM 3500 Cr D	2/27/2006 21:00	2/27/2006 21:22	Lachat 8000 Autoanalyzer	DDW
LCSD	SM 3500 Cr D	HC-0254-W	SM 3500 Cr D	2/27/2006 21:00	2/27/2006 21:23	Lachat 8000 Autoanalyzer	DDW

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Chromium, Hexavalent	0.10	0.10	104%	0.10	0.11	105%	0 %	80-120%	20 %	SM 3500 Cr D

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and
Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111,
(1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,
or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Laboratory Control Sample

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Total Petroleum Hydrocarbons	mg/L	21	19	93 %	80 - 120 %	03-03-06 09:00	HI-1351-W	SM 5520 CF	3	DEB
Solids, Total Suspended	mg/L	92	90	98 %	80 - 120 %	03-01-06 15:34	TSS-1196-W	SM 2540 D	4	DEB
Chlorine, Total Residual	mg/L	1	1	97 %	80 - 120 %	02-27-06 21:30	TRC-0412-W	SM 4500-Cl G	2	LJD
Oil and Grease, Total	mg/L	40	38	94 %	78 - 114 %	03-09-06 14:00	HO-0208-W	EPA 1664	4	DEB
Cyanide, Total	mg/L	0.45	0.49	108 %	80 - 120 %	03-07-06 14:15	TCN-1169-W	Lachat 10-204-00-1-A (EPA 335.3)	1	AVB

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

- 1 Instrument ID: Lachat 8000 Autoanalyzer
- 2 Instrument ID: Milton Roy Spectronic 401
- 3 Instrument ID: PE 1625 FT-IR
- 4 Instrument ID: Mettler AT 200 Balance

Quality Control Report Method Blank

Category: **Inorganic Chemistry**

Matrix: **Aqueous**

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Total Petroleum Hydrocarbons	BRL	mg/L	0.5	03-03-06 09:00	HI-1351-W	SM 5520 CF	3	DEB
Solids, Total Suspended	BRL	mg/L	2	03-01-06 15:34	TSS-1196-W	SM 2540 D	4	DEB
Chlorine, Total Residual	BRL	mg/L	0.2	02-27-06 21:30	TRC-0412-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	BRL	mg/L	0.01	02-27-06 21:22	HC-0254-W	SM 3500-Cr D	1	DDW
Oil and Grease, Total	BRL	mg/L	5	03-09-06 14:00	HO-0208-W	EPA 1664	4	DEB
Cyanide, Total	BRL	mg/L	0.01	03-07-06 14:15	TCN-1169-W	Lachat 10-20400-1-A (EPA 335.3)	1	AVB

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

RL Reporting Limit.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: PE 1625 FT-IR

4 Instrument ID: Mettler AT 200 Balance

**Quality Control Report
Laboratory Control Sample**

Category: **EPA Method 504.1**
QC Batch ID: **PV-0819-E**
Matrix: **Aqueous**
Units: **ug/L**

Instrument ID: **GC-5 HP 5890**
Extracted: **02-28-06 10:00**
Analyzed: **02-28-06 10:43**
Analyst: **CRL**

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.20	100 %	100 %	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBC)	0.20	0.19	0.19	96 %	96 %	70 - 130 %

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**Quality Control Report
Method Blank**

Category: **EPA Method 504.1**
QC Batch ID: **PV-0819-E**
Matrix: **Aqueous**

Instrument ID: **GC-5 HP 5890**
Extracted: **02-28-06 10:00**
Analyzed: **02-28-06 12:29**
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Quality Control Report Laboratory Control Samples

Category: **Metals**
Matrix: **Aqueous**
Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 7041	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-07-06 15:04	GFAA-1 PE 5100 Zeeman	MFP
LCS	EPA 6010B	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-08-06 17:21	ICP-2 PE 3300	DRW
LCS	EPA 7740	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-14-06 14:17	GFAA-1 PE 5100 Zeeman	MWR
LCS	EPA 7421	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-13-06 16:04	GFAA-1 PE 5100 Zeeman	MWR
LCS	EPA 7470A	MP-1807-WL	EPA 7470A	03-02-06 09:15	03-02-06 12:47	CVAA-1 PE FIMS	KLB
LCSD	EPA 7041	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-02-06 12:50	GFAA-1 PE 5100 Zeeman	MFP
LCSD	EPA 6010B	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-14-06 14:17	ICP-2 PE 3300	DRW
LCSD	EPA 7740	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-14-06 02:20	GFAA-1 PE 5100 Zeeman	MWR
LCSD	EPA 7421	MB-1961-WL	EPA 3010A	03-06-06 08:27	03-14-06 16:07	GFAA-1 PE 5100 Zeeman	MWR
LCSD	EPA 7470A	MP-1807-WL	EPA 7470A	03-02-06 09:15	03-02-06 12:50	CVAA-1 PE FIMS	KLB

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-36-0	Antimony	0.050	0.055	109%	0.050	0.052	105%	2 %	80-120 %	20 %	EPA 7041
7440-38-2	Arsenic	5.0	5.2	105%	5.0	5.1	102%	1 %	80-120 %	20 %	EPA 6010B
7440-43-9	Cadmium	1.0	1.0	103%	1.0	0.98	98%	2 %	80-120 %	20 %	EPA 6010B
7440-47-3	Chromium	1.0	1.0	104%	1.0	0.99	99%	2 %	80-120 %	20 %	EPA 6010B
7440-50-8	Copper	1.0	1.0	100%	1.0	0.96	96%	2 %	80-120 %	20 %	EPA 6010B
7439-89-6	Iron	5.0	5.1	103%	5.0	4.9	99%	2 %	80-120 %	20 %	EPA 6010B
7439-92-1	Lead	0.050	0.050	100%	0.050	0.054	108%	4 %	80-120 %	20 %	EPA 7421
7439-97-6	Mercury	0.0010	0.0010	103%	0.0010	0.0011	109%	3 %	80-120 %	20 %	EPA 7470A
7440-02-0	Nickel	1.0	1.0	101%	1.0	0.96	96%	3 %	80-120 %	20 %	EPA 6010B
7782-49-2	Selenium	0.050	0.050	101%	0.050	0.052	103%	1 %	80-120 %	20 %	EPA 7740
7440-22-4	Silver	1.0	1.0	104%	1.0	0.99	99%	2 %	80-120 %	20 %	EPA 6010B
7440-66-6	Zinc	1.0	1.0	103%	1.0	0.99	99%	2 %	80-120 %	20 %	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Method Blank

Category: **Metals**
Matrix: **Aqueous**

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 7041	MB-1961-WB	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100 Zeeman	MFP
EPA 6010B	MB-1961-WB	EPA 3010A	03-06-06 08:27	50 mL	ICP-2 PE 3300	DRW
EPA 7740	MB-1961-WB	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100 Zeeman	MWR
EPA 7421	MB-1961-WB	EPA 3010A	03-06-06 08:27	50 mL	GFAA-1 PE 5100 Zeeman	MWR
EPA 7470A	MP-1807-WB	EPA 7470A	03-02-06 09:15	25 mL	CVAA-1 PE FIMS	KLB

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony		BRL	mg/L	0.006	1	03-07-06 14:58	EPA 7041
7440-38-2	Arsenic		BRL	mg/L	0.01	1	03-08-06 17:19	EPA 6010B
7440-43-9	Cadmium		BRL	mg/L	0.005	1	03-08-06 17:19	EPA 6010B
7440-47-3	Chromium		BRL	mg/L	0.01	1	03-08-06 17:19	EPA 6010B
7440-50-8	Copper		BRL	mg/L	0.025	1	03-08-06 17:19	EPA 6010B
7439-89-6	Iron		BRL	mg/L	0.1	1	03-08-06 17:18	EPA 6010B
7439-92-1	Lead		BRL	mg/L	0.001	1	03-13-06 16:24	EPA 7421
7439-97-6	Mercury		BRL	mg/L	0.0002	1	03-02-06 12:47	EPA 7470A
7440-02-0	Nickel		BRL	mg/L	0.04	1	03-08-06 17:19	EPA 6010B
7782-49-2	Selenium		BRL	mg/L	0.005	1	03-14-06 14:19	EPA 7740
7440-22-4	Silver		BRL	mg/L	0.007	1	03-08-06 17:19	EPA 6010B
7440-66-6	Zinc		BRL	mg/L	0.2	1	03-08-06 17:19	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

DF Dilution Factor.

Quality Control Report Laboratory Control Samples

Category: EPA Method 624	LCS Instrument ID: MS-4 HP 6890	LCSD Instrument ID: MS-4 HP 6890
QC Batch ID: VM4-3462-WL	Analyzed: 03-07-06 08:33	Analyzed: 03-07-06 09:02
Matrix: Aqueous	Analyst: KMC	Analyst: KMC
Units: ug/L		

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
1634-04-4	Methyl tert-butyl Ether (MTBE)	10	9.1	91 %	10	8.9	89 %	2 %	70 - 130 %	25%
71-43-2	Benzene	10	11	108 %	10	11	108 %	1 %	70 - 130 %	25%
108-88-3	Toluene	10	11	112 %	10	11	106 %	5 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	11	111 %	10	11	112 %	1 %	70 - 130 %	25%
108-38-3/106-42-3	meta-Xylene and para-Xylene	20	22	111 %	20	22	111 %	0 %	70 - 130 %	25%
95-47-6	ortho-Xylene	10	11	108 %	10	11	108 %	0 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	104 %	10	10	104 %	1 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	11	106 %	10	11	107 %	1 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	11	106 %	10	11	108 %	2 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	9.4	94 %	10	10	102 %		70 - 130 %
1,2-Dichloroethane-d ₄	10	8.5	85 %	10	8.4	84 %		70 - 130 %
Toluene-d ₈	10	11	106 %	10	10	102 %		70 - 130 %
4-Bromofluorobenzene	10	9.6	96 %	10	10	102 %		70 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 C.F.R. 136, Appendix A (1986).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Method Blank

Category: **EPA Method 624**
QC Batch ID: **VM4-3462-WB**
Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
Analyzed: **03-07-06 09:31**
Analyst: **KMC**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
1634-04-4	Methyl <i>tert</i> -butyl Ether (MTBE)	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
108-88-3	Toluene	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	<i>meta</i> -Xylene and <i>para</i> -Xylene	BRL		ug/L	0.5
95-47-6	<i>ortho</i> -Xylene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	11	110 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	10	104 %	70 - 130 %
Toluene-d ₈	10	10	102 %	70 - 130 %
4-Bromofluorobenzene	10	9.6	96 %	70 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 C.F.R. 136, Appendix A (1986).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Quality Control Report Laboratory Control Samples

Category:	EPA Method 8260B	LCS	Instrument ID:	MS-4 HP 6890	LCSD	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3464-WL	Analyzed:	03-08-06 13:50	Analyzed:	03-08-06 14:19	Analyzed:	03-08-06 14:19
Matrix:	Aqueous	Analyst:	KMC	Analyst:	KMC	Analyst:	KMC
Units:	ug/L						

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CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	8.8	88 %	10	9.2	92 %	4 %	70 - 130 %	25%
74-87-3	Chloromethane	10	11	106 %	10	9.2	92 %	14 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	11	108 %	10	9.7	97 %	11 %	70 - 130 %	25%
74-83-9	Bromomethane	10	10	102 %	10	9.3	93 %	10 %	70 - 130 %	25%
75-00-3	Chloroethane	10	11	114 %	10	9.9	99 %	14 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	11	108 %	10	9.5	95 %	14 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	20	101 %	20	17	84 %	18 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	12	117 %	10	9.8	98 %	17 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	22	109 %	20	18	91 %	17 %	70 - 130 %	25%
67-64-1	Acetone	20	19	96 %	20	18	89 %	8 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	18	90 %	20	16	78 %	15 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	14	142 %	10	12	117 %	19 %	70 - 130 %	25%
156-60-5	trans- 1,2-Dichloroethene	10	12	115 %	10	10	100 %	15 %	70 - 130 %	25%
1634-04-4	Methyl tert- butyl Ether (MTBE)	10	9.7	97 %	10	8.5	85 %	13 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	12	116 %	10	10	101 %	13 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	11	107 %	10	9.9	99 %	8 %	70 - 130 %	25%
156-59-2	cis- 1,2-Dichloroethene	10	12	119 %	10	11	108 %	9 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	20	100 %	20	19	95 %	5 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	12	115 %	10	11	106 %	8 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	19	93 %	20	19	94 %	1 %	70 - 130 %	25%
67-66-3	Chloroform	10	11	113 %	10	10	104 %	8 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	11	110 %	10	9.3	93 %	16 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	11	111 %	10	10	101 %	9 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	11	110 %	10	10	101 %	9 %	70 - 130 %	25%
71-43-2	Benzene	10	11	110 %	10	10	102 %	7 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	11	107 %	10	9.2	92 %	16 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	10	103 %	10	9.9	99 %	4 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	11	109 %	10	10	101 %	7 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	11	109 %	10	9.9	99 %	10 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	11	110 %	10	9.9	99 %	11 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	140	71 %	200	150	73 %	2 %	70 - 130 %	25%
10061-01-5	cis- 1,3-Dichloropropene	10	11	110 %	10	10	101 %	9 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	18	89 %	20	16	82 %	8 %	70 - 130 %	25%
108-88-3	Toluene	10	10	104 %	10	9.3	93 %	11 %	70 - 130 %	25%
10061-02-6	trans- 1,3-Dichloropropene	10	11	115 %	10	10	104 %	10 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	110 %	10	10	103 %	7 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	11	109 %	10	11	108 %	1 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	11	109 %	10	10	101 %	7 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	20	99 %	20	19	97 %	2 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	11	111 %	10	10	101 %	9 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	11	114 %	10	11	107 %	7 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	11	109 %	10	10	103 %	5 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	11	112 %	10	11	108 %	4 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	11	112 %	10	10	105 %	7 %	70 - 130 %	25%
108-38-3/106-42-3	meta- Xylene and para- Xylene	20	23	114 %	20	21	105 %	9 %	70 - 130 %	25%
95-47-6	ortho- Xylene	10	11	109 %	10	10	104 %	5 %	70 - 130 %	25%
100-42-5	Styrene	10	11	114 %	10	11	106 %	8 %	70 - 130 %	25%
75-25-2	Bromoform	10	12	119 %	10	11	115 %	4 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	10	104 %	10	10	105 %	0 %	70 - 130 %	25%

Quality Control Report Laboratory Control Samples

Category: EPA Method 8260B	LCS Instrument ID: MS-4 HP 6890	LCSD Instrument ID: MS-4 HP 6890
QC Batch ID: VM4-3464-WL	Analyzed: 03-08-06 13:50	Analyzed: 03-08-06 14:19
Matrix: Aqueous	Analyst: KMC	Analyst: KMC
Units: ug/L		

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CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
108-86-1	Bromobenzene	10	11	106 %	10	11	108 %	1 %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	10	105 %	10	10	103 %	2 %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	12	115 %	10	12	119 %	3 %	70 - 130 %	25%
103-65-1	n-Propylbenzene	10	11	108 %	10	11	108 %	0 %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	11	106 %	10	11	108 %	2 %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	106 %	10	11	108 %	2 %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	11	105 %	10	11	108 %	3 %	70 - 130 %	25%
98-06-6	tert-Butylbenzene	10	11	107 %	10	11	108 %	1 %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
135-98-8	sec-Butylbenzene	10	11	106 %	10	11	107 %	1 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	101 %	10	10	101 %	0 %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	11	107 %	10	11	106 %	1 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	10	102 %	10	10	102 %	0 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	10	103 %	10	10	103 %	0 %	70 - 130 %	25%
104-51-8	n-Butylbenzene	10	10	105 %	10	11	106 %	1 %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	9.9	99 %	10	9.9	99 %	1 %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	11	108 %	10	11	107 %	1 %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	11	110 %	10	11	113 %	3 %	70 - 130 %	25%
91-20-3	Naphthalene	10	11	112 %	10	11	112 %	0 %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	11	106 %	10	11	109 %	3 %	70 - 130 %	25%
75-65-0	tert-Butyl Alcohol (TBA)	200	210	103 %	200	170	83 %	21 %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	11	109 %	10	9.9	99 %	10 %	70 - 130 %	25%
637-92-3	Ethyl tert-butyl Ether (ETBE)	10	10	100 %	10	9.5	95 %	5 %	70 - 130 %	25%
994-05-8	tert-Amyl Methyl Ether (TAME)	10	8.6	86 %	10	8.5	85 %	1 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	104 %	10	10	102 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	10	100 %	10	8.2	82 %	70 - 130 %
Toluene-d ₈	10	9.9	99 %	10	9.1	91 %	70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	10	9.7	97 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

q Recovery outside recommended limits.

Quality Control Report Method Blank

Category: **EPA Method 8260B**
QC Batch ID: **VM4-3464-WB**
Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
Analyzed: **03-08-06 14:48**
Analyst: **KMC**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	<i>trans</i> - 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl <i>tert</i> - butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	<i>cis</i> - 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	<i>cis</i> - 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	<i>trans</i> - 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	<i>meta</i> - Xylene and <i>para</i> - Xylene	BRL		ug/L	0.5
95-47-6	<i>ortho</i> - Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5

Quality Control Report Method Blank

Category: **EPA Method 8260B**
QC Batch ID: **VM4-3464-WB**
Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
Analyzed: **03-08-06 14:48**
Analyst: **KMC**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	<i>n</i> -Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	<i>tert</i> -Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	<i>sec</i> -Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	<i>n</i> -Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	<i>tert</i> -Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl <i>tert</i> -butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	<i>tert</i> -Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	100 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	10	103 %	70 - 130 %
Toluene-d ₈	10	9.6	96 %	70 - 130 %
4-Bromofluorobenzene	10	9.6	96 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Quality Control Report Laboratory Control Samples

Category: EPA 8270C (Part 2) QC Batch ID: SV-1845-F Matrix: Aqueous Units: ug/L	LCS Instrument ID: MS-3 HP 5890 Extracted: 03-01-06 10:00 Analyzed: 03-03-06 18:35 Analyst: CMM	LCSD Instrument ID: MS-6 HP 6890 Extracted: 03-01-06 10:00 Analyzed: 03-03-06 19:15 Analyst: CMM
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CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
91-20-3	Naphthalene	5.0	2.3	47 %	5.0	2.7	55 %	16 %	40 - 140 %	25%
91-57-6	2-Methylnaphthalene	5.0	2.5	50 %	5.0	2.9	58 %	14 %	40 - 140 %	25%
208-96-8	Acenaphthylene	5.0	3.1	63 %	5.0	3.7	73 %	16 %	40 - 140 %	25%
83-32-9	Acenaphthene	5.0	3.0	60 %	5.0	3.5	70 %	16 %	40 - 140 %	25%
86-73-7	Fluorene	5.0	3.2	65 %	5.0	3.7	74 %	13 %	40 - 140 %	25%
85-01-8	Phenanthrene	5.0	3.4	68 %	5.0	3.8	76 %	11 %	40 - 140 %	25%
120-12-7	Anthracene	5.0	3.5	70 %	5.0	3.9	78 %	11 %	40 - 140 %	25%
206-44-0	Fluoranthene	5.0	3.4	68 %	5.0	3.9	77 %	12 %	40 - 140 %	25%
129-00-0	Pyrene	5.0	3.5	71 %	5.0	3.8	77 %	8 %	40 - 140 %	25%
56-55-3	Benzo[a]anthracene	5.0	3.7	75 %	5.0	4.0	80 %	7 %	40 - 140 %	25%
218-01-9	Chrysene	5.0	3.7	73 %	5.0	3.9	78 %	7 %	40 - 140 %	25%
205-99-2	Benzo[b]fluoranthene	5.0	3.9	78 %	5.0	4.1	82 %	6 %	40 - 140 %	25%
207-08-9	Benzo[k]fluoranthene	5.0	3.8	75 %	5.0	4.0	81 %	7 %	40 - 140 %	25%
50-32-8	Benzo[a]pyrene	5.0	4.0	81 %	5.0	4.3	87 %	7 %	40 - 140 %	25%
193-39-5	Indeno[1,2,3-c,d]pyrene	5.0	3.3	66 %	5.0	3.6	73 %	9 %	40 - 140 %	25%
53-70-3	Dibenzo[a,h]anthracene	5.0	3.3	66 %	5.0	3.5	70 %	6 %	40 - 140 %	25%
191-24-2	Benzo[g,h,i]perylene	5.0	3.7	74 %	5.0	4.0	79 %	7 %	40 - 140 %	25%
87-68-3	Hexachlorobutadiene	5.0	2.0	40 %	5.0	2.3	47 %	16 %	40 - 140 %	25%
118-74-1	Hexachlorobenzene	5.0	3.1	62 %	5.0	3.5	70 %	13 %	40 - 140 %	25%
87-86-5	Pentachlorophenol	5.0	3.3	66 %	5.0	3.7	74 %	12 %	30 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
2-Fluorophenol	20	8	41 %	20	9	47 %		15 - 110 %
Phenol-d5	20	7	33 %	20	8	38 %		15 - 110 %
Nitrobenzene-d5	10	5	53 %	10	6	60 %		30 - 130 %
2-Fluorobiphenyl	10	6	56 %	10	6	64 %		30 - 130 %
2,4,6-Tribromophenol	20	11	57 %	20	13	66 %		15 - 110 %
Terphenyl-d14	10	7	66 %	10	7	70 %		30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3510C.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**Quality Control Report
Method Blank**

Category: **EPA Method 8270C (Part 2)**
QC Batch ID: **SV-1845-F**
Matrix: **Aqueous**

Instrument ID: **MS-6 HP 6890**
Extracted: **03-01-06 10:00**
Analyzed: **03-03-06 17:56**
Analyst: **CMM**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	0.5
91-57-6	2-Methylnaphthalene	BRL		ug/L	0.5
208-96-8	Acenaphthylene	BRL		ug/L	0.5
83-32-9	Acenaphthene	BRL		ug/L	0.5
86-73-7	Fluorene	BRL		ug/L	0.5
85-01-8	Phenanthrene	BRL		ug/L	0.5
120-12-7	Anthracene	BRL		ug/L	0.5
206-44-0	Fluoranthene	BRL		ug/L	0.5
129-00-0	Pyrene	BRL		ug/L	0.5
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.1
218-01-9	Chrysene	BRL		ug/L	0.1
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	0.1
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.1
50-32-8	Benzo[a]pyrene	BRL		ug/L	0.1
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	0.1
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	0.1
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	0.1
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
118-74-1	Hexachlorobenzene	BRL		ug/L	0.5
87-86-5	Pentachlorophenol	BRL		ug/L	1.0

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	9	47 %	15 - 110 %
Phenol-d5	20	7	36 %	15 - 110 %
Nitrobenzene-d5	10	6	56 %	30 - 130 %
2-Fluorobiphenyl	10	6	61 %	30 - 130 %
2,4,6-Tribromophenol	20	12	61 %	15 - 110 %
Terphenyl-d14	10	7	73 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Quality Control Report Laboratory Control Samples

Category:	EPA 8270C (Part 1)	LCS	Instrument ID:	MS-3 HP 5890	LCSD	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1845-F		Extracted:	03-01-06 10:00		Extracted:	03-01-06 10:00
Matrix:	Aqueous		Analyzed:	03-02-06 16:12		Analyzed:	03-02-06 16:54
Units:	ug/L		Analyst:	CMM		Analyst:	CMM

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CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
62-75-9	N-Nitrosodimethylamine	50	28	55 %	50	28	55 %	0 %	40 - 140 %	25%
110-86-1	Pyridine	50	23	46 %	50	21	41 %	10 %	40 - 140 %	25%
108-95-2	Phenol	50	18	36 %	50	19	38 %	6 %	30 - 130 %	25%
62-53-3	Aniline	50	36	71 %	50	38	76 %	6 %	40 - 140 %	25%
111-44-4	Bis(2-chloroethyl) ether	50	32	64 %	50	31	63 %	2 %	40 - 140 %	25%
95-57-8	2-Chlorophenol	50	28	56 %	50	27	55 %	2 %	30 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	50	31	62 %	50	30	60 %	5 %	40 - 140 %	25%
106-46-7	1,4-Dichlorobenzene	50	30	61 %	50	29	59 %	3 %	40 - 140 %	25%
100-51-6	Benzyl Alcohol	50	31	62 %	50	31	62 %	0 %	30 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	50	30	60 %	50	29	58 %	5 %	40 - 140 %	25%
95-48-7	2-Methylphenol	50	30	60 %	50	30	59 %	2 %	30 - 130 %	25%
108-60-1	Bis(2-chloroisopropyl) ether	50	32	64 %	50	31	63 %	2 %	40 - 140 %	25%
106-44-5	4-Methylphenol	50	31	62 %	50	31	62 %	0 %	30 - 130 %	25%
621-64-7	N-Nitrosodi-n-propylamine	50	34	68 %	50	34	68 %	1 %	40 - 140 %	25%
98-86-2	Acetophenone	50	37	74 %	50	36	72 %	3 %	40 - 140 %	25%
67-72-1	Hexachloroethane	50	30	60 %	50	29	58 %	4 %	40 - 140 %	25%
98-95-3	Nitrobenzene	50	33	66 %	50	32	65 %	2 %	40 - 140 %	25%
78-59-1	Isophorone	50	32	64 %	50	32	65 %	2 %	40 - 140 %	25%
88-75-5	2-Nitrophenol	50	30	59 %	50	29	58 %	2 %	30 - 130 %	25%
105-67-9	2,4-Dimethylphenol	50	32	65 %	50	35	70 %	8 %	30 - 130 %	25%
111-91-1	Bis(2-chloroethoxy) methane	50	33	67 %	50	33	66 %	1 %	40 - 140 %	25%
120-83-2	2,4-Dichlorophenol	50	29	59 %	50	31	61 %	4 %	30 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	50	31	63 %	50	31	63 %	0 %	40 - 140 %	25%
106-47-8	4-Chloroaniline	50	37	74 %	50	39	77 %	5 %	40 - 140 %	25%
87-68-3	Hexachlorobutadiene	50	28	57 %	50	29	58 %	2 %	40 - 140 %	25%
59-50-7	4-Chloro-3-methylphenol	50	33	66 %	50	33	67 %	1 %	30 - 130 %	25%
77-47-4	Hexachlorocyclopentadiene	50	29	58 %	50	29	57 %	1 %	40 - 140 %	25%
88-06-2	2,4,6-Trichlorophenol	50	32	64 %	50	33	65 %	2 %	30 - 130 %	25%
95-95-4	2,4,5-Trichlorophenol	50	35	71 %	50	37	73 %	4 %	30 - 130 %	25%
91-58-7	2-Chloronaphthalene	50	35	69 %	50	35	71 %	2 %	40 - 140 %	25%
88-74-4	2-Nitroaniline	50	39	77 %	50	40	81 %	4 %	40 - 140 %	25%
100-25-4	1,4-Dinitrobenzene	50	39	77 %	50	40	80 %	3 %	40 - 140 %	25%
131-11-3	Dimethyl phthalate	50	39	79 %	50	40	80 %	1 %	40 - 140 %	25%
99-65-0	1,3-Dinitrobenzene	50	35	70 %	50	36	72 %	3 %	40 - 140 %	25%
606-20-2	2,6-Dinitrotoluene	50	39	77 %	50	39	78 %	2 %	40 - 140 %	25%
528-29-0	1,2-Dinitrobenzene	50	39	77 %	50	40	80 %	4 %	40 - 140 %	25%
99-09-2	3-Nitroaniline	50	39	78 %	50	40	80 %	3 %	40 - 140 %	25%
51-28-5	2,4-Dinitrophenol	50	29	57 %	50	31	62 %	8 %	30 - 130 %	25%
100-02-7	4-Nitrophenol	50	20	41 %	50	22	43 %	6 %	30 - 130 %	25%
132-64-9	Dibenzofuran	50	38	75 %	50	39	77 %	2 %	40 - 140 %	25%
121-14-2	2,4-Dinitrotoluene	50	38	76 %	50	40	79 %	4 %	40 - 140 %	25%
84-66-2	Diethyl phthalate	50	39	78 %	50	40	81 %	3 %	40 - 140 %	25%
7005-72-3	4-Chlorophenyl phenyl ether	50	38	76 %	50	39	78 %	3 %	40 - 140 %	25%
100-01-6	4-Nitroaniline	50	39	78 %	50	40	80 %	3 %	40 - 140 %	25%
534-52-1	4,6-Dinitro-2-methylphenol	50	37	74 %	50	37	75 %	1 %	30 - 130 %	25%
86-30-6	N-Nitrosodiphenylamine †	50	36	72 %	50	37	73 %	1 %	40 - 140 %	25%
122-66-7	1,2-Diphenylhydrazine à	50	40	80 %	50	40	81 %	1 %	40 - 140 %	25%
101-55-3	4-Bromophenyl phenyl ether	50	43	86 %	50	43	86 %	0 %	40 - 140 %	25%

Quality Control Report Laboratory Control Samples

Category: EPA 8270C (Part 1)	LCS Instrument ID: MS-3 HP 5890	LCSD Instrument ID: MS-3 HP 5890
QC Batch ID: SV-1845-F	Extracted: 03-01-06 10:00	Extracted: 03-01-06 10:00
Matrix: Aqueous	Analyzed: 03-02-06 16:12	Analyzed: 03-02-06 16:54
Units: ug/L	Analyst: CMM	Analyst: CMM

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CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
86-74-8	Carbazole	50	41	83 %	50	42	83 %	1 %	40 - 140 %	25%
84-74-2	Di- <i>n</i> -butyl phthalate	50	41	82 %	50	41	81 %	1 %	40 - 140 %	25%
85-68-7	Butyl benzyl phthalate	50	38	76 %	50	38	77 %	1 %	40 - 140 %	25%
91-94-1	3,3'-Dichlorobenzidine	50	35	70 %	50	35	71 %	0 %	40 - 140 %	25%
117-81-7	Bis(2-ethylhexyl) phthalate	50	39	79 %	50	39	77 %	1 %	40 - 140 %	25%
117-84-0	Di- <i>n</i> -octyl phthalate	50	41	82 %	50	41	83 %	1 %	40 - 140 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
2-Fluorophenol	20	10	48 %	20	10	48 %		15 - 110 %
Phenol-d5	20	8	39 %	20	8	38 %		15 - 110 %
Nitrobenzene-d5	10	6	58 %	10	6	62 %		30 - 130 %
2-Fluorobiphenyl	10	7	71 %	10	7	69 %		30 - 130 %
2,4,6-Tribromophenol	20	14	70 %	20	14	71 %		15 - 110 %
Terphenyl-d14	10	8	76 %	10	8	75 %		30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3510C.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

- † Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.
- ◇ Analyzed as Azobenzene.

Quality Control Report Method Blank

Category: **EPA Method 8270C (Part 1)**
 QC Batch ID: **SV-1845-F**
 Matrix: **Aqueous**

Instrument ID: **MS-3 HP 5890**
 Extracted: **03-01-06 10:00**
 Analyzed: **03-02-06 17:35**
 Analyst: **CMM**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	5
110-86-1	Pyridine	BRL		ug/L	5
108-95-2	Phenol	BRL		ug/L	5
62-53-3	Aniline	BRL		ug/L	5
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	5
95-57-8	2-Chlorophenol	BRL		ug/L	5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	5
100-51-6	Benzyl Alcohol	BRL		ug/L	5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	5
95-48-7	2-Methylphenol	BRL		ug/L	5
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	5
108-39-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	5
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	5
98-86-2	Acetophenone	BRL		ug/L	5
67-72-1	Hexachloroethane	BRL		ug/L	5
98-95-3	Nitrobenzene	BRL		ug/L	5
78-59-1	Isophorone	BRL		ug/L	5
88-75-5	2-Nitrophenol	BRL		ug/L	5
105-67-9	2,4-Dimethylphenol	BRL		ug/L	5
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	5
120-83-2	2,4-Dichlorophenol	BRL		ug/L	5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	5
106-47-8	4-Chloroaniline	BRL		ug/L	5
87-68-3	Hexachlorobutadiene	BRL		ug/L	5
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	5
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	5
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	5
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	5
91-58-7	2-Chloronaphthalene	BRL		ug/L	5
88-74-4	2-Nitroaniline	BRL		ug/L	5
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	5
131-11-3	Dimethyl phthalate	BRL		ug/L	5
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	5
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	5
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	5
99-09-2	3-Nitroaniline	BRL		ug/L	5
51-28-5	2,4-Dinitrophenol	BRL		ug/L	5
100-02-7	4-Nitrophenol	BRL		ug/L	5
132-64-9	Dibenzofuran	BRL		ug/L	5
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	5
84-66-2	Diethyl phthalate	BRL		ug/L	5
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	5
100-01-6	4-Nitroaniline	BRL		ug/L	5
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	5

Quality Control Report Method Blank

Category: **EPA Method 8270C (Part 1)**
 QC Batch ID: **SV-1845-F**
 Matrix: **Aqueous**

Instrument ID: **MS-3 HP 5890**
 Extracted: **03-01-06 10:00**
 Analyzed: **03-02-06 17:35**
 Analyst: **CMM**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
86-30-6	N-Nitrosodiphenylamine [†]	BRL		ug/L	5
122-66-7	1,2-Diphenylhydrazine [◇]	BRL		ug/L	5
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	5
86-74-8	Carbazole	BRL		ug/L	5
84-74-2	Di- <i>n</i> -butyl phthalate	BRL		ug/L	5
85-68-7	Butyl benzyl phthalate	BRL		ug/L	5
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	5
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	5
117-84-0	Di- <i>n</i> -octyl phthalate	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	9	47 %	15 - 110 %
Phenol-d5	20	7	36 %	15 - 110 %
Nitrobenzene-d5	10	6	55 %	30 - 130 %
2-Fluorobiphenyl	10	6	62 %	30 - 130 %
2,4,6-Tribromophenol	20	12	62 %	15 - 110 %
Terphenyl-d14	10	7	74 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

* Analyzed as 4-Methylphenol.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◇ Analyzed as Azobenzene.

Quality Control Report Laboratory Control Sample

Category: **EPA Method 625 PAHs**
 QC Batch ID: **SV-1847-L**
 Matrix: **Aqueous**
 Units: **ug/L**

Instrument ID: **MS-3 HP 5890**
 Extracted: **03-03-06 09:00**
 Analyzed: **03-07-06 14:21**
 Analyst: **CMM**

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
91-20-3	Naphthalene	50	36	71 %	40 - 140 %
208-96-8	Acenaphthylene	50	41	81 %	40 - 140 %
83-32-9	Acenaphthene	50	41	82 %	40 - 140 %
86-73-7	Fluorene	50	42	84 %	40 - 140 %
85-01-8	Phenanthrene	50	42	83 %	40 - 140 %
120-12-7	Anthracene	50	42	83 %	40 - 140 %
206-44-0	Fluoranthene	50	41	83 %	40 - 140 %
129-00-0	Pyrene	50	43	86 %	40 - 140 %
56-55-3	Benzo[a]anthracene	50	42	84 %	40 - 140 %
218-01-9	Chrysene	50	41	82 %	40 - 140 %
205-99-2	Benzo[b]fluoranthene	50	42	85 %	40 - 140 %
207-08-9	Benzo[k]fluoranthene	50	43	85 %	40 - 140 %
50-32-8	Benzo[a]pyrene	50	41	83 %	40 - 140 %
193-39-5	Indeno[1,2,3-c,d]pyrene	50	31	63 %	40 - 140 %
53-70-3	Dibenzo[a,h]anthracene	50	31	63 %	40 - 140 %
191-24-2	Benzo[g,h,i]perylene	50	31	63 %	40 - 140 %
QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5		100	70	70 %	30 - 130 %
2-Fluorobiphenyl		100	80	80 %	30 - 130 %
Terphenyl-d14		100	86	86 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**Quality Control Report
Method Blank**

Category: **EPA Method 625 PAHs**
QC Batch ID: **SV-1847-L**
Matrix: **Aqueous**

Instrument ID: **MS-3 HP 5890**
Extracted: **03-03-06 09:00**
Analyzed: **03-07-06 15:44**
Analyst: **CMM**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	100	75	75 %	30 - 130 %
2-Fluorobiphenyl	100	87	87 %	30 - 130 %
Terphenyl-d14	100	92	92 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
<http://www.floridadep.org/labs/qa/dohforms.htm>

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
<http://www.state.me.us/dhs/eng/water/Compliance.htm>

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
<http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf>

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
<http://www.wadsworth.org/labcert/elap/comm.html>

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
<http://www.dep.state.pa.us/Labs/Registered/>

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
<http://www.vermontdrinkingwater.org/wsops/labtable.PDF>

May 8, 2006

Mr. Craig Nicholson
Paragon Environmental Services
10 Cottage Street
Suite B
Norwood, MA 02062

LABORATORY REPORT

Project: **N.Washington St**
Lab ID: **94020**
Received: **04-27-06**

Dear Craig:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

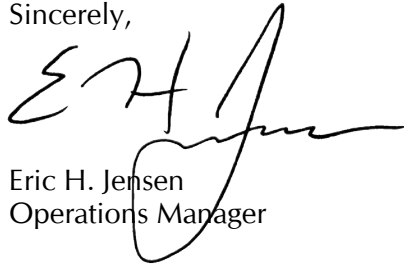
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/ajh
Enclosures

Sample Receipt Report

Project: **N.Washington St**
 Client: **Paragon Environmental Services**
 Lab ID: **94020**

Delivery: **GWA Courier**
 Airbill: **n/a**
 Lab Receipt: **04-27-06**

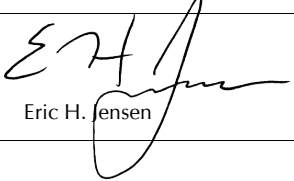
Temperature: **3.0'C**
 Chain of Custody: **Present**
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
94020-1	INF-01		Aqueous	4/26/06 15:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C727405	1 L Amber Glass	Proline	BX20826	None	n/a	n/a	04-13-06		
C727404	1 L Amber Glass	Proline	BX20826	None	n/a	n/a	04-13-06		

Data Certification

Project: **N.Washington St**
Client: **Paragon Environmental Services**

Lab ID: **94020**
Received: **04-27-06 17:15**

MA DEP Compendium of Analytical Methods					
Project Location: n/a		MA DEP RTN: n/a			
This Form provides certifications for the following data set:					
EPA 8082: 94020-01					
Sample Matrices:		Groundwater (X)	Soil/Sediment ()	Drinking Water ()	Other ()
MCP SW-846 Methods Used	8260B ()	8151A ()	8330 ()	6010B ()	7470A/1A ()
	8270C ()	8081A ()	VPH ()	6020 ()	9012A ² ()
	8082 (X)	8021B ()	EPH ()	7000 S ³ ()	Other ()
	As specified in MA DEP Compendium of Analytical Methods. (check all that apply)				
1. List Release Tracking Number (RTN), if known. 2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method 3. S - SW-846 Methods 7000 Series. List individual method and analyte.					
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	<u>VPH and EPH methods only:</u> Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				n/a
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				Yes
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: 		Position: Operations Manager			
Printed Name: Eric H. Jensen		Date: 05-08-06			

**EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **INF-01**
 Project: **N.Washington St**
 Client: **Paragon Environmental Services**
 Laboratory ID: **94020-01**
 Sampled: **04-26-06 15:45**
 Received: **04-27-06 17:15**
 Extracted: **05-01-06 16:00**
 Cleaned Up: **05-02-06 19:00**
 Analyzed: **05-04-06 17:44**
 Analyst: **CRL**

Matrix: **Aqueous**
 Container: **1 L Amber Glass**
 Preservation: **Cool**
 QC Batch ID: **PB-2233-F**
 Instrument ID: **GC-11 Agilent 6890**
 Sample Weight: **1000 mL**
 Final Volume: **1 mL**
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	1.4	2C (1.1)*	ug/L	0.2
37324-23-5	Aroclor 1262 †	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 †	BRL		ug/L	0.2

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	0.20	0.15	77 %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.17	84 %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	0.20	0.15	77 %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.24	118 %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 † Non-target analyte. Result is based on a single mid-range calibration standard.
 * Confirmatory column quantification.
 2C Concentration reported from second column.

Project Narrative

Project: **N.Washington St**
Client: **Paragon Environmental Services**

Lab ID: **94020**
Received: **04-27-06 17:15**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

- 1 . No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

- 1 . No method modifications, non-conformances or analytical issues were noted.

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

Quality Control Report Laboratory Control Samples

Category: EPA 8082 QC Batch ID: PB-2233-F Matrix: Aqueous Units: ug/L	LCS Instrument ID: GC-11 Agilent 6890 Extracted: 05-01-06 16:00 Cleaned Up: 05-02-06 19:00 Analyzed: 05-03-06 23:03 Analyst: CRL	LCSD Instrument ID: GC-11 Agilent 6890 Extracted: 05-01-06 16:00 Cleaned Up: 05-02-06 19:00 Analyzed: 05-03-06 23:26 Analyst: CRL
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CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	5.0	5.2	5.2	103%	104%	5.0	5.4	5.4	109%	109%	5 %	4 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	5.0	4.4	4.2	87%	84%	5.0	4.1	4.2	82%	83%	6 %	1 %	40 - 140%	30 %	

QC Surrogate Compound	Surrogate Recovery											QC Limits	
Tetrachloro- <i>m</i> -xylene	0.20	0.22	0.21	110%	104%	0.20	0.23	0.21	115%	107%		30 - 150 %	
Decachlorobiphenyl	0.20	0.12	0.08	62%	40%	0.20	0.11	0.09	54%	44%		30 - 150 %	

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,
 or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Method Blank

Category: **EPA Method 8082**
QC Batch ID: **PB-2233-F**
Matrix: **Aqueous**

Instrument ID: **GC-11 Agilent 6890**
Extracted: **05-01-06 16:00**
Cleaned Up: **05-02-06 19:00**
Analyzed: **05-03-06 22:39**
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 [†]	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 [†]	BRL		ug/L	0.2

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	0.20	0.23	117 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.10	52 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	0.20	0.22	112 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.09	46 %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
[†] Non-target analyte. Result is based on a single mid-range calibration standard.

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<http://www.groundwateranalytical.com/qualifications.htm>

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Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
<http://www.floridadep.org/labs/qa/dohforms.htm>

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
<http://www.state.me.us/dhs/eng/water/Compliance.htm>

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
<http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf>

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
<http://www.wadsworth.org/labcert/elap/comm.html>

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
<http://www.dep.state.pa.us/Labs/Registered/>

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
<http://www.vermontdrinkingwater.org/wsops/labtable.PDF>