

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: Town of Lexington DPW		Facility/site address: Proposed DPW Facility		
Location of facility/site: longitude: <u>71-14-15</u> latitude: <u>42-27-37</u>	Facility SIC code(s): <u>7538/9999</u>	Street: <u>201 Bedford Street</u>		
b) Name of facility/site owner: Town of Lexington, DPW		Town: Lexington		
Email address of owner: whadley@ci.lexington.ma.us		State:	Zip:	County:
Telephone no. of facility/site owner: 781-862-0550		MA	02420-4413	USA
Fax no. of facility/site owner: 781-863-2350		Owner is (check one): 1. Federal ___ 2. State/Tribal <input checked="" type="checkbox"/>		
Address of owner (if different from site): Administration Office / Town Hall		3. Private _____ 4. other, if so, describe: <u>DPW</u>		
Street: 1625 Mass Ave, Room 206				
Town: Lexington,		State: MA	Zip: 02420	County: USA
c) Legal name of operator: Cyn Environmental Services		Operator telephone no: 781-341-1777 Ext 133		
		Operator fax no.: 781-341-6246		Operator email: phil_mcbain@cynenv.com
Operator contact name and title: Philip D. McBain, LSP, Senior Project Manager				
Address of operator (if different from owner):		Street: 100 Tosca Drive		
Town: Stoughton,		State: MA	Zip: 02072	County: USA
d) Check "yes" or "no" for the following:				
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ___ No <input checked="" type="checkbox"/> , if "yes," number:				
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ___ No <input checked="" type="checkbox"/> , if "yes," date and tracking #:				
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ___ No <input checked="" type="checkbox"/>				
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No ___				

<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes ___ No <input checked="" type="checkbox"/></p> <p>If "yes," please list:</p> <ol style="list-style-type: none"> 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: 	<p>f) Is the site/facility covered by any other EPA permit, including:</p> <ol style="list-style-type: none"> 1. multi-sector storm water general permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number: 2. phase I or II construction storm water general permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number: 3. individual NPDES permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number: 4. any other water quality related permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number:
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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:	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">1) Number of discharge points: 1</td> <td>2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow <u>40-gpm</u> Average flow <u>40-gpm</u> Is maximum flow a design value? Y <input checked="" type="checkbox"/> N ___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.</td> </tr> </table>	1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>40-gpm</u> Average flow <u>40-gpm</u> Is maximum flow a design value ? Y <input checked="" type="checkbox"/> N ___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>40-gpm</u> Average flow <u>40-gpm</u> Is maximum flow a design value ? Y <input checked="" type="checkbox"/> 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. <u>71-14-17</u> lat. <u>42-27-39</u> ; 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): Not Applicable	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal _____? Is discharge ongoing Yes ___ No <input checked="" type="checkbox"/> ?		
c) Expected dates of discharge (mm/dd/yy): start <u>10/20/08</u> end <u>10/24/08</u>			
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		✓	1	grab	8100M	211	47,200		47.200	
4. Cyanide	✓			grab	VPH-04-1.1	1.5	ND		ND	
5. Benzene		✓	1	grab	VPH-04-1.1	5	ND		ND	
6. Toluene		✓	1	grab	VPH-04-1.1	5	ND		ND	
7. Ethylbenzene		✓	1	grab	VPH-04-1.1	5	ND		ND	
8. (m,p,o) Xylenes		✓	1	grab	VPH-04-1.1	5	ND		ND	
9. Total BTEX ⁴		✓	1	grab	VPH-04-1.1	5	ND		ND	

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

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)
10. Ethylene Dibromide ⁵ (1,2- Dibromo-methane)	✓									
11. Methyl-tert-Butyl Ether (MtBE)	✓		1	Grab	VPH-04-1.1	1.5	ND		ND	
12. tert-Butyl Alcohol (TBA)	✓									
13. tert-Amyl Methyl Ether (TAME)	✓									
14. Naphthalene		✓	1	Grab	VPH-04-1.1	5	6.5		6.5	
15. Carbon Tetrachloride	✓									
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 Dichloroethylene	✓									
23. Dichloromethane (Methylene Chloride)	✓									
24. Tetrachloroethylene	✓									

⁵EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

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 ⁶ (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	✓									

⁶The sum of individual phthalate compounds.

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		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	✓		1	Grab	EPH-04-1.1	5	ND		ND	
i. Acenaphthylene	✓									
j. Anthracene	✓									
k. Benzo(ghi) Perylene	✓									
l. Fluoranthene	✓									
m. Fluorene	✓									
n. Naphthalene-		✓	1	Grab	EPH-04-1.1	10	ND		ND	
o. Phenanthrene	✓		1	Grab	EPH-04-1.1	10	ND		ND	
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):										

Not Applicable

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

<p><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___</p>	<p>If yes, which metals?</p>
<p><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.e) (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: _____</p>	<p>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:</p>

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 <input checked="" type="checkbox"/>	Air stripper	Oil/water separator	Equalization tanks	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
	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 <u>40-gpm</u> Maximum flow rate of treatment system <u>40-gpm</u> Design flow rate of treatment system <u>40-gpm</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): <u>None</u>						

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

a) Identify the discharge pathway:	Direct <input type="checkbox"/>	Within facility <input type="checkbox"/>	Storm drain <input checked="" type="checkbox"/>	River/brook <input type="checkbox"/>	Wetlands <input type="checkbox"/>	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: <u>Frac tank through Bag Filter. Treated with Carbon, and discharged to onsite drainage basin. Unnamed Stream connected to Tophet Swamp</u>						
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 <u>Class B</u>						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water <u>Not Applicable</u> 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, for which pollutant(s)? Is there a TMDL? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Has any consultation with the federal services been completed? Yes ___ No <input checked="" type="checkbox"/> or is consultation underway? Yes ___ No <input checked="" type="checkbox"/> What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (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 <input checked="" type="checkbox"/> Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No <input checked="" type="checkbox"/>

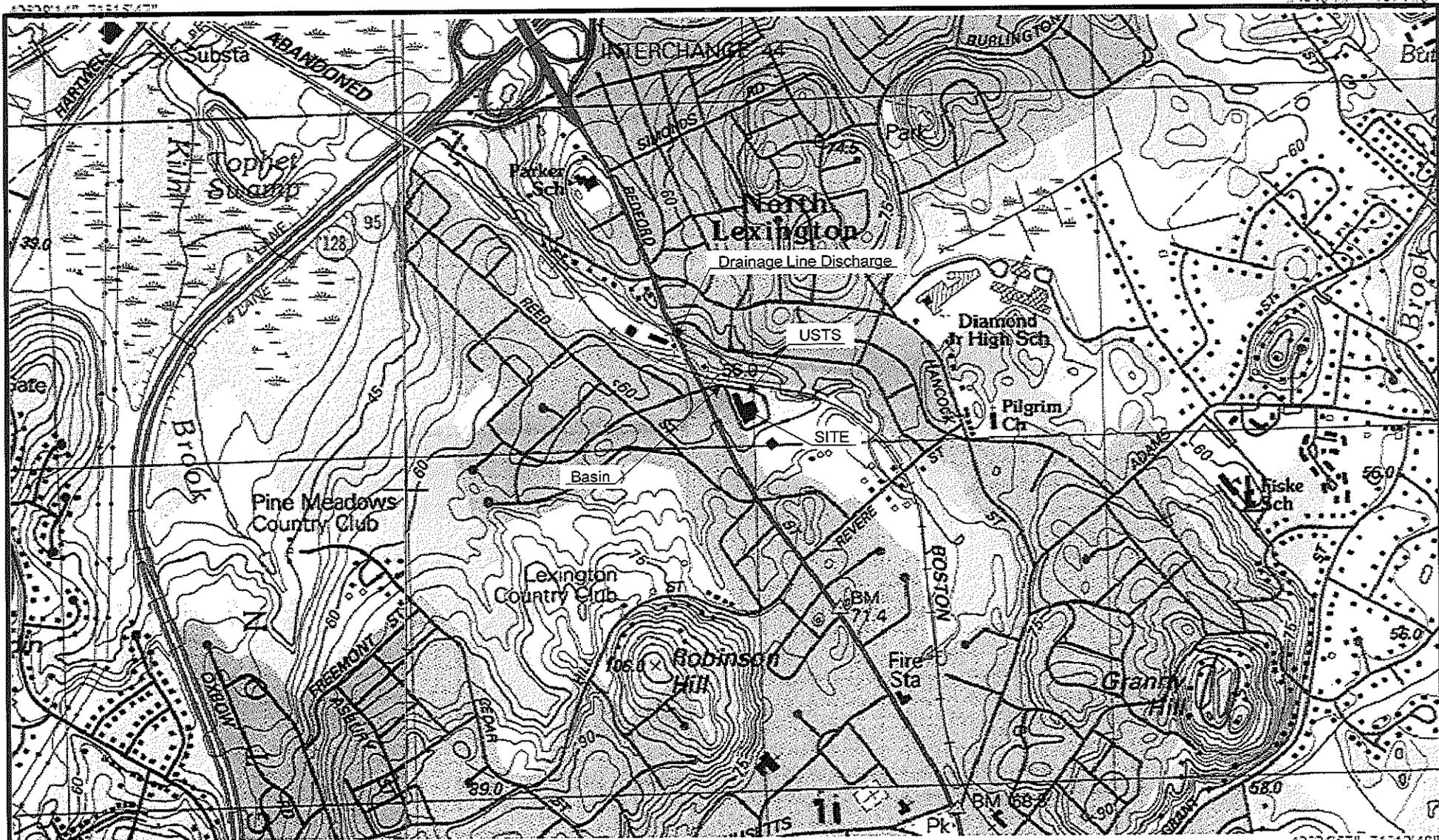
7. Supplemental information. :

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

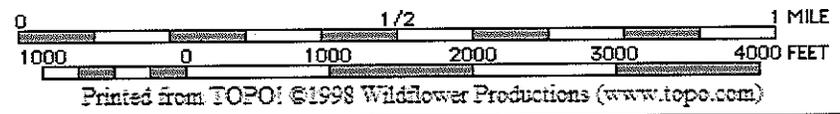
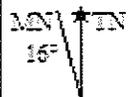
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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: Town of Lexington DPW. Conducting dewatering operations to install USTs.
Operator signature: 
Title: LSP / Senior Project Manager
Date: 10/09/08



42°26'57", 71°15'47" NAD83

42°26'57", 71°12'48"



CYN Environmental Services
100 Tosca Drive, Stoughton, Massachusetts 02072

Prepared By: PDM

Scale: As Noted

Date: 9 October 2008

SITE LOCUS PLAN
201 Bedford Street
Lexington, Massachusetts 02420-4413

Release Tracking Number: Closed

Cyn Job No.: 206573-00-ST

Figure No. 1



CYN Environmental Services
 100 Tosca Drive, Stoughton, Massachusetts 02072

Prepared By: PDM

Scale: As Noted

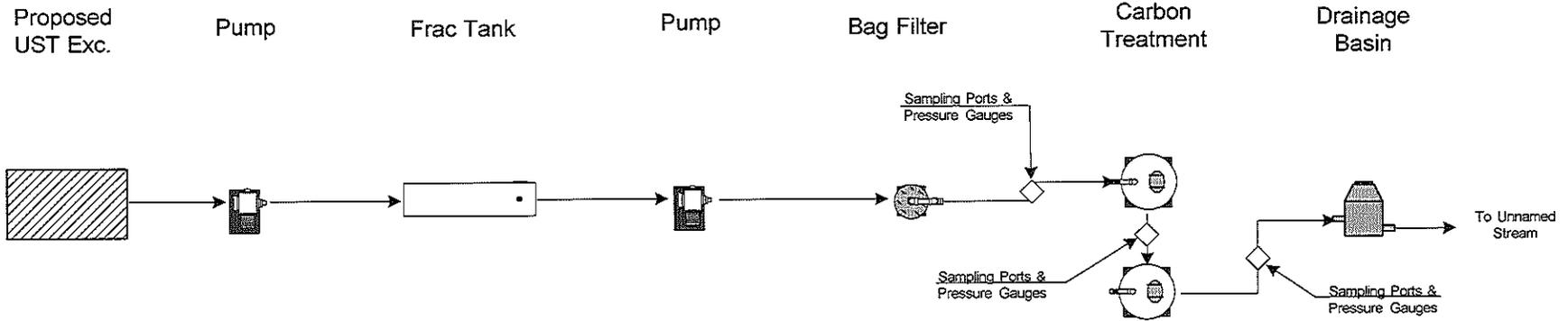
Date: 9 October 2008

Aerial Site Photograph
 201 Bedford Street
 Lexington, Massachusetts 02420-4413

Release Tracking Number: Closed

Cyn Job No.: 206573-00-ST

Figure No. 2



Note: Drainage basin discharges to an Unnamed Stream.
This stream connects to Tophet Swamp then Shawsheen River



CYN Environmental Services
100 Tosca Drive, Stoughton, MA 02072

Drawn By: PDM

Reviewed By:

Scale: None

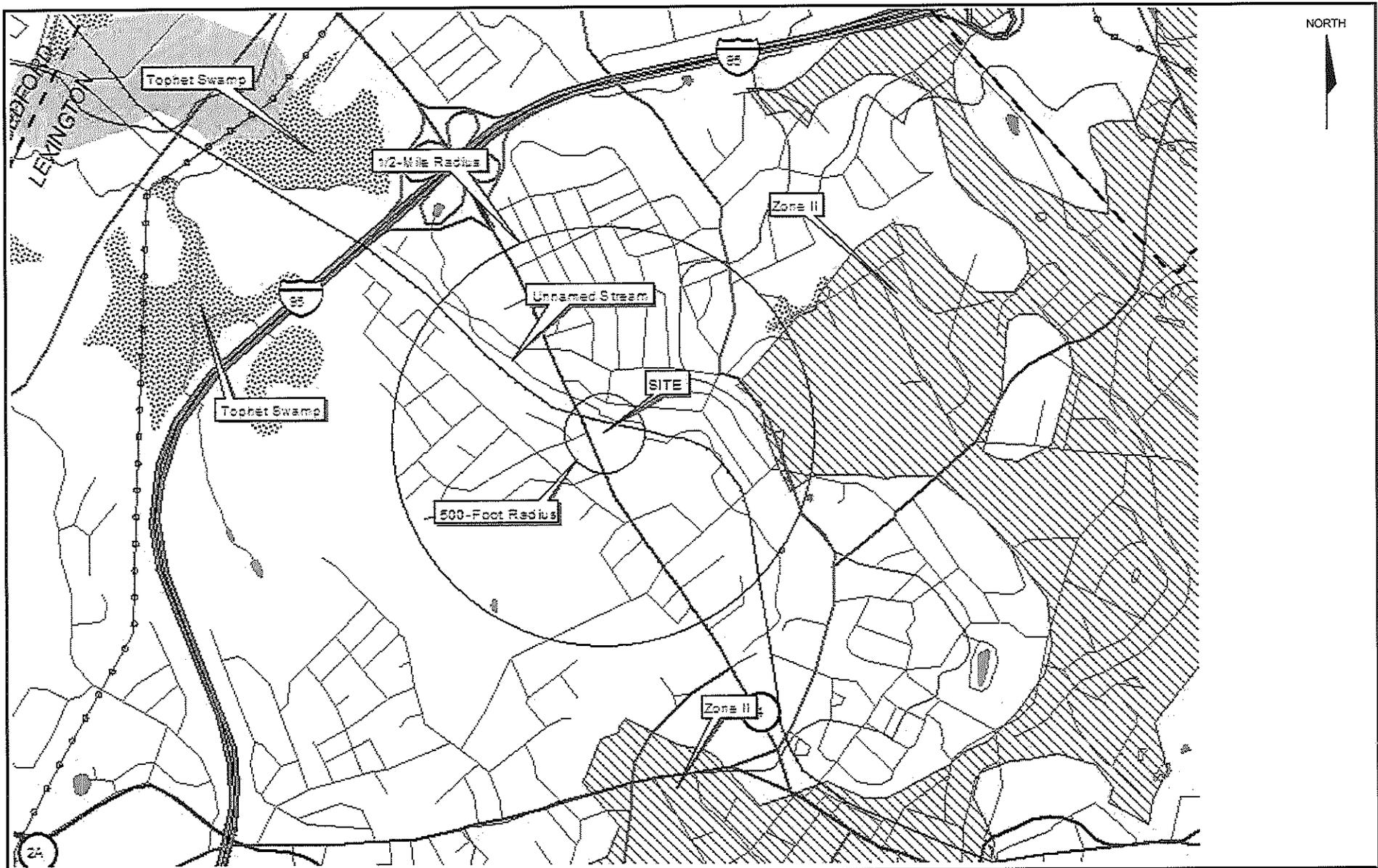
Date: 9 October 2008

General Treatment Line Diagram Schematic
Proposed Underground Storage Tank Excavation
Town of Lexington Department of Public Works Facility
201 Bedford Street, Lexington, Massachusetts

Release Tracking No.:

Cyn Job No.: 206573-00-ST

Figure No. 3



CYN Environmental Services
100 Tosca Drive, Stoughton, MA 02072

Drawn By: PDM

Reviewed By:

Scale: 1 = 20,000

Date: 9 October 2008

MADEP GIS MAP

Proposed Underground Storage Tank Excavation
Town of Lexington Department of Public Works Facility
201 Bedford Street, Lexington, Massachusetts

Release Tracking No.:

Cyn Job No.: 206573-00-ST

Figure No. 4



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

PROJECT NARRATIVE

Phil McBain
Cyn Environmental Services
100 Tosca Drive
Stoughton, MA 02072

RE: CTA Construction
ESS Laboratory Work Order Number: 0809252

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this Project Narrative, the entire report has been paginated. The ESS Laboratory Certifications sheet is the final report page. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been mailed. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

Date: September 22, 2008

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration may be used instead of automated integration because it produces more accurate results.

ESS Laboratory certifies that the test results meet the requirements of NELAC, except where noted within this project narrative.

To achieve CAM compliance for MCP data, ESS laboratory has performed and reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Data Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Sample Receipt

The following samples were received on September 17, 2008 for the analyses specified on the enclosed Chain of Custody Record.

Question F: All samples for EPH were analyzed for a subset of the required MCP list per the client's request.

Laboratory ID	Matrix	Client Sample ID
0809252-01	Ground Water	GW 1

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486

<http://www.ESSLaboratory.com>

Dependability

+

Quality

+

Service



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services
Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

PROJECT NARRATIVE

MADEP-VPH-04-1.1 Volatile Petroleum Hydrocarbon

BI81916-DUP1 pH > 2

BI81916-DUP1 **Relative percent difference for duplicate is outside of criteria.**

1,2,4-Trimethylbenzene, C5-C8 Unadjusted Aliphatics, C9-C10 Aromatics, C9-C12 Unadjusted Aliphatics, Ethylbenzene, Toluene, Xylene O, Xylene P,M

BI81916-MS1 **Surrogate recovery(ies) above upper control limit.**

No other observations noted.

End of Project Narrative.



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

MADEP MCP Response Action Analytical Report Certification Form

MADEP RTN*: _____

This form provides certification for the following data set:

0809252-01

Sample Matrices:	<input checked="" type="checkbox"/> Ground Water	<input type="checkbox"/> Soil/Sediment	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Other: _____
MCP SW-846	8260B ()	8151A ()	8330 ()	6010B () 7470A/1A ()
Methods Used	8270C ()	8081A ()	VPH <input checked="" type="checkbox"/>	6020 () 9014M** ()
	8082 ()	8021B ()	EPH <input checked="" type="checkbox"/>	7000 S*** () 7196A ()

As specified in MADEP

* List Release Tracking Number (RTN), if known.

Compendium of Analytical

** M-SW-846 9014 or MADEP Physiologically Available Cyanide (PAC) Method

Methods (Check all that apply)

*** 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 No*

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 No*

C Does the data included in the report meet all the requirements for "Presumptive Certainty" as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? Yes No*

D VPH and EPH methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective Methods)? Yes No*

A response to questions E and F below required for "Presumptive Certainty" status

E Were all QC performance standards and recommendations for the specific methods achieved? Yes No*

F Were results for all analyte-list compounds/elements for the specified method(s) reported? Yes No*

**All negative responses must be addressed in an attached Environmental Laboratory Case 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: Laurel Stoddard

Date: September 22, 2008

Printed Name: Laurel Stoddard

Position: Laboratory Director



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services
Client Project ID: CTA Construction
Client Sample ID: GW 1
Date Sampled: 09/16/08 13:15
Percent Solids: N/A
Initial Volume: 950
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 0809252
ESS Laboratory Sample ID: 0809252-01
Sample Matrix: Ground Water
Analyst: SEP
Prepared: 09/17/08

8100M Total Petroleum Hydrocarbons

MA - GW1

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	47200	ug/L	211	200	1	09/18/08

<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
104 %		40-140

Surrogate: O-Terphenyl



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services
 Client Project ID: CTA Construction
 Client Sample ID: GW 1
 Date Sampled: 09/16/08 13:15
 Percent Solids: N/A
 Initial Volume: 1000
 Final Volume: 1
 Extraction Method: 3510C

ESS Laboratory Work Order: 0809252
 ESS Laboratory Sample ID: 0809252-01
 Sample Matrix: Ground Water
 Analyst: SEP
 Prepared: 09/18/08

MADEP-EPH-04-1.1/8270C Extractable Petroleum Hydrocarbons

MA - GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
C9-C18 Aliphatics1	15600	ug/L	200	700	1	09/18/08
C19-C36 Aliphatics1	4030	ug/L	200	14000	1	09/18/08
C11-C22 Unadjusted Aromatics1	6020	ug/L	150	200	1	09/19/08
C11-C22 Aromatics1,2	6020	ug/L	150	200		09/19/08
2-Methylnaphthalene	ND	ug/L	5.0	10	1	09/19/08
Accenaphthene	ND	ug/L	10.0	20	1	09/19/08
Naphthalene	ND	ug/L	10.0	140	1	09/19/08
Phenanthrene	ND	ug/L	10.0	40	1	09/19/08
Preservative:	pH <= 2					

	%Recovery	Qualifier	Limits
Surrogate: 1-Chlorooctadecane	73 %		40-140
Surrogate: 2-Bromonaphthalene	78 %		40-140
Surrogate: 2-Fluorobiphenyl	65 %		40-140
Surrogate: O-Terphenyl	55 %		40-140



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services
 Client Project ID: CTA Construction
 Client Sample ID: GW 1
 Date Sampled: 09/16/08 13:15
 Percent Solids: N/A
 Initial Volume: 5
 Final Volume: 5
 Extraction Method: 5030B

ESS Laboratory Work Order: 0809252
 ESS Laboratory Sample ID: 0809252-01
 Sample Matrix: Ground Water
 Analyst: MD
 Prepared: 09/19/08

MADEP-VPH-04-1.1 Volatile Petroleum Hydrocarbon MA - GW1

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
C9-C10 Aromatics	ND	ug/L	100	200	1	09/19/08
C5-C8 Aliphatics1,2	ND	ug/L	200	300	1	09/19/08
C9-C12 Aliphatics2,3	363	ug/L	200	700	1	09/19/08
Benzene	ND	ug/L	1.5	5	1	09/19/08
Ethylbenzene	ND	ug/L	5.0	700	1	09/19/08
Methyl tert-Butyl Ether	ND	ug/L	1.5	70	1	09/19/08
Naphthalene	6.5	ug/L	5.0	140	1	09/19/08
Toluene	ND	ug/L	5.0	1000	1	09/19/08
Xylene O	ND	ug/L	5.0	10000	1	09/19/08
Xylene P,M	ND	ug/L	10.0	10000	1	09/19/08
Preservative:	pH <= 2					

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 2,5-Dibromotoluene - FID	104 %		70-130
Surrogate: 2,5-Dibromotoluene - PID	94 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch B181728 - 3510C

Blank										
Decane (C10)	ND	5.00	ug/L							
Docosane (C22)	ND	5.00	ug/L							
Dodecane (C12)	ND	5.00	ug/L							
Elcosane (C20)	ND	5.00	ug/L							
Hexacosane (C26)	ND	5.00	ug/L							
Hexadecane (C16)	ND	5.00	ug/L							
Nonadecane (C19)	ND	5.00	ug/L							
Nonane (C9)	ND	5.00	ug/L							
Octacosane (C28)	ND	5.00	ug/L							
Octadecane (C18)	ND	5.00	ug/L							
Tetracosane (C24)	ND	5.00	ug/L							
Tetradecane (C14)	ND	5.00	ug/L							
Total Petroleum Hydrocarbons	ND	200	ug/L							
Triacontane (C30)	ND	5.00	ug/L							

<i>Surrogate: O-Terphenyl</i>	<i>68.0</i>		ug/L	<i>100.0</i>		<i>68</i>	<i>40-140</i>			
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LCS										
Decane (C10)	41.4	5.00	ug/L	50.00		83	40-140			
Docosane (C22)	47.5	5.00	ug/L	50.00		95	40-140			
Dodecane (C12)	42.1	5.00	ug/L	50.00		84	40-140			
Elcosane (C20)	47.5	5.00	ug/L	50.00		95	40-140			
Hexacosane (C26)	47.6	5.00	ug/L	50.00		95	40-140			
Hexadecane (C16)	45.4	5.00	ug/L	50.00		91	40-140			
Nonadecane (C19)	49.4	5.00	ug/L	50.00		99	40-140			
Nonane (C9)	35.6	5.00	ug/L	50.00		71	30-140			
Octacosane (C28)	48.8	5.00	ug/L	50.00		98	40-140			
Octadecane (C18)	46.4	5.00	ug/L	50.00		93	40-140			
Tetracosane (C24)	48.8	5.00	ug/L	50.00		98	40-140			
Tetradecane (C14)	44.3	5.00	ug/L	50.00		89	40-140			
Triacontane (C30)	49.8	5.00	ug/L	50.00		100	40-140			

<i>Surrogate: O-Terphenyl</i>	<i>87.1</i>		ug/L	<i>100.0</i>		<i>87</i>	<i>40-140</i>			
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LCS Dup										
Decane (C10)	45.6	5.00	ug/L	50.00		91	40-140	10	25	
Docosane (C22)	49.4	5.00	ug/L	50.00		99	40-140	4	25	
Dodecane (C12)	46.1	5.00	ug/L	50.00		92	40-140	9	25	
Elcosane (C20)	49.9	5.00	ug/L	50.00		100	40-140	5	25	
Hexacosane (C26)	49.1	5.00	ug/L	50.00		98	40-140	3	25	
Hexadecane (C16)	48.4	5.00	ug/L	50.00		97	40-140	7	25	
Nonadecane (C19)	52.3	5.00	ug/L	50.00		105	40-140	6	25	
Nonane (C9)	41.1	5.00	ug/L	50.00		82	30-140	14	25	
Octacosane (C28)	50.4	5.00	ug/L	50.00		101	40-140	3	25	
Octadecane (C18)	49.0	5.00	ug/L	50.00		98	40-140	6	25	
Tetracosane (C24)	50.3	5.00	ug/L	50.00		101	40-140	3	25	
Tetradecane (C14)	48.3	5.00	ug/L	50.00		97	40-140	9	25	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch B181728 - 3510C

Triacontane (C30)	51.0	5.00	ug/L	50.00		102	40-140	2	25	
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Surrogate: O-Terphenyl

92.5 ug/L 100.0 92 40-140

MADEP-EPH-04-1.1/8270C Extractable Petroleum Hydrocarbons

Batch B181820 - 3510C

Blank										
C19-C36 Aliphatics1	ND	200	ug/L							
C9-C18 Aliphatics1	ND	200	ug/L							
Decane (C10)	ND	5	ug/L							
Docosane (C22)	ND	5	ug/L							
Dodecane (C12)	ND	5	ug/L							
Eicosane (C20)	ND	5	ug/L							
Hexacosane (C26)	ND	5	ug/L							
Hexadecane (C16)	ND	5	ug/L							
Nonadecane (C19)	ND	5	ug/L							
Nonane (C9)	ND	5	ug/L							
Octacosane (C28)	ND	5	ug/L							
Octadecane (C18)	ND	5	ug/L							
Tetracosane (C24)	ND	5	ug/L							
Tetradecane (C14)	ND	5	ug/L							
Triacontane (C30)	ND	5	ug/L							

Surrogate: 1-Chlorooctadecane	35.5		ug/L	50.00		71	40-140			
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Blank										
2-Methylnaphthalene	ND	5.0	ug/L							
Acenaphthene	ND	10.0	ug/L							
Acenaphthylene	ND	10.0	ug/L							
Anthracene	ND	10.0	ug/L							
Benzo(a)anthracene	ND	10.0	ug/L							
Benzo(a)pyrene	ND	10.0	ug/L							
Benzo(b)fluoranthene	ND	10.0	ug/L							
Benzo(g,h,i)perylene	ND	10.0	ug/L							
Benzo(k)fluoranthene	ND	10.0	ug/L							
C11-C22 Unadjusted Aromatics1	ND	150	ug/L							
Chrysene	ND	10.0	ug/L							
Dibenzo(a,h)Anthracene	ND	10.0	ug/L							
Fluoranthene	ND	10.0	ug/L							
Fluorene	ND	10.0	ug/L							
Indeno(1,2,3-cd)Pyrene	ND	10.0	ug/L							
Naphthalene	ND	10.0	ug/L							
Phenanthrene	ND	10.0	ug/L							
Pyrene	ND	10.0	ug/L							
Surrogate: 2-Bromonaphthalene	45.8		mg/L	50.00		92	40-140			
Surrogate: 2-Fluorobiphenyl	39.0		mg/L	50.00		78	40-140			
Surrogate: O-Terphenyl	32.0		ug/L	50.00		64	40-140			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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MADEP-EPH-04-1.1/8270C Extractable Petroleum Hydrocarbons

Batch B181820 - 3510C

LCS										
Decane (C10)	32	5	ug/L	50.00		64	40-140			
Docosane (C22)	45	5	ug/L	50.00		90	40-140			
Dodecane (C12)	34	5	ug/L	50.00		68	40-140			
Elcosane (C20)	44	5	ug/L	50.00		88	40-140			
Hexacosane (C26)	45	5	ug/L	50.00		91	40-140			
Hexadecane (C16)	39	5	ug/L	50.00		79	40-140			
Nonadecane (C19)	44	5	ug/L	50.00		87	40-140			
Nonane (C9)	25	5	ug/L	50.00		50	30-140			
Octacosane (C28)	47	5	ug/L	50.00		94	40-140			
Octadecane (C18)	42	5	ug/L	50.00		83	40-140			
Tetracosane (C24)	46	5	ug/L	50.00		93	40-140			
Tetradecane (C14)	38	5	ug/L	50.00		75	40-140			
Triacontane (C30)	48	5	ug/L	50.00		96	40-140			

<i>Surrogate: 1-Chlorooctadecane</i>	<i>36.7</i>		<i>ug/L</i>	<i>50.00</i>		<i>73</i>	<i>40-140</i>			
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LCS										
2-Methylnaphthalene	39.6	5.0	ug/L	50.00		79	40-140			
Acenaphthene	39.1	10.0	ug/L	50.00		78	40-140			
Acenaphthylene	41.4	10.0	ug/L	50.00		83	40-140			
Anthracene	39.6	10.0	ug/L	50.00		79	40-140			
Benzo(a)anthracene	36.4	10.0	ug/L	50.00		73	40-140			
Benzo(a)pyrene	39.8	10.0	ug/L	50.00		80	40-140			
Benzo(b)fluoranthene	34.6	10.0	ug/L	50.00		69	40-140			
Benzo(g,h,i)perylene	41.1	10.0	ug/L	50.00		82	40-140			
Benzo(k)fluoranthene	35.0	10.0	ug/L	50.00		70	40-140			
Chrysene	34.8	10.0	ug/L	50.00		70	40-140			
Dibenzo(a,h)Anthracene	41.9	10.0	ug/L	50.00		84	40-140			
Fluoranthene	38.1	10.0	ug/L	50.00		76	40-140			
Fluorene	41.8	10.0	ug/L	50.00		84	40-140			
Indeno(1,2,3-cd)Pyrene	41.4	10.0	ug/L	50.00		83	40-140			
Naphthalene	37.9	10.0	ug/L	50.00		76	40-140			
Phenanthrene	40.7	10.0	ug/L	50.00		81	40-140			
Pyrene	37.8	10.0	ug/L	50.00		76	40-140			
<i>Surrogate: 2-Bromonaphthalene</i>	<i>45.4</i>		<i>mg/L</i>	<i>50.00</i>		<i>91</i>	<i>40-140</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>38.4</i>		<i>mg/L</i>	<i>50.00</i>		<i>77</i>	<i>40-140</i>			
<i>Surrogate: O-Terphenyl</i>	<i>32.5</i>		<i>ug/L</i>	<i>50.00</i>		<i>65</i>	<i>40-140</i>			

LCS										
2-Methylnaphthalene Breakthrough	0.0		%				0-5			
Naphthalene Breakthrough	0.0		%				0-5			

LCS Dup										
Decane (C10)	30	5	ug/L	50.00		60	40-140	6	25	
Docosane (C22)	47	5	ug/L	50.00		94	40-140	4	25	
Dodecane (C12)	32	5	ug/L	50.00		65	40-140	5	25	
Elcosane (C20)	46	5	ug/L	50.00		91	40-140	3	25	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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MADEP-EPH-04-1.1/8270C Extractable Petroleum Hydrocarbons

Batch BI81820 - 3510C

Hexacosane (C26)	47	5	ug/L	50.00		95	40-140	4	25	
Hexadecane (C16)	39	5	ug/L	50.00		77	40-140	2	25	
Nonadecane (C19)	44	5	ug/L	50.00		88	40-140	1	25	
Nonane (C9)	24	5	ug/L	50.00		47	30-140	7	25	
Octacosane (C28)	49	5	ug/L	50.00		98	40-140	4	25	
Octadecane (C18)	41	5	ug/L	50.00		83	40-140	0.6	25	
Tetracosane (C24)	48	5	ug/L	50.00		97	40-140	4	25	
Tetradecane (C14)	36	5	ug/L	50.00		72	40-140	4	25	
triacontane (C30)	50	5	ug/L	50.00		101	40-140	4	25	

Surrogate: 1-Chlorooctadecane

37.6 ug/L 50.00 75 40-140

LCS Dup

2-Methylnaphthalene	34.2	5.0	ug/L	50.00		68	40-140	15	25	
Acenaphthene	33.7	10.0	ug/L	50.00		67	40-140	15	25	
Acenaphthylene	35.6	10.0	ug/L	50.00		71	40-140	15	25	
Anthracene	34.0	10.0	ug/L	50.00		68	40-140	15	25	
Benzo(a)anthracene	36.0	10.0	ug/L	50.00		72	40-140	1	25	
Benzo(a)pyrene	38.0	10.0	ug/L	50.00		76	40-140	5	25	
Benzo(b)fluoranthene	38.6	10.0	ug/L	50.00		77	40-140	11	25	
Benzo(g,h,i)perylene	40.3	10.0	ug/L	50.00		81	40-140	2	25	
Benzo(k)fluoranthene	30.6	10.0	ug/L	50.00		61	40-140	13	25	
Chrysene	33.6	10.0	ug/L	50.00		67	40-140	3	25	
Dibenzo(a,h)Anthracene	40.3	10.0	ug/L	50.00		81	40-140	4	25	
Fluoranthene	35.4	10.0	ug/L	50.00		71	40-140	7	25	
Fluorene	32.8	10.0	ug/L	50.00		66	40-140	24	25	
Indeno(1,2,3-cd)Pyrene	41.1	10.0	ug/L	50.00		82	40-140	0.7	25	
Naphthalene	31.9	10.0	ug/L	50.00		64	40-140	17	25	
Phenanthrene	35.6	10.0	ug/L	50.00		71	40-140	13	25	
Pyrene	36.0	10.0	ug/L	50.00		72	40-140	5	25	

Surrogate: 2-Bromonaphthalene

40.4 mg/L 50.00 81 40-140

Surrogate: 2-Fluorobiphenyl

37.7 mg/L 50.00 75 40-140

Surrogate: O-Terphenyl

28.0 ug/L 50.00 56 40-140

LCS Dup

2-Methylnaphthalene Breakthrough	0.0		%				0-5		200	
Naphthalene Breakthrough	0.0		%				0-5		200	

MADEP-VPH-04-1.1 Volatile Petroleum Hydrocarbon

Batch BI81916 - 5030B

Blank

1,2,4-Trimethylbenzene	ND	5.0	ug/L							
2,2,4-Trimethylpentane	ND	50.0	ug/L							
2-Methylpentane	ND	50.0	ug/L							
Benzene	ND	1.5	ug/L							
C5-C8 Unadjusted Aliphatics	ND	200	ug/L							
C9-C10 Aromatics	ND	100	ug/L							



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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MADEP-VPH-04-1.1 Volatile Petroleum Hydrocarbon

Batch B181916 - 50308

C9-C12 Unadjusted Aliphatics	ND	200	ug/L							
Ethylbenzene	ND	5.0	ug/L							
Methyl tert-Butyl Ether	ND	1.5	ug/L							
Naphthalene	ND	5.0	ug/L							
n-Butylcyclohexane	ND	50.0	ug/L							
n-Decane	ND	50.0	ug/L							
Nonane (C9)	ND	50.0	ug/L							
Pentane	ND	50.0	ug/L							
Toluene	ND	5.0	ug/L							
Xylene O	ND	5.0	ug/L							
Xylene P,M	ND	10.0	ug/L							

Surrogate: 2,5-Dibromotoluene - FID	45.2		ug/L	50.00		90	70-130			
Surrogate: 2,5-Dibromotoluene - PID	45.7		ug/L	50.00		91	70-130			

LCS

1,2,4-Trimethylbenzene	93.7		ug/L	100.0		94	70-130			
2,2,4-Trimethylpentane	146		ug/L	150.0		97	70-130			
2-Methylpentane	142		ug/L	150.0		95	70-130			
Benzene	48.0		ug/L	50.00		96	70-130			
Ethylbenzene	47.9		ug/L	50.00		96	70-130			
Methyl tert-Butyl Ether	162		ug/L	150.0		108	70-130			
Naphthalene	93.4		ug/L	100.0		93	70-130			
n-Butylcyclohexane	90.7		ug/L	100.0		91	70-130			
n-Decane	95.0		ug/L	100.0		95	70-130			
Nonane (C9)	101		ug/L	100.0		101	30-130			
Pentane	95.4		ug/L	100.0		95	70-130			
Toluene	148		ug/L	150.0		99	70-130			
Xylene O	96.3		ug/L	100.0		96	70-130			
Xylene P,M	189		ug/L	200.0		94	70-130			

Surrogate: 2,5-Dibromotoluene - FID	55.8		ug/L	50.00		112	70-130			
Surrogate: 2,5-Dibromotoluene - PID	56.9		ug/L	50.00		114	70-130			

LCS Dup

1,2,4-Trimethylbenzene	90.2		ug/L	100.0		90	70-130	4	25	
2,2,4-Trimethylpentane	149		ug/L	150.0		99	70-130	2	25	
2-Methylpentane	138		ug/L	150.0		92	70-130	3	25	
Benzene	46.9		ug/L	50.00		94	70-130	2	25	
Ethylbenzene	46.2		ug/L	50.00		92	70-130	4	25	
Methyl tert-Butyl Ether	141		ug/L	150.0		94	70-130	14	25	
Naphthalene	93.4		ug/L	100.0		93	70-130	0.01	25	
n-Butylcyclohexane	87.9		ug/L	100.0		88	70-130	3	25	
n-Decane	94.8		ug/L	100.0		95	70-130	0.3	25	
Nonane (C9)	99.2		ug/L	100.0		99	30-130	2	25	
Pentane	92.2		ug/L	100.0		92	70-130	3	25	
Toluene	145		ug/L	150.0		97	70-130	2	25	
Xylene O	94.0		ug/L	100.0		94	70-130	2	25	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
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MADEP-VPH-04-1.1 Volatile Petroleum Hydrocarbon

Batch BI81916 - 5030B

Xylene P,M	185		ug/L	200.0		92	70-130	2	25	
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Surrogate: 2,5-Dibromotoluene - FID	46.4		ug/L	50.00		93	70-130			
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Surrogate: 2,5-Dibromotoluene - PID	46.8		ug/L	50.00		94	70-130			
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Duplicate Source: 0809252-01

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
1,2,4-Trimethylbenzene	27.2	5.0	ug/L		3.6			153	50	D+
2,2,4-Trimethylpentane	ND	50.0	ug/L		ND				50	
2-Methylpentane	ND	50.0	ug/L		ND				50	
Benzene	ND	1.5	ug/L		ND				50	
C5-C8 Unadjusted Aliphatics	155	200	ug/L		ND				50	D+
C9-C10 Aromatics	274	100	ug/L		88.4			102	50	D+
C9-C12 Unadjusted Aliphatics	1170	200	ug/L		363			105	50	D+
Ethylbenzene	22.5	5.0	ug/L		ND				50	D+
Methyl tert-Butyl Ether	ND	1.5	ug/L		ND				50	
Naphthalene	5.2	5.0	ug/L		6.5			23	50	
n-Butylcyclohexane	ND	50.0	ug/L		ND				50	
n-Decane	ND	50.0	ug/L		ND				50	
Nonane (C9)	ND	50.0	ug/L		ND				50	
Pentane	ND	50.0	ug/L		ND				50	
Toluene	51.7	5.0	ug/L		ND				50	D+
Xylene O	49.4	5.0	ug/L		ND				50	D+
Xylene P,M	54.7	10.0	ug/L		ND				50	D+

Surrogate: 2,5-Dibromotoluene - FID	52.8		ug/L	50.00		106	70-130			
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Surrogate: 2,5-Dibromotoluene - PID	52.7		ug/L	50.00		105	70-130			
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Matrix Spike Source: 0809252-01

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
1,2,4-Trimethylbenzene	114		ug/L	100.0	3.6	110	70-130			
2,2,4-Trimethylpentane	183		ug/L	150.0	ND	122	70-130			
2-Methylpentane	156		ug/L	150.0	ND	104	70-130			
Benzene	48.6		ug/L	50.00	ND	97	70-130			
Ethylbenzene	48.4		ug/L	50.00	0.5	96	70-130			
Methyl tert-Butyl Ether	144		ug/L	150.0	ND	96	70-130			
Naphthalene	107		ug/L	100.0	6.5	101	70-130			
n-Butylcyclohexane	128		ug/L	100.0	15.2	113	70-130			
n-Decane	109		ug/L	100.0	14.9	94	70-130			
Nonane (C9)	110		ug/L	100.0	9.6	100	30-130			
Pentane	94.5		ug/L	100.0	ND	95	70-130			
Toluene	147		ug/L	150.0	0.5	98	70-130			
Xylene O	107		ug/L	100.0	1.0	106	70-130			
Xylene P,M	183		ug/L	200.0	0.5	91	70-130			

Surrogate: 2,5-Dibromotoluene - FID	82.2		ug/L	50.00		164	70-130			S+
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Surrogate: 2,5-Dibromotoluene - PID	54.8		ug/L	50.00		110	70-130			
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ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

Notes and Definitions

- Z-06 pH \leq 2
- U Analyte included in the analysis, but not detected
- S+ Surrogate recovery(ies) above upper control limit.
- PH+ pH > 2
- D+ Relative percent difference for duplicate is outside of criteria.
- ND Analyte NOT DETECTED above the detection limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Cyn Environmental Services

Client Project ID: CTA Construction

ESS Laboratory Work Order: 0809252

ESS LABORATORY CERTIFICATIONS

U.S. Army Corps of Engineers
Soil and Water

Navy Installation Restoration QA Program
Soil and Water

Rhode Island: A-179

Connecticut: PH-0750

Maine: RI002

Massachusetts: M-RI002

New Hampshire (NELAP accredited): 242405
Potable Water
Non Potable Water

New York (NELAP accredited): 11313
Potable Water
Non Potable Water
Solid and Hazardous Waste

United States Department of Agriculture
Soil Permit: S-54210

New Jersey (NELAP accredited): RI002
Potable Water
Non Potable Water
Soil and Hazardous Waste

Maryland: 301
Potable Water

