

5 October 2007

ERM Reference: 0051545

Brian Monahan
Conservation Administrator
Wayland Conservation Commission
Town Building
Wayland, MA 01778

Re: Inspection Report #8: 24 September through 5 October 2007,
and Analytical Data Transmittal
Former Raytheon Facility
430 Boston Post Road
DEP File No. 322-647

Dear Mr. Monahan:

Environmental Resources Management (ERM) is pleased to provide the Wayland Conservation Commission (Commission) with this Inspection Report for Northern Area Excavation activities at the Former Raytheon Facility at 430 Boston Post Road in Wayland, Massachusetts (Site). This report is submitted in accordance with the Order of Conditions for Massachusetts Department of Environmental Protection (DEP) File Number 322-647 dated 8 August 2006. Additionally, this report contains analytical laboratory data corresponding with sample results received during the past 10 days and records certifying the acceptability of using the wetland topsoil.

INSPECTION REPORT #8

Special Conditions 31 and 32 of the Town of Wayland Wetlands and Water Resources Permit Chapter 194 (Chapter 194) and Special Conditions 47 and 49 of Attachment A to the Wetlands Protection Act Form 5 Order of Conditions (WPA) require that a registered Professional Engineer perform weekly inspections of the work activities and certify in bi-weekly reports that those activities are in compliance with the Order of Conditions. The following information summarizes work performed between 24 September and 5 October 2007.

Work Performed During Period

Decontamination of the sheet piling began on 24 September inside the excavation area ([Appendix A, Photograph 1](#)). A sump lined with polyethylene sheeting was used to collect the wash water which was then sent through the on-Site treatment system. All 110 sheet piles and the remaining Tundra mats were decontaminated by 26 September.

Upon removal of the sheets from the excavation area, the soil that was brought to the surface during sheet pile extraction was moved to Stockpile I for off-Site disposal ([Appendix A, Photograph 2](#)). Backfilling of the excavation resumed once this soil was stockpiled. Soil used as backfill was moved from the clean soil stockpiles A, C and G ([Figure 1](#)), as well as from the Wayland Commons project on the adjacent property. Backfilling continued in this manner through 1 October when the target elevation for installation of the wetland was achieved.

The wetland was constructed beginning 1 October as described in the Restoration Plan (ERM, 14 June 2006). A 4-inch confining layer was first laid in the area and then covered with approximately 12 inches of wetland topsoil brought in from Newland Farm of Norton, Massachusetts ([Appendix A, Photograph 4](#)). In accordance with WPA Condition 52, this soil has been certified free of invasive species and contaminants by the seller. [Appendix C](#) contains these certifications.

The rest of the excavation area was brought to pre-construction grades on 2 October. Approximately 1,900 cubic yards of clean soil were hauled from the adjacent site during this reporting period. As required by WPA Condition 41 and Chapter 194 Condition 34, disturbed areas were spread with loam, seeded with a "New England Dry Site Mix" purchased from New England Wetland Plants of Amherst, Massachusetts, and mulched with straw.

Discharge of treated water from the treatment system began on 27 September after laying 2,100 feet of high-density polyethylene hose between the system and the Sudbury River. Water was discharged continuously to the Sudbury River through the end of this reporting period. Of the approximately 46,000 gallons to be discharged, roughly 12,000 gallons were left to be discharged as of 5 October. Effluent samples were collected on 27 September, 1 October and 2 October in accordance with the Remediation General Permit.

On 3 October activated carbon from the treatment system was added to Stockpile I. The carbon was accepted for disposal at Turnkey Recycling

and Environmental Enterprises (Turnkey) in Rochester, New Hampshire based on results of analytical testing performed on a sample collected on 1 October.

The wetland plants, purchased from Bigelow Nurseries of Northborough, Massachusetts, were received on Site and planted on 4 October. The numbers and species of plants were selected based on the Restoration Plan. Also, the restoration area was seeded with New England Wetland Plants' "New England Detention Basin and Moist Site Seed Mix".

Stockpile I, constituting all remaining soil and material to be disposed of off Site, was hauled to Turnkey in five truckloads (approximately 90 cubic yards) on 5 October.

Throughout the reporting period materials and equipment were demobilized from the Site. Also, mechanical and vacuum sweepers were used to clean the parking lot of residual sediment.

Alicia Kabir conducted the weekly Professional Engineer's inspections on 27 September and 4 October. No items or procedures were identified as out of compliance with the Order of Conditions during the Site visits.

In addition to the major activities detailed above, several other tasks were completed as required by the Order of Conditions:

- Daily inspections of the sedimentation controls have been performed. Records of these inspections are kept with the Daily Site Logs in [Appendix B](#). Sufficient supplies of silt fence and straw bales are maintained on Site to allow for corrective action and maintenance activities per WPA Condition 50 and Chapter 194 Condition 42.
- Equipment is being refueled in accordance with the Refueling Plan provided in the Response to Order of Conditions as stipulated in WPA Condition 39 and the Amendment to Refueling Plan provided in Inspection Report #3. Sufficient spill containment supplies are maintained at the refueling area and near each piece of heavy equipment.

Items Not in Conformance with Order of Conditions During Period

- Items on Site were in conformance with the Order of Conditions during this reporting period.

TRANSMITTAL OF ANALYTICAL DATA

As required by Chapter 194 Condition 24, analytical laboratory reports received in the past 10 days are attached as [Appendix D](#). Laboratory reports include results from:

- Effluent samples collected from the water treatment system on 27 September, 1 October, and 2 October 2007.
- A sample of the activated carbon from the treatment system collected on 1 October for waste characterization purposes.

ERM will continue to comply with the Order of Conditions and will inform the Commission of any significant deviations in the schedule or work plan.

If you have any questions or comments please contact the undersigned at (617) 646-7800.

Sincerely,

Jeremy J. Picard, P.G.
Senior Project Manager

Jason D. Flattery
Project Engineer

Encl:	Figure 1	Stockpile Locations
	Appendix A	Site Photographs
	Appendix B	Daily Site Logs: 24 September to 5 October
	Appendix C	Wetland Topsoil Certification
	Appendix D	Analytical Laboratory Reports

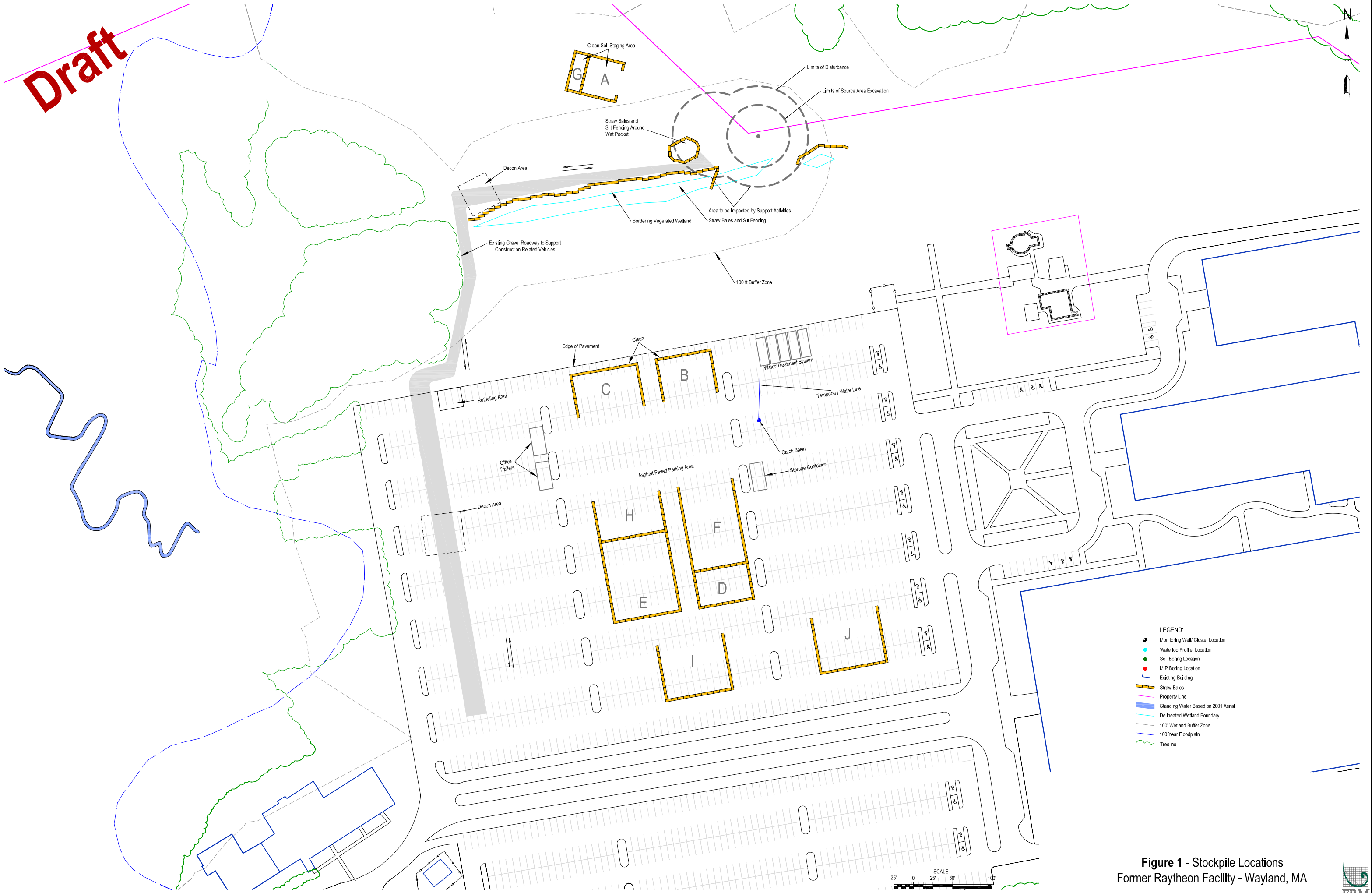
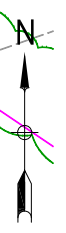
Cc: Louis Burkhardt, Raytheon Company
Public Repositories
Ben Gould, CMG Environmental

As required by WPA Conditions 47 and 49 and Chapter 194 Conditions 31 and 32, I certify based on my observations during Site visits on 27 September and 4 October 2007 and conversations with ERM field representatives that, to the best of my knowledge, work (except for any exceptions noted above) has been conducted in accordance with the Order of Conditions for DEP File Number 322-647.

Alicia Kabir, P.E.
Professional Engineer
MA License #46671

Figures

Draft



- LEGEND:**
- Monitoring Well/ Cluster Location
 - Waterloo Profiler Location
 - Soil Boring Location
 - MIP Boring Location
 - Existing Building
 - Straw Bales
 - Property Line
 - Standing Water Based on 2011 Aerial
 - Delineated Wetland Boundary
 - 100' Wetland Buffer Zone
 - 100 Year Floodplain
 - Tree Line

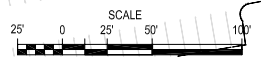


Figure 1 - Stockpile Locations
Former Raytheon Facility - Wayland, MA



Appendix A
Site Photographs



Photograph 1 –Sheet Pile Decontamination



Photograph 2 – Removing Residual Soil for Disposal



Photograph 3 –Backfilling Excavation



Photograph 4 – Completed Wetland Restoration Area





Photograph 5 – Finished Excavation Area Grades



Photograph 6 – Completed Wetland Restoration



Appendix B
Daily Site Logs 24 September –
5 October

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 9/24/07
Start Time: 07:00

End Time: 16:00

Personnel

ERM: B Massihzadegan, J FLATTERY, JDrobinski

Other Personnel: MT: C Jones, D Syriac, R Mangiardi
Union: B McCarthy, A Zain, J Muto, I Hackett

Visitors: Memam Graves (delivery)

Equipment On Site

Type	MAKE/MODEL Operating Company	#	SP. ID. Number
Loader	Komatsu WA340	-	MT
Excavator	Caterpillar 345	75	↓
Generator	MQ Power Whispermatt	14, 16	
Welder	Lincoln 250	-	
Water Treatment System		45	↓
Sweeper	Elgin Premier Pelican	-	Scanlon

Describe Activities:

Pressure washed 43 sheets, used ~140 gallons of water. Water was pumped into flocc tank and will go through the water treatment system.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



9/24/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHZADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 9/25/07
Start Time: 6:30

End Time: 15:00

Personnel

ERM: B Massihzadegan

Other Personnel: MT: C Jones, D Syria & R Mangiardi
Unov: B Mcleathy, A Zain, H Hackett, J Muto

Visitors: Delivery trucks (2) from Maxymillim to pick up sheet pile.

Equipment On Site

Type	MAKE/MODEL Operating Company	#	Co. Number
<u>Loader</u>	<u>Komatsu WA 390</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	<u> </u>
<u>Generator</u>	<u>MQ Power whisper watt 14.16</u>	<u>-</u>	<u> </u>
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	<u> </u>
<u>Water Treatment System</u>	<u>-</u>	<u>45</u>	<u> </u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scarlion</u>

Describe Activities:

49 sheetpile taken offsite to Maxymillian yard. 50
sheets total were pressure washed. ~500 gallons of
water was used and left in flocc tank to be run through
water treatment system.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



9/25/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BALHAAR MASSIHZADEGAN

(Signature):

Bahaar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 9/26/07
Start Time: 06:30 End Time: 1540

Personnel
ERM: B Masshaddegan, J Hammer, H Ammerberger

Other Personnel: MT: C Jones, D Syriac, R Mangiardi
Union: B McCarthy, A Zaim, I Hackett, J Muto

Visitors: Delivery truck removing sheetpile from site,
Taylor Oil Co.

Equipment On Site

Type	MAKE/MODEL Operating Company	#	CR CO. Number
<u>Loader</u>	<u>Komatsu WA 300</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	<u> </u>
<u>Generator</u>	<u>MR Damer Whispermax</u>	<u>14, 16</u>	<u> </u>
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	<u> </u>
<u>Water Treatment System</u>	<u>-</u>	<u>45</u>	<u>∇</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scorlon</u>

Describe Activities:

All sheetpile have been decontaminated (pressure washed)
44 were taken off site, and 17 remain on site. 2 marac hammers,
decon pad and filter fabric were taken off site. 2 tundra mats
were pressure washed. Used ~150 gallons today. Setup staging
area around SP-I for material around water to be put.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts

9/26/07



Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHZADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 9/27/07
Start Time: 06:30 End Time: 1530

Personnel

ERM: B Massihzadegan, J Flattery, A Kabir

Other Personnel: MT: C Jones, D Synal, P Morgiardi
Union: B McCarthy, I Hackett, A Zaion, J Muto

Visitors: Newton Trucking (2 trucks), 2 large flat bed trucks
picking up Maximilian equipment

Equipment On Site

Type	MAKE/MODEL Operating Company	#	OP. CO Number
<u>Loader</u>	<u>Komatsu WA300</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	
<u>Generator</u>	<u>M/Q Power Whisperwatt</u>	<u>14, 16</u>	
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	
<u>Water Treatment System</u>		<u>45</u>	<u>↓</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scorlon</u>
<u>Dump Truck</u>	<u>Mack truck 10 Wheeler</u>	<u>Tompkins</u>	<u>Newton Trucking</u>

Describe Activities:

Removing tundra mats, portions wood pieces Backfilling
excavation with material from SP-A, SP-C and Intoxica yard.
RHP samples collected - water treatment discharge system was set up,
using ~3100' of hose to stretch to the Sudbury River.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



9/27/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 9/28/07
Start Time: 06:00

End Time: 14:15

Personnel

ERM: B Massihzadegan, L Colburn, H Anzenberger

Other Personnel: MT: C Tones, D Syrial, R Mengjardi
Union: B McCarthy, H Hackett, A Farin, J Muto

Visitors: Taylor Oil Co., Grant (delivery of bucket to put scrap metal in)

Equipment On Site

Type	MACE/NOEL Operating Company	#	SP.CO Number
<u>Loader</u>	<u>Komatsu WA 380</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	
<u>Generator</u>	<u>MQ Power Whüpenwatt</u>	<u>14,16</u>	
<u>Welder</u>	<u>Lincoln 250</u>		
<u>Water Treatment System</u>		<u>45</u>	<u>↓</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scanlon</u>
<u>Dump Truck</u>	<u>Mack Truck 10 wheeler</u>		<u>Newton Trucking</u>

Describe Activities:

56 truckloads ~14 yd³ each of soil were backfilled (soil from Intocia). SP-A and SP-G have been used up entirely. Decontaminating via pressure washer of Fractionation tank 1.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



9/28/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHZADEGAN

(Signature):

Bahaar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 10/1/07
Start Time: 07:00 End Time: 16:00

Personnel

ERM: B Massihza degan, J Fearey, A Momenemy
GW Sampling: L Kelly, M Mitchell, Mlinger, H Anzenberger
S Mack

Other Personnel: MT: C Jones, D Sybil, R Mangiardi
Union: B McLaughy, J Muto, I Hackett
Newton Trucking: Tomkins

Visitors: Taylor Oil Co.

Equipment On Site

Type	MAKE/MODEL Operating Company	#	SP.CO. Number
<u>Loader</u>	<u>Komatsu WA38D</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	<u> </u>
<u>Generator</u>	<u>MQ Power Whisper Watt</u>	<u>14, 16</u>	<u> </u>
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	<u> </u>
<u>Water Treatment System</u>		<u>45</u>	<u> </u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u> </u>
<u>Dump Truck</u>	<u>Mack truck 10 wheeler</u>		<u> </u>
			<u>↓</u>
			<u>Scanlon</u>
			<u>Newton Trucking</u>

Describe Activities:

Collected effluent sample of treated water discharging into
Judbury River. ~20 truckloads of material from Intoreca used as
backfill. Completed soil deposition in wetlands restoration area (covering
layer SPC, and topsoil). - Approved by ERM wetlands scientist.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



10/1/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHZADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 10/2/07
Start Time: 06:30

End Time: 1520

Personnel

ERM: B Massihzadegan, J Flattery, J Drobinski, J Picard,
Lyndsey Colburn

Groundwater Sampling team: H Anzenberger, M Singer, J Mark

Other Personnel: MT: C Jones, D Synal, P Mangiardi
Union: B McCarthy, I Hackett, J Muto

Visitors: Raytheon Team

Equipment On Site

Type	MAKE/MODEL Operating Company	#	OPCO Number
<u>Loader</u>	<u>Komatsu WA 380</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	
<u>Generator</u>	<u>MQ Power Whisperwatt</u>	<u>14, 16</u>	
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	
<u>Water Treatment System</u>		<u>45</u>	<u>↓</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scanlon</u>

Describe Activities:

2 Fractionation tanks (#1 + #2) removed from site. 12 truckloads
of fill from Intoceca used to backfill. ~5 truckloads of topsoil
from Intoceca used to grade former excavation site. Sweeping of
site, installation of metal stand pipe to infiltration gallery. collected PGP
sample for discharge to Sudbury river.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



10/2/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHZADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 10/3/07
Start Time: 06:30 End Time: 15:00

Personnel

ERM: B Massihzadegan

Groundwater Sampling Team: 2 Riley, Hanzenberger,
J Mark, Msinger, J Allen

Other Personnel: MT: C Jones, D Rinal, R Mangiardi
Union: B McCarthy, I Hackett, J Muto

Visitors: Geosearch, Maxymillion Truck, Casello Electric,
Scanlon Sweeping, Miller Iron @

Equipment On Site

Type	MAKE/MODEL Operating Company	#	OP-CD Number
<u>Loader</u>	<u>Komatsu WA 380</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345</u>	<u>75</u>	<u> </u>
<u>Generator</u>	<u>MD Power Whippernot</u>	<u>14, 16</u>	<u> </u>
<u>Water Treatment System</u>		<u>45</u>	<u>↓</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scanlon</u>
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	<u>MT</u>

Describe Activities:

Various supplies of MT taken off site, rebar is cut and dumpster
of scrap metal is removed from site. Carbon is sifted out of
water treatment system. Bucket is taken off of excavator.
Backfill and grading is completed. Welder removed from site today

EROSION AND SEDIMENTATION CONTROL INSPECTION
Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



10/3/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIMZADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date: 10/4/07
Start Time: 06:30

End Time: 15:00

Personnel

ERM: B Massihzadegan, J Flattery, L Colburn, C Regan, C Katuska,
C Corvi, J Drobinski, J Picard, Akabir

Other Personnel: MT: C Jones, D Dynac, R Mangiardi
Union: B McElarthy, J Muto, H Hackett

Visitors: Maximillian truck (removal of cat 345), Scorpion Sweeping,
Perste/Bigelow Farms, Millerwin Sweeping

Equipment On Site

Type	MAKE/MODEL Operating Company	#	GA-RO Number
<u>Louder</u>	<u>Komatsu WA 380</u>	<u>-</u>	<u>MT</u>
<u>Excavator</u>	<u>Caterpillar 345B</u>	<u>75</u>	<u>↓</u>
<u>Generator</u>	<u>MQ Power Whisper 14/16</u>	<u>45</u>	<u>↓</u>
<u>Water Treatment System</u>	<u>Lincoln 250</u>	<u>-</u>	<u>↓</u>
<u>Welder</u>	<u>Lincoln 250</u>	<u>-</u>	<u>↓</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scorpion</u>

Describe Activities:

Various demobilization activities including removing equipment. Wetlands
restoration underway - all plants have been planted and grass seed
has been spread in other disturbed areas and mulched with straw
bales. PE inspection

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



10/4/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAR MASSIHADEGAN

(Signature):

Bahar

DAILY SITE LOG

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



Date:

10/5/07

Start Time:

06:00

End Time:

13:00

Personnel

ERM:

B Massihzadegan, C Corri, L Colburn

Other Personnel:

MT: C Jones, D Syriac, R Margiardi
UMON: B McCarthy, I Hackett, J Muto

Visitors:

Maxymilian truck (picking up treatment system), trailers
dispatched from Ameritech, William Scotsman;
Scanlon Sweeping

Equipment On Site

Type	MAKE/MODEL Operating Company	#	SP. CO. Number
<u>Loader</u>	<u>Komatsu WA 380</u>	<u>-</u>	<u>MT</u>
<u>Generator</u>	<u>MQ Power Whisperatt</u>	<u>16</u>	<u>MT</u>
<u>Sweeper</u>	<u>Elgin Premier Pelican</u>	<u>-</u>	<u>Scanlon</u>

Describe Activities:

Trailers (Offsite) taken offsite, water treatment system offsite.
5 truckloads of SP-I and straw bales taken to Turnkey
in Rochester, NH.

EROSION AND SEDIMENTATION CONTROL INSPECTION

Northern Area Excavation
Former Raytheon Facility
Wayland, Massachusetts



10/5/07

Are silt fence, hay bails and wooden stakes intact?

YES

Have soils/sediment been deposited in any wetland areas?

NO

If yes, was it removed and how? Please describe below.

N/A

Is there evidence of erosion along access road?

NO

If yes, please describe below.

Please note any corrective actions taken.

N/A

Field Supervisor Name (Printed):

BAHAAR MASSIHZADEGIAN

(Signature):

Bahar

Appendix C
Wetland Topsoil Certification



145 Newland St.
NORTON, MA 02766

invoice

DATE
9/20/2007

INVOICE #
07-168


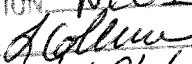
(508) 285-3169 FAX (508) 285-5818

BILL TO: 037928

ENVIRONMENTAL RESOURCES MANAGEMENT
ATTN: LYNDESEY COLBURN
399 BOYLSTON STREET-6TH FLOOR
BOSTON, MA 02116

SHIP TO:

WAYLAND TOWN CENTER
400-440 BOSTON POST ROAD - RTE. 20
WAYLAND, MA

P.O. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.	PROJECT
0066882	NET 15 DAYS	EW	9/12/2007	OUR TRUCK		
QUANTITY	ITEM CODE	DESCRIPTION			PRICE EACH	AMOUNT
60	LOAM MIX	CU. YD. SCREENED LOAM/COMPOST MIX DEL. To the best of our knowledge the soil mix (loamix) purchased from us, is weed/seed free regarding wetlands invasive species. Our strict control in the composting process and selection of soil off sites without invasive species assures you of this statement.  Earl C. Willcott, Jr./Pres. Newland Farm Inc. MA Sales Tax 5.00%				
PROJECT # 0061882.04 COMPANY (CIRCLE ONE) <input checked="" type="radio"/> ERM <input type="radio"/> ENVIROCLEAN LOCATION (CIRCLE ONE) <input checked="" type="radio"/> USA <input type="radio"/> CANADA REC'D SEP 21 2007 ORGANIZATION: NEO7 APPROVAL:  DATE: 9/21/07 COUCHER # 46846 GL # 504000						
					TOTAL	



invoice

DATE 10/11/2007 INVOICE #

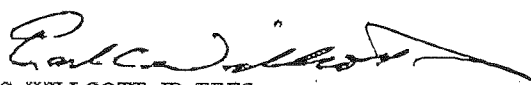
(508) 285-3169 FAX (508) 285-5818

BILL TO:

ENVIRONMENTAL RESOURCES MANAGEMENT
 ATTN: LYNDSY COLBURN
 399 BOYLSTON STREET-6TH FLOOR
 BOSTON, MA 02116

SHIP TO:

WAYLAND TOWN CENTER
 400-440 BOSTON POST ROAD - RTE. 20
 WAYLAND, MA

PO NUMBER	TERMS	REP	SHIP	VIA	FOB	PROJECT
			9/19/2007			
QUANTITY	ITEM CODE	DESCRIPTION			PRICE EACH	AMOUNT
		NEWLAND FARM INC. CERTIFIES THAT THERE IS NO HAZARDOUS MATERIAL IN OR ON OUR COMPOST SITE. FURTHERMORE, ALL MATERIALS THAT ARE RECEIVED BY US HAVE BEEN APPROVED BY D.E.P. AS WE ARE IN A ZONE 1 WATER DISTRICT.  EARL C. WILLCOTT, JR./PRES. NEWLAND FARM INC.				
					TOTAL	

Appendix D
Analytical Laboratory Reports

Water Treatment System
Effluent Samples:
 27 September,
 1 October,
 2 October

Water Treatment System
Carbon Samples:
 1 October

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com
MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England Laboratory Job Number: L0714218
Address: 399 Boylston Street Date Received: 27-SEP-2007
6th Floor Date Reported: 02-OCT-2007
Boston, MA 02116 Delivery Method: Alpha
Attn: Mr. Jason Flattery Site: NA SOIL EXCAVATION
Project Number: 0051545

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714218-01	DAY-1-EFF-20070927-01	RAYTHEON-WAYLAND

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 report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Richard J. Weston
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0714218

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Semivolatile Organics

The WG295957 LCS, MS, and MSD % recoveries for 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene and Hexachloropropene are below the method acceptance criteria. Re-extraction could not be performed due to lack of additional sample.

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0714218-01	Date Collected: 27-SEP-2007 14:45
DAY-1-EFF-20070927-01	Date Received : 27-SEP-2007
Sample Matrix: WATER	Date Reported : 02-OCT-2007
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 2-Amber,3-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30 2540D	0928 15:40	DW
pH (H)	8.2	SU	-	30 4500H+-B	0927 20:30	LR
Total Metals						
Arsenic, Total	0.0144	mg/l	0.0005	1 6020	0929 11:45 1001 18:37	BM
Copper, Total	0.0012	mg/l	0.0005	1 6020	0929 11:45 1001 18:37	BM
Iron, Total	0.05	mg/l	0.05	19 200.7	1001 15:00 1002 09:46	AI
Nickel, Total	0.0060	mg/l	0.0005	1 6020	0929 11:45 1001 18:37	BM
Volatile Organics by GC/MS 624						
Methylene chloride	ND	ug/l	5.0	5 624	1001 20:37	MM
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
2-Chloroethylvinyl ether	ND	ug/l	10.			
Tetrachloroethene	ND	ug/l	1.5			
Chlorobenzene	ND	ug/l	3.5			
Trichlorofluoromethane	ND	ug/l	5.0			
1,2-Dichloroethane	ND	ug/l	1.5			
1,1,1-Trichloroethane	ND	ug/l	2.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.5			
cis-1,3-Dichloropropene	ND	ug/l	1.5			
Bromoform	ND	ug/l	1.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Benzene	ND	ug/l	1.0			
Toluene	ND	ug/l	1.0			
Ethylbenzene	ND	ug/l	1.0			
Chloromethane	ND	ug/l	10.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 624 cont'd				5 624	1001 20:37 MM		
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	10	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Methyl tert butyl ether	ND	ug/l	20.				
1,4-Dioxane	ND	ug/l	2000				
Tert-Butyl Alcohol	ND	ug/l	100				
Tertiary-Amyl Methyl Ether	ND	ug/l	20.				
Surrogate(s)	Recovery		QC Criteria				
Pentafluorobenzene	101	%	80-120				
Fluorobenzene	103	%	80-120				
4-Bromofluorobenzene	100	%	80-120				
SVOC's by GC/MS 8270				1 8270C	0928 10:40 0929 16:04 RL		
Acenaphthene	ND	ug/l	4.9				
Benzidine	ND	ug/l	49.				
1,2,4-Trichlorobenzene	ND	ug/l	4.9				
Hexachlorobenzene	ND	ug/l	4.9				
Bis(2-chloroethyl)ether	ND	ug/l	4.9				
1-Chloronaphthalene	ND	ug/l	4.9				
2-Chloronaphthalene	ND	ug/l	5.9				
1,2-Dichlorobenzene	ND	ug/l	4.9				
1,3-Dichlorobenzene	ND	ug/l	4.9				
1,4-Dichlorobenzene	ND	ug/l	4.9				
3,3'-Dichlorobenzidine	ND	ug/l	49.				
2,4-Dinitrotoluene	ND	ug/l	5.9				
2,6-Dinitrotoluene	ND	ug/l	4.9				
Azobenzene	ND	ug/l	4.9				
Fluoranthene	ND	ug/l	4.9				
4-Chlorophenyl phenyl ether	ND	ug/l	4.9				
4-Bromophenyl phenyl ether	ND	ug/l	4.9				
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9				
Bis(2-chloroethoxy)methane	ND	ug/l	4.9				
Hexachlorobutadiene	ND	ug/l	9.9				
Hexachlorocyclopentadiene	ND	ug/l	30.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
 DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1 8270C	0928 10:40	0929 16:04	RL
Hexachloroethane	ND	ug/l	4.9				
Isophorone	ND	ug/l	4.9				
Naphthalene	ND	ug/l	4.9				
Nitrobenzene	ND	ug/l	4.9				
NDPA/DPA	ND	ug/l	15.				
n-Nitrosodi-n-propylamine	ND	ug/l	4.9				
Bis(2-ethylhexyl)phthalate	9.8	ug/l	4.9				
Butyl benzyl phthalate	ND	ug/l	4.9				
Di-n-butylphthalate	ND	ug/l	4.9				
Di-n-octylphthalate	ND	ug/l	4.9				
Diethyl phthalate	ND	ug/l	4.9				
Dimethyl phthalate	ND	ug/l	4.9				
Benzo(a)anthracene	ND	ug/l	4.9				
Benzo(a)pyrene	ND	ug/l	4.9				
Benzo(b)fluoranthene	ND	ug/l	4.9				
Benzo(k)fluoranthene	ND	ug/l	4.9				
Chrysene	ND	ug/l	4.9				
Acenaphthylene	ND	ug/l	4.9				
Anthracene	ND	ug/l	4.9				
Benzo(ghi)perylene	ND	ug/l	4.9				
Fluorene	ND	ug/l	4.9				
Phenanthrene	ND	ug/l	4.9				
Dibenzo(a,h)anthracene	ND	ug/l	4.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9				
Pyrene	ND	ug/l	4.9				
Benzo(e)pyrene	ND	ug/l	4.9				
Biphenyl	ND	ug/l	4.9				
Perylene	ND	ug/l	4.9				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	4.9				
1-Methylnaphthalene	ND	ug/l	4.9				
2-Nitroaniline	ND	ug/l	4.9				
3-Nitroaniline	ND	ug/l	4.9				
4-Nitroaniline	ND	ug/l	6.9				
Dibenzofuran	ND	ug/l	4.9				
a,a-Dimethylphenethylamine	ND	ug/l	49.				
Hexachloropropene	ND	ug/l	9.9				
Nitrosodi-n-butylamine	ND	ug/l	9.9				
2-Methylnaphthalene	ND	ug/l	4.9				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	25.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	9.9				
Dimethoate	ND	ug/l	20.				
4-Aminobiphenyl	ND	ug/l	9.9				
Pentachloronitrobenzene	ND	ug/l	9.9				
Isodrin	ND	ug/l	9.9				
p-Dimethylaminoazobenzene	ND	ug/l	9.9				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
 DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1 8270C	0928 10:40	0929 16:04	RL
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.				
n-Nitrosodimethylamine	ND	ug/l	49.				
2,4,6-Trichlorophenol	ND	ug/l	4.9				
p-Chloro-m-cresol	ND	ug/l	4.9				
2-Chlorophenol	ND	ug/l	5.9				
2,4-Dichlorophenol	ND	ug/l	9.9				
2,4-Dimethylphenol	ND	ug/l	9.9				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	9.9				
2,4-Dinitrophenol	ND	ug/l	30.				
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	9.9				
Phenol	ND	ug/l	6.9				
2-Methylphenol	ND	ug/l	5.9				
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9				
2,4,5-Trichlorophenol	ND	ug/l	4.9				
2,6-Dichlorophenol	ND	ug/l	9.9				
Benzoic Acid	ND	ug/l	49.				
Benzyl Alcohol	ND	ug/l	9.9				
Carbazole	ND	ug/l	4.9				
Pyridine	ND	ug/l	49.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	28.0	%		21-120			
Phenol-d6	23.0	%		10-120			
Nitrobenzene-d5	58.0	%		23-120			
2-Fluorobiphenyl	45.0	%		43-120			
2,4,6-Tribromophenol	66.0	%		10-120			
4-Terphenyl-d14	67.0	%		33-120			
PAH by GC/MS SIM 8270M				1 8270C-M	0928 10:40	0930 04:20	RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.49				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
 DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0928 10:40	0930 04:20 RL
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.79				
Hexachlorobenzene	ND	ug/l	0.79				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.79				
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	30.0	%		21-120			
Phenol-d6	25.0	%		10-120			
Nitrobenzene-d5	84.0	%		23-120			
2-Fluorobiphenyl	57.0	%		43-120			
2,4,6-Tribromophenol	88.0	%		10-120			
4-Terphenyl-d14	94.0	%		33-120			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714218

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0714048-01, WG295971-2)					
Solids, Total Suspended	47	40	mg/l	16	32
pH for sample(s) 01 (L0714218-01, WG295861-2)					
pH (H)	8.2	8.2	SU	0	5
Total Metals for sample(s) 01 (L0714340-02, WG296114-1)					
Copper, Total	0.0045	0.0045	mg/l	0	20
Total Metals for sample(s) 01 (L0714218-01, WG296272-1)					
Iron, Total	0.05	0.06	mg/l	2	
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714218

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	104	99.0	%		80-120
Fluorobenzene	108	105	%		80-120
4-Bromofluorobenzene	106	104	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01 (WG295861-1)		
pH	100	99-101
Total Metals LCS for sample(s) 01 (WG296114-4)		
Arsenic, Total	95	80-120
Copper, Total	97	80-120
Nickel, Total	96	80-120
Total Metals LCS for sample(s) 01 (WG296272-4)		
Iron, Total	95	
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-3)		
Methylene chloride	91	10-221
1,1-Dichloroethane	82	59-155
Chloroform	83	51-138
Carbon tetrachloride	126	70-140
1,2-Dichloropropane	124	10-210
Dibromochloromethane	105	53-149
1,1,2-Trichloroethane	106	52-150
2-Chloroethylvinyl ether	111	10-305
Tetrachloroethene	112	64-148
Chlorobenzene	116	37-160
Trichlorofluoromethane	116	17-181
1,2-Dichloroethane	119	49-155
1,1,1-Trichloroethane	122	52-162
Bromodichloromethane	112	35-155
trans-1,3-Dichloropropene	113	17-183
cis-1,3-Dichloropropene	112	10-227
Bromoform	107	45-169
1,1,2,2-Tetrachloroethane	110	46-157
Benzene	126	37-151
Toluene	120	47-150
Ethylbenzene	126	37-162
Chloromethane	120	10-273
Bromomethane	123	10-242
Vinyl chloride	111	10-251
Chloroethane	109	14-230
1,1-Dichloroethene	100	10-234
trans-1,2-Dichloroethene	94	54-156
cis-1,2-Dichloroethene	82	60-140
Trichloroethene	120	71-157
1,2-Dichlorobenzene	115	18-190
1,3-Dichlorobenzene	114	59-156
1,4-Dichlorobenzene	117	18-190
p/m-Xylene	127	40-160
o-Xylene	118	40-160
XYLENE (TOTAL)	124	40-160
Styrene	117	40-160
Acetone	94	40-160

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-3)		
Carbon disulfide	110	40-160
2-Butanone	87	40-160
Vinyl acetate	102	40-160
4-Methyl-2-pentanone	115	40-160
2-Hexanone	106	40-160
Acrolein	66	40-160
Acrylonitrile	79	40-160
Surrogate(s)		
Pentafluorobenzene	118	80-120
Fluorobenzene	112	80-120
4-Bromofluorobenzene	97	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG295957-2)		
Acenaphthene	53	46-118
1,2,4-Trichlorobenzene	27	39-98
2-Chloronaphthalene	41	40-140
1,2-Dichlorobenzene	34	40-140
1,4-Dichlorobenzene	31	36-97
2,4-Dinitrotoluene	89	24-96
2,6-Dinitrotoluene	92	40-140
Fluoranthene	83	40-140
4-Chlorophenyl phenyl ether	58	40-140
n-Nitrosodi-n-propylamine	58	41-116
Butyl benzyl phthalate	90	40-140
Anthracene	69	40-140
Pyrene	80	26-127
Hexachloropropene	15	40-140
P-Chloro-M-Cresol	61	23-97
2-Chlorophenol	54	27-123
2-Nitrophenol	63	30-130
4-Nitrophenol	35	10-80
2,4-Dinitrophenol	80	30-130
Pentachlorophenol	69	9-103
Phenol	19	12-110
Surrogate(s)		
2-Fluorophenol	31	21-120
Phenol-d6	25	10-120
Nitrobenzene-d5	66	23-120
2-Fluorobiphenyl	50	43-120
2,4,6-Tribromophenol	68	10-120
4-Terphenyl-d14	76	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG295956-2)		
Acenaphthene	66	40-140
2-Chloronaphthalene	66	40-140
Fluoranthene	100	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG295956-2)		
Anthracene	84	40-140
Pyrene	107	40-140
Pentachlorophenol	70	30-130
Surrogate(s)		
2-Fluorophenol	36	21-120
Phenol-d6	30	10-120
Nitrobenzene-d5	103	23-120
2-Fluorobiphenyl	68	43-120
2,4,6-Tribromophenol	100	10-120
4-Terphenyl-d14	101	33-120
Total Metals SPIKE for sample(s) 01 (L0714340-02, WG296114-2)		
Arsenic, Total	105	80-120
Copper, Total	94	80-120
Nickel, Total	93	80-120
Total Metals SPIKE for sample(s) 01 (L0714218-01, WG296272-2)		
Iron, Total	95	
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
Methylene chloride	91	10-221
1,1-Dichloroethane	72	59-155
Chloroform	83	51-138
Carbon tetrachloride	80	70-140
1,2-Dichloropropane	85	10-210
Dibromochloromethane	81	53-149
1,1,2-Trichloroethane	88	52-150
2-Chloroethylvinyl ether	80	10-305
Tetrachloroethene	77	64-148
Chlorobenzene	76	37-160
Trichlorofluoromethane	95	17-181
1,2-Dichloroethane	97	49-155
1,1,1-Trichloroethane	83	52-162
Bromodichloromethane	83	35-155
trans-1,3-Dichloropropene	75	17-183
cis-1,3-Dichloropropene	69	10-227
Bromoform	82	45-169
1,1,2,2-Tetrachloroethane	81	46-157
Benzene	90	35-151
Toluene	83	47-150
Ethylbenzene	82	37-162
Chloromethane	90	10-273
Bromomethane	77	10-242
Vinyl chloride	96	10-251
Chloroethane	101	14-230
1,1-Dichloroethene	87	10-234
trans-1,2-Dichloroethene	85	54-156

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
cis-1,2-Dichloroethene	82	60-140
Trichloroethene	85	71-157
1,2-Dichlorobenzene	33	18-190
1,3-Dichlorobenzene	77	59-156
1,4-Dichlorobenzene	78	18-190
p/m-Xylene	87	40-160
o-Xylene	80	40-160
XYLENE (TOTAL)	85	40-160
Styrene	82	40-160
Acetone	114	40-160
Carbon disulfide	92	40-160
2-Butanone	94	40-160
Vinyl acetate	70	40-160
4-Methyl-2-pentanone	98	40-160
2-Hexanone	93	40-160
Acrolein	69	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	101	80-120
Fluorobenzene	107	80-120
4-Bromofluorobenzene	99	80-120

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0714218

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0714218-01, WG295957-4)					
Acenaphthene	57	52	9	30	46-118
1,2,4-Trichlorobenzene	33	28	16	30	39-98
2-Chloronaphthalene	48	44	9	30	40-140
1,2-Dichlorobenzene	36	30	18	30	40-140
1,4-Dichlorobenzene	34	29	16	30	36-97
2,4-Dinitrotoluene	86	81	6	30	24-96
2,6-Dinitrotoluene	90	86	5	30	40-140
Fluoranthene	81	76	6	30	40-140
4-Chlorophenyl phenyl ether	67	62	8	30	40-140
n-Nitrosodi-n-propylamine	52	48	8	30	41-116
Butyl benzyl phthalate	86	86	0	30	40-140
Anthracene	67	62	8	30	40-140
Pyrene	76	71	7	30	26-127
Hexachloropropene	25	20	22	30	40-140
P-Chloro-M-Cresol	62	57	8	30	23-97
2-Chlorophenol	50	43	15	30	27-123
2-Nitrophenol	59	50	17	30	30-130
4-Nitrophenol	62	59	5	30	10-80
2,4-Dinitrophenol	81	78	4	30	30-130
Pentachlorophenol	67	64	5	30	9-103
Phenol	31	26	18	30	12-110
Surrogate(s)					
2-Fluorophenol	40	35	13		21-120
Phenol-d6	40	34	16		10-120
Nitrobenzene-d5	59	52	13		23-120
2-Fluorobiphenyl	51	44	15		43-120
2,4,6-Tribromophenol	66	63	5		10-120
4-Terphenyl-d14	72	70	3		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0714218-01, WG295956-4)					
Acenaphthene	67	57	16	40	40-140
2-Chloronaphthalene	62	52	18	40	40-140
Fluoranthene	100	90	11	40	40-140
Anthracene	81	76	6	40	40-140
Pyrene	110	100	10	40	40-140
Pentachlorophenol	78	67	15	40	30-130
Surrogate(s)					
2-Fluorophenol	40	31	25		21-120
Phenol-d6	41	33	22		10-120
Nitrobenzene-d5	86	70	21		23-120
2-Fluorobiphenyl	67	59	13		43-120
2,4,6-Tribromophenol	88	85	3		10-120
4-Terphenyl-d14	114	105	8		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG295971-1)							
Solids, Total Suspended	ND	mg/l	5.0	30 2540D		0928 15:40	DW
Blank Analysis for sample(s) 01 (WG296114-3)							
Total Metals							
Arsenic, Total	ND	mg/l	0.0005	1 6020		0929 11:45 1001 18:26	BM
Copper, Total	ND	mg/l	0.0005	1 6020		0929 11:45 1001 18:26	BM
Nickel, Total	ND	mg/l	0.0005	1 6020		0929 11:45 1001 18:26	BM
Blank Analysis for sample(s) 01 (WG296272-3)							
Total Metals							
				19 200.7			
Iron, Total	ND	mg/l	0.05	19 200.7		1001 15:00 1002 09:23	AI
Blank Analysis for sample(s) 01 (WG296345-4)							
Volatile Organics by GC/MS 624							
				5 624		1001 20:01	MM
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				
Tetrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.5				
1,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
Bromoform	ND	ug/l	1.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Benzene	ND	ug/l	1.0				
Toluene	ND	ug/l	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Vinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ND	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296345-4)							
Volatile Organics by GC/MS 624 cont'd				5 624		1001 20:01	MM
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Methyl tert butyl ether	ND	ug/l	20.				
1,4-Dioxane	ND	ug/l	2000				
Tert-Butyl Alcohol	ND	ug/l	100				
Tertiary-Amyl Methyl Ether	ND	ug/l	20.				
Surrogate(s)	Recovery		QC Criteria				
Pentafluorobenzene	106	%	80-120				
Fluorobenzene	109	%	80-120				
4-Bromofluorobenzene	99.0	%	80-120				
Blank Analysis for sample(s) 01 (WG295957-1)							
SVOC's by GC/MS 8270				1 8270C		0928 10:40	1001 14:22 RL
Acenaphthene	ND	ug/l	5.0				
Benzidine	ND	ug/l	50.				
1,2,4-Trichlorobenzene	ND	ug/l	5.0				
Hexachlorobenzene	ND	ug/l	5.0				
Bis(2-chloroethyl)ether	ND	ug/l	5.0				
1-Chloronaphthalene	ND	ug/l	5.0				
2-Chloronaphthalene	ND	ug/l	6.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
3,3'-Dichlorobenzidine	ND	ug/l	50.				
2,4-Dinitrotoluene	ND	ug/l	6.0				
2,6-Dinitrotoluene	ND	ug/l	5.0				
Azobenzene	ND	ug/l	5.0				
Fluoranthene	ND	ug/l	5.0				
4-Chlorophenyl phenyl ether	ND	ug/l	5.0				
4-Bromophenyl phenyl ether	ND	ug/l	5.0				
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0				
Bis(2-chloroethoxy)methane	ND	ug/l	5.0				
Hexachlorobutadiene	ND	ug/l	10.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG295957-1)							
SVOC's by GC/MS 8270 cont'd				1 8270C	0928 10:40	1001 14:22	RL
Hexachlorocyclopentadiene	ND	ug/l	30.				
Hexachloroethane	ND	ug/l	5.0				
Isophorone	ND	ug/l	5.0				
Naphthalene	ND	ug/l	5.0				
Nitrobenzene	ND	ug/l	5.0				
NDPA/DPA	ND	ug/l	15.				
n-Nitrosodi-n-propylamine	ND	ug/l	5.0				
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0				
Butyl benzyl phthalate	ND	ug/l	5.0				
Di-n-butylphthalate	ND	ug/l	5.0				
Di-n-octylphthalate	ND	ug/l	5.0				
Diethyl phthalate	ND	ug/l	5.0				
Dimethyl phthalate	ND	ug/l	5.0				
Benzo(a)anthracene	ND	ug/l	5.0				
Benzo(a)pyrene	ND	ug/l	5.0				
Benzo(b)fluoranthene	ND	ug/l	5.0				
Benzo(k)fluoranthene	ND	ug/l	5.0				
Chrysene	ND	ug/l	5.0				
Acenaphthylene	ND	ug/l	5.0				
Anthracene	ND	ug/l	5.0				
Benzo(ghi)perylene	ND	ug/l	5.0				
Fluorene	ND	ug/l	5.0				
Phenanthrene	ND	ug/l	5.0				
Dibenzo(a,h)anthracene	ND	ug/l	5.0				
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0				
Pyrene	ND	ug/l	5.0				
Benzo(e)pyrene	ND	ug/l	5.0				
Biphenyl	ND	ug/l	5.0				
Perylene	ND	ug/l	5.0				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	5.0				
1-Methylnaphthalene	ND	ug/l	5.0				
2-Nitroaniline	ND	ug/l	5.0				
3-Nitroaniline	ND	ug/l	5.0				
4-Nitroaniline	ND	ug/l	7.0				
Dibenzofuran	ND	ug/l	5.0				
a,a-Dimethylphenethylamine	ND	ug/l	50.				
Hexachloropropene	ND	ug/l	10.				
Nitrosodi-n-butylamine	ND	ug/l	10.				
2-Methylnaphthalene	ND	ug/l	5.0				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	25.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	10.				
Dimethoate	ND	ug/l	20.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG295957-1)							
SVOC's by GC/MS 8270 cont'd				1	8270C	0928 10:40	1001 14:22 RL
4-Aminobiphenyl	ND	ug/l	10.				
Pentachloronitrobenzene	ND	ug/l	10.				
Isodrin	ND	ug/l	10.				
p-Dimethylaminoazobenzene	ND	ug/l	10.				
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.				
n-Nitrosodimethylamine	ND	ug/l	50.				
2,4,6-Trichlorophenol	ND	ug/l	5.0				
p-Chloro-m-cresol	ND	ug/l	5.0				
2-Chlorophenol	ND	ug/l	6.0				
2,4-Dichlorophenol	ND	ug/l	10.				
2,4-Dimethylphenol	ND	ug/l	10.				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	10.				
2,4-Dinitrophenol	ND	ug/l	30.				
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	10.				
Phenol	ND	ug/l	7.0				
2-Methylphenol	ND	ug/l	6.0				
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0				
2,4,5-Trichlorophenol	ND	ug/l	5.0				
2,6-Dichlorophenol	ND	ug/l	10.				
Benzoic Acid	ND	ug/l	50.				
Benzyl Alcohol	ND	ug/l	10.				
Carbazole	ND	ug/l	5.0				
Pyridine	ND	ug/l	50.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				
Surrogate(s)	Recovery		QC Criteria				
2-Fluorophenol	30.0	%	21-120				
Phenol-d6	20.0	%	10-120				
Nitrobenzene-d5	53.0	%	23-120				
2-Fluorobiphenyl	46.0	%	43-120				
2,4,6-Tribromophenol	79.0	%	10-120				
4-Terphenyl-d14	88.0	%	33-120				
Blank Analysis for sample(s) 01 (WG295956-1)							
PAH by GC/MS SIM 8270M				1	8270C-M	0928 10:40	0930 00:17 RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG295956-1)							
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0928 10:40	0930 00:17 RL
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.50				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.80				
Hexachlorobenzene	ND	ug/l	0.80				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.80				
Surrogate(s)	Recovery						QC Criteria
2-Fluorophenol	26.0	%					21-120
Phenol-d6	22.0	%					10-120
Nitrobenzene-d5	69.0	%					23-120
2-Fluorobiphenyl	45.0	%					43-120
2,4,6-Tribromophenol	67.0	%					10-120
4-Terphenyl-d14	86.0	%					33-120

**ALPHA ANALYTICAL LABORATORIES
ADDENDUM I**

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.



CHAIN OF CUSTODY

PAGE 1 OF 1

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Date Rec'd in Lab: 9/27ALPHA Job #: LO714218**Project Information**

Project Name: NA Soil Excavation
 Project Location: Raytheon-Wayland
 Project #: 0051545
 Project Manager: Jason Flattery
 ALPHA Quote #:

Report Information - Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Client Information

Client: ERM - Boston
 Address: 399 Boston St. 6th Floor
Boston, MA 02116
 Phone: 617-646-7800
 Fax: 617-267-6447
 Email: Jason.Flattery@erm.com
 These samples have been previously analyzed by Alpha

Turn-Around Time

Standard 72 HR. per EPA
 RUSH (only confirmed if pre-approved!)
 Date Due: 10/2/07 Time:

Regulatory Requirements/Report Limits

State /Fed Program Criteria
EPA RLPD

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS
VOCs by 624
Total Al, Cu, Ni, Fe
TSS
pH
Spec's by 827 DM
9/27/07

SAMPLE HANDLING
 Filtration
 Done
 Not needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS							Sample Specific Comments	TOTAL # BOTTLES	
		Date	Time			VOCs	Total Al	Cu	Ni	Fe	TSS	pH			Spec's
<u>14218-01</u>	<u>DAY-1-EFF-20070927-01</u>	<u>9/27/07</u>	<u>1445</u>	<u>GW</u>	<u>BM</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>				<u>7</u>

PLEASE ANSWER QUESTIONS ABOVE!
 IS YOUR PROJECT
 MA MCP or CT RCP?

Container Type V P P P A
 Preservative H C A A A

Relinquished By: [Signature] Date/Time 9/27/07 15:18
 Received By: [Signature] Date/Time 9/27/07 15:48

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com
MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England **Laboratory Job Number:** L0714428
Address: 399 Boylston Street **Date Received:** 01-OCT-2007
6th Floor **Date Reported:** 04-OCT-2007
Boston, MA 02116 **Delivery Method:** Alpha
Attn: Mr. Jason Flattery **Site:** NA SOIL EXCAVATION
Project Number: 0051545

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714428-01	EFF-2007 1001-01	RAYTHEON WAYLAND

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 report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Richard J. Weston
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0714428

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Semivolatile Organics

The WG296453-2 LCS % recovery for 2,4-Dinitrotoluene is above the method acceptance criteria. All associated samples are non-detect for this compound.

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0714428-01	Date Collected: 01-OCT-2007 14:40
EFF-2007 1001-01	Date Received : 01-OCT-2007
Sample Matrix: WATER	Date Reported : 04-OCT-2007
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 2-Amber,3-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30 2540D	1003 13:30	DW
pH (H)	7.5	SU	-	30 4500H+-B	1001 22:45	LR
Total Metals						
Arsenic, Total	0.0185	mg/l	0.0005	1 6020	1002 18:00	1003 16:19 BM
Copper, Total	0.0016	mg/l	0.0005	1 6020	1002 18:00	1003 16:19 BM
Iron, Total	ND	mg/l	0.05	19 200.7	1002 18:00	1003 14:43 AI
Nickel, Total	0.0051	mg/l	0.0005	1 6020	1002 18:00	1003 16:19 BM
Volatile Organics by GC/MS 624						
Methylene chloride	ND	ug/l	5.0	5 624	1002 08:52	MM
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
2-Chloroethylvinyl ether	ND	ug/l	10.			
Tetrachloroethene	ND	ug/l	1.5			
Chlorobenzene	ND	ug/l	3.5			
Trichlorofluoromethane	ND	ug/l	5.0			
1,2-Dichloroethane	ND	ug/l	1.5			
1,1,1-Trichloroethane	ND	ug/l	2.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.5			
cis-1,3-Dichloropropene	ND	ug/l	1.5			
Bromoform	ND	ug/l	1.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Benzene	ND	ug/l	1.0			
Toluene	ND	ug/l	1.0			
Ethylbenzene	ND	ug/l	1.0			
Chloromethane	ND	ug/l	10.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 624 cont'd				5 624	1002 08:52		MM
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Surrogate(s)	Recovery		QC Criteria				
Pentafluorobenzene	104	%	80-120				
Fluorobenzene	108	%	80-120				
4-Bromofluorobenzene	106	%	80-120				
SVOC's by GC/MS 8270				1 8270C	1002 19:00 1003 12:44		RL
Acenaphthene	ND	ug/l	4.9				
Benzidine	ND	ug/l	49.				
1,2,4-Trichlorobenzene	ND	ug/l	4.9				
Hexachlorobenzene	ND	ug/l	4.9				
Bis(2-chloroethyl)ether	ND	ug/l	4.9				
1-Chloronaphthalene	ND	ug/l	4.9				
2-Chloronaphthalene	ND	ug/l	5.9				
1,2-Dichlorobenzene	ND	ug/l	4.9				
1,3-Dichlorobenzene	ND	ug/l	4.9				
1,4-Dichlorobenzene	ND	ug/l	4.9				
3,3'-Dichlorobenzidine	ND	ug/l	49.				
2,4-Dinitrotoluene	ND	ug/l	5.9				
2,6-Dinitrotoluene	ND	ug/l	4.9				
Azobenzene	ND	ug/l	4.9				
Fluoranthene	ND	ug/l	4.9				
4-Chlorophenyl phenyl ether	ND	ug/l	4.9				
4-Bromophenyl phenyl ether	ND	ug/l	4.9				
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9				
Bis(2-chloroethoxy)methane	ND	ug/l	4.9				
Hexachlorobutadiene	ND	ug/l	9.9				
Hexachlorocyclopentadiene	ND	ug/l	30.				
Hexachloroethane	ND	ug/l	4.9				
Isophorone	ND	ug/l	4.9				
Naphthalene	ND	ug/l	4.9				
Nitrobenzene	ND	ug/l	4.9				

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 12:44	RL
NDPA/DPA	ND	ug/l	15.				
n-Nitrosodi-n-propylamine	ND	ug/l	4.9				
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.9				
Butyl benzyl phthalate	ND	ug/l	4.9				
Di-n-butylphthalate	ND	ug/l	4.9				
Di-n-octylphthalate	ND	ug/l	4.9				
Diethyl phthalate	ND	ug/l	4.9				
Dimethyl phthalate	ND	ug/l	4.9				
Benzo(a)anthracene	ND	ug/l	4.9				
Benzo(a)pyrene	ND	ug/l	4.9				
Benzo(b)fluoranthene	ND	ug/l	4.9				
Benzo(k)fluoranthene	ND	ug/l	4.9				
Chrysene	ND	ug/l	4.9				
Acenaphthylene	ND	ug/l	4.9				
Anthracene	ND	ug/l	4.9				
Benzo(ghi)perylene	ND	ug/l	4.9				
Fluorene	ND	ug/l	4.9				
Phenanthrene	ND	ug/l	4.9				
Dibenzo(a,h)anthracene	ND	ug/l	4.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9				
Pyrene	ND	ug/l	4.9				
Benzo(e)pyrene	ND	ug/l	4.9				
Biphenyl	ND	ug/l	4.9				
Perylene	ND	ug/l	4.9				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	4.9				
1-Methylnaphthalene	ND	ug/l	4.9				
2-Nitroaniline	ND	ug/l	4.9				
3-Nitroaniline	ND	ug/l	4.9				
4-Nitroaniline	ND	ug/l	6.9				
Dibenzofuran	ND	ug/l	4.9				
a,a-Dimethylphenethylamine	ND	ug/l	49.				
Hexachloropropene	ND	ug/l	9.9				
Nitrosodi-n-butylamine	ND	ug/l	9.9				
2-Methylnaphthalene	ND	ug/l	4.9				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	25.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	9.9				
Dimethoate	ND	ug/l	20.				
4-Aminobiphenyl	ND	ug/l	9.9				
Pentachloronitrobenzene	ND	ug/l	9.9				
Isodrin	ND	ug/l	9.9				
p-Dimethylaminoazobenzene	ND	ug/l	9.9				
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 12:44	RL
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.				
n-Nitrosodimethylamine	ND	ug/l	49.				
2,4,6-Trichlorophenol	ND	ug/l	4.9				
p-Chloro-m-cresol	ND	ug/l	4.9				
2-Chlorophenol	ND	ug/l	5.9				
2,4-Dichlorophenol	ND	ug/l	9.9				
2,4-Dimethylphenol	ND	ug/l	9.9				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	9.9				
2,4-Dinitrophenol	ND	ug/l	30.				
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	9.9				
Phenol	ND	ug/l	6.9				
2-Methylphenol	ND	ug/l	5.9				
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9				
2,4,5-Trichlorophenol	ND	ug/l	4.9				
2,6-Dichlorophenol	ND	ug/l	9.9				
Benzoic Acid	ND	ug/l	49.				
Benzyl Alcohol	ND	ug/l	9.9				
Carbazole	ND	ug/l	4.9				
Pyridine	ND	ug/l	49.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				
Surrogate(s)	Recovery		QC Criteria				
2-Fluorophenol	47.0	%	21-120				
Phenol-d6	41.0	%	10-120				
Nitrobenzene-d5	86.0	%	23-120				
2-Fluorobiphenyl	64.0	%	43-120				
2,4,6-Tribromophenol	64.0	%	10-120				
4-Terphenyl-d14	68.0	%	33-120				
PAH by GC/MS SIM 8270M				1 8270C-M	1002 19:00	1003 14:29	RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.49				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	1002 19:00	1003 14:29 RL
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.79				
Hexachlorobenzene	ND	ug/l	0.79				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.79				
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	49.0	%		21-120			
Phenol-d6	43.0	%		10-120			
Nitrobenzene-d5	112	%		23-120			
2-Fluorobiphenyl	79.0	%		43-120			
2,4,6-Tribromophenol	74.0	%		10-120			
4-Terphenyl-d14	111	%		33-120			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714428

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0714322-01, WG296505-2)					
Solids, Total Suspended	83	70	mg/l	17	32
pH for sample(s) 01 (L0714436-01, WG296297-1)					
pH (H)	7.2	7.2	SU	0	5
Total Metals for sample(s) 01 (L0714216-02, WG296464-1)					
Iron, Total	0.19	0.19	mg/l	0	
Total Metals for sample(s) 01 (L0714216-02, WG296463-1)					
Arsenic, Total	0.0112	0.0111	mg/l	1	20
Copper, Total	0.0007	0.0008	mg/l	3	20
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714428

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	104	99.0	%		80-120
Fluorobenzene	108	105	%		80-120
4-Bromofluorobenzene	106	104	%		80-120

**ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES**

Laboratory Job Number: L0714428

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01 (WG296297-2)		
pH	100	99-101
Total Metals LCS for sample(s) 01 (WG296464-4)		
Iron, Total	92	
Total Metals LCS for sample(s) 01 (WG296463-4)		
Arsenic, Total	94	80-120
Copper, Total	94	80-120
Nickel, Total	95	80-120
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-5)		
Methylene chloride	109	10-221
1,1-Dichloroethane	92	59-155
Chloroform	102	51-138
Carbon tetrachloride	104	70-140
1,2-Dichloropropane	111	10-210
Dibromochloromethane	100	53-149
1,1,2-Trichloroethane	104	52-150
2-Chloroethylvinyl ether	106	10-305
Tetrachloroethene	101	64-148
Chlorobenzene	101	37-160
Trichlorofluoromethane	121	17-181
1,2-Dichloroethane	109	49-155
1,1,1-Trichloroethane	102	52-162
Bromodichloromethane	100	35-155
trans-1,3-Dichloropropene	101	17-183
cis-1,3-Dichloropropene	99	10-227
Bromoform	90	45-169
1,1,2,2-Tetrachloroethane	98	46-157
Benzene	116	37-151
Toluene	111	47-150
Ethylbenzene	107	37-162
Chloromethane	132	10-273
Bromomethane	126	10-242
Vinyl chloride	125	10-251
Chloroethane	132	14-230
1,1-Dichloroethene	118	10-234
trans-1,2-Dichloroethene	112	54-156
cis-1,2-Dichloroethene	94	60-140
Trichloroethene	111	71-157
1,2-Dichlorobenzene	100	18-190
1,3-Dichlorobenzene	99	59-156
1,4-Dichlorobenzene	102	18-190
p/m-Xylene	112	40-160
o-Xylene	104	40-160
XYLENE (TOTAL)	109	40-160
Styrene	105	40-160
Acetone	125	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-5)		
Carbon disulfide	126	40-160
2-Butanone	103	40-160
Vinyl acetate	84	40-160
4-Methyl-2-pentanone	106	40-160
2-Hexanone	102	40-160
Acrolein	112	40-160
Acrylonitrile	124	40-160
Surrogate(s)		
Pentafluorobenzene	99	80-120
Fluorobenzene	103	80-120
4-Bromofluorobenzene	95	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG296453-2)		
Acenaphthene	81	46-118
1,2,4-Trichlorobenzene	68	39-98
2-Chloronaphthalene	73	40-140
1,2-Dichlorobenzene	66	40-140
1,4-Dichlorobenzene	64	36-97
2,4-Dinitrotoluene	101	24-96
2,6-Dinitrotoluene	103	40-140
Fluoranthene	92	40-140
4-Chlorophenyl phenyl ether	81	40-140
n-Nitrosodi-n-propylamine	73	41-116
Butyl benzyl phthalate	100	40-140
Anthracene	76	40-140
Pyrene	87	26-127
Hexachloropropene	62	40-140
P-Chloro-M-Cresol	79	23-97
2-Chlorophenol	66	27-123
2-Nitrophenol	81	30-130
4-Nitrophenol	52	10-80
2,4-Dinitrophenol	92	30-130
Pentachlorophenol	79	9-103
Phenol	31	12-110
Surrogate(s)		
2-Fluorophenol	46	21-120
Phenol-d6	40	10-120
Nitrobenzene-d5	84	23-120
2-Fluorobiphenyl	73	43-120
2,4,6-Tribromophenol	80	10-120
4-Terphenyl-d14	82	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Acenaphthene	73	40-140
2-Chloronaphthalene	82	40-140
Fluoranthene	102	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Anthracene	83	40-140
Pyrene	91	40-140
Pentachlorophenol	66	30-130
Surrogate(s)		
2-Fluorophenol	52	21-120
Phenol-d6	44	10-120
Nitrobenzene-d5	118	23-120
2-Fluorobiphenyl	71	43-120
2,4,6-Tribromophenol	91	10-120
4-Terphenyl-d14	112	33-120
Total Metals SPIKE for sample(s) 01 (L0714216-02, WG296464-2)		
Iron, Total	91	
Total Metals SPIKE for sample(s) 01 (L0714216-02, WG296463-2)		
Arsenic, Total	103	80-120
Copper, Total	93	80-120
Nickel, Total	93	80-120
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
Methylene chloride	91	10-221
1,1-Dichloroethane	72	59-155
Chloroform	83	51-138
Carbon tetrachloride	80	70-140
1,2-Dichloropropane	85	10-210
Dibromochloromethane	81	53-149
1,1,2-Trichloroethane	88	52-150
2-Chloroethylvinyl ether	80	10-305
Tetrachloroethene	77	64-148
Chlorobenzene	76	37-160
Trichlorofluoromethane	95	17-181
1,2-Dichloroethane	97	49-155
1,1,1-Trichloroethane	83	52-162
Bromodichloromethane	83	35-155
trans-1,3-Dichloropropene	75	17-183
cis-1,3-Dichloropropene	69	10-227
Bromoform	82	45-169
1,1,2,2-Tetrachloroethane	81	46-157
Benzene	90	35-151
Toluene	83	47-150
Ethylbenzene	82	37-162
Chloromethane	90	10-273
Bromomethane	77	10-242
Vinyl chloride	96	10-251
Chloroethane	101	14-230
1,1-Dichloroethene	87	10-234
trans-1,2-Dichloroethene	85	54-156

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
cis-1,2-Dichloroethene	82	60-140
Trichloroethene	85	71-157
1,2-Dichlorobenzene	33	18-190
1,3-Dichlorobenzene	77	59-156
1,4-Dichlorobenzene	78	18-190
p/m-Xylene	87	40-160
o-Xylene	80	40-160
XYLENE (TOTAL)	85	40-160
Styrene	82	40-160
Acetone	114	40-160
Carbon disulfide	92	40-160
2-Butanone	94	40-160
Vinyl acetate	70	40-160
4-Methyl-2-pentanone	98	40-160
2-Hexanone	93	40-160
Acrolein	69	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	101	80-120
Fluorobenzene	107	80-120
4-Bromofluorobenzene	99	80-120

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0714428

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0714428-01, WG296453-4)					
Acenaphthene	66	75	13	30	46-118
1,2,4-Trichlorobenzene	52	66	24	30	39-98
2-Chloronaphthalene	61	66	8	30	40-140
1,2-Dichlorobenzene	52	66	24	30	40-140
1,4-Dichlorobenzene	52	61	16	30	36-97
2,4-Dinitrotoluene	80	89	11	30	24-96
2,6-Dinitrotoluene	85	94	10	30	40-140
Fluoranthene	75	80	6	30	40-140
4-Chlorophenyl phenyl ether	66	75	13	30	40-140
n-Nitrosodi-n-propylamine	56	66	16	30	41-116
Butyl benzyl phthalate	85	89	5	30	40-140
Anthracene	61	66	8	30	40-140
Pyrene	71	75	5	30	26-127
Hexachloropropene	52	66	24	30	40-140
P-Chloro-M-Cresol	66	73	10	30	23-97
2-Chlorophenol	54	63	15	30	27-123
2-Nitrophenol	63	75	17	30	30-130
4-Nitrophenol	66	73	10	30	10-80
2,4-Dinitrophenol	78	87	11	30	30-130
Pentachlorophenol	63	68	8	30	9-103
Phenol	35	45	25	30	12-110
Surrogate(s)					
2-Fluorophenol	46	57	21		21-120
Phenol-d6	50	59	17		10-120
Nitrobenzene-d5	67	78	15		23-120
2-Fluorobiphenyl	59	66	11		43-120
2,4,6-Tribromophenol	65	70	7		10-120
4-Terphenyl-d14	69	73	6		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0714428-01, WG296454-4)					
Acenaphthene	66	75	13	40	40-140
2-Chloronaphthalene	75	80	6	40	40-140
Fluoranthene	100	110	10	40	40-140
Anthracene	75	80	6	40	40-140
Pyrene	94	99	5	40	40-140
Pentachlorophenol	63	66	5	40	30-130
Surrogate(s)					
2-Fluorophenol	51	64	23		21-120
Phenol-d6	56	65	15		10-120
Nitrobenzene-d5	101	117	15		23-120
2-Fluorobiphenyl	79	85	7		43-120
2,4,6-Tribromophenol	86	90	5		10-120
4-Terphenyl-d14	102	111	8		33-120

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296505-1)							
Solids, Total Suspended	ND	mg/l	5.0	30 2540D		1003 13:30	DW
Blank Analysis for sample(s) 01 (WG296464-3)							
Total Metals				19 200.7			
Iron, Total	ND	mg/l	0.05	19 200.7		1002 18:00 1003 13:46	AI
Blank Analysis for sample(s) 01 (WG296463-3)							
Total Metals							
Arsenic, Total	ND	mg/l	0.0005	1 6020		1002 18:00 1003 15:06	BM
Copper, Total	ND	mg/l	0.0005	1 6020		1002 18:00 1003 15:06	BM
Nickel, Total	ND	mg/l	0.0005	1 6020		1002 18:00 1003 15:06	BM
Blank Analysis for sample(s) 01 (WG296345-6)							
Volatile Organics by GC/MS 624				5 624		1002 07:42	MM
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				
Tetrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.5				
1,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
Bromoform	ND	ug/l	1.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Benzene	ND	ug/l	1.0				
Toluene	ND	ug/l	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Vinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ND	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296345-6)							
Volatile Organics by GC/MS 624 cont'd				5 624		1002 07:42	MM
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Surrogate(s)	Recovery		QC Criteria				
Pentafluorobenzene	104	%	80-120				
Fluorobenzene	80.0	%	80-120				
4-Bromofluorobenzene	103	%	80-120				
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270				1 8270C		1002 19:00	1003 11:11 RL
Acenaphthene	ND	ug/l	5.0				
Benzidine	ND	ug/l	50.				
1,2,4-Trichlorobenzene	ND	ug/l	5.0				
Hexachlorobenzene	ND	ug/l	5.0				
Bis(2-chloroethyl)ether	ND	ug/l	5.0				
1-Chloronaphthalene	ND	ug/l	5.0				
2-Chloronaphthalene	ND	ug/l	6.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
3,3'-Dichlorobenzidine	ND	ug/l	50.				
2,4-Dinitrotoluene	ND	ug/l	6.0				
2,6-Dinitrotoluene	ND	ug/l	5.0				
Azobenzene	ND	ug/l	5.0				
Fluoranthene	ND	ug/l	5.0				
4-Chlorophenyl phenyl ether	ND	ug/l	5.0				
4-Bromophenyl phenyl ether	ND	ug/l	5.0				
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0				
Bis(2-chloroethoxy)methane	ND	ug/l	5.0				
Hexachlorobutadiene	ND	ug/l	10.				
Hexachlorocyclopentadiene	ND	ug/l	30.				
Hexachloroethane	ND	ug/l	5.0				
Isophorone	ND	ug/l	5.0				
Naphthalene	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 11:11	RL
Nitrobenzene	ND	ug/l	5.0				
NDPA/DPA	ND	ug/l	15.				
n-Nitrosodi-n-propylamine	ND	ug/l	5.0				
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0				
Butyl benzyl phthalate	ND	ug/l	5.0				
Di-n-butylphthalate	ND	ug/l	5.0				
Di-n-octylphthalate	ND	ug/l	5.0				
Diethyl phthalate	ND	ug/l	5.0				
Dimethyl phthalate	ND	ug/l	5.0				
Benzo(a)anthracene	ND	ug/l	5.0				
Benzo(a)pyrene	ND	ug/l	5.0				
Benzo(b)fluoranthene	ND	ug/l	5.0				
Benzo(k)fluoranthene	ND	ug/l	5.0				
Chrysene	ND	ug/l	5.0				
Acenaphthylene	ND	ug/l	5.0				
Anthracene	ND	ug/l	5.0				
Benzo(ghi)perylene	ND	ug/l	5.0				
Fluorene	ND	ug/l	5.0				
Phenanthrene	ND	ug/l	5.0				
Dibenzo(a,h)anthracene	ND	ug/l	5.0				
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0				
Pyrene	ND	ug/l	5.0				
Benzo(e)pyrene	ND	ug/l	5.0				
Biphenyl	ND	ug/l	5.0				
Perylene	ND	ug/l	5.0				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	5.0				
1-Methylnaphthalene	ND	ug/l	5.0				
2-Nitroaniline	ND	ug/l	5.0				
3-Nitroaniline	ND	ug/l	5.0				
4-Nitroaniline	ND	ug/l	7.0				
Dibenzofuran	ND	ug/l	5.0				
a,a-Dimethylphenethylamine	ND	ug/l	50.				
Hexachloropropene	ND	ug/l	10.				
Nitrosodi-n-butylamine	ND	ug/l	10.				
2-Methylnaphthalene	ND	ug/l	5.0				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	25.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	10.				
Dimethoate	ND	ug/l	20.				
4-Aminobiphenyl	ND	ug/l	10.				
Pentachloronitrobenzene	ND	ug/l	10.				
Isodrin	ND	ug/l	10.				
p-Dimethylaminoazobenzene	ND	ug/l	10.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11 RL
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.				
n-Nitrosodimethylamine	ND	ug/l	50.				
2,4,6-Trichlorophenol	ND	ug/l	5.0				
p-Chloro-m-cresol	ND	ug/l	5.0				
2-Chlorophenol	ND	ug/l	6.0				
2,4-Dichlorophenol	ND	ug/l	10.				
2,4-Dimethylphenol	ND	ug/l	10.				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	10.				
2,4-Dinitrophenol	ND	ug/l	30.				
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	10.				
Phenol	ND	ug/l	7.0				
2-Methylphenol	ND	ug/l	6.0				
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0				
2,4,5-Trichlorophenol	ND	ug/l	5.0				
2,6-Dichlorophenol	ND	ug/l	10.				
Benzoic Acid	ND	ug/l	50.				
Benzyl Alcohol	ND	ug/l	10.				
Carbazole	ND	ug/l	5.0				
Pyridine	ND	ug/l	50.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	56.0	%		21-120			
Phenol-d6	51.0	%		10-120			
Nitrobenzene-d5	89.0	%		23-120			
2-Fluorobiphenyl	63.0	%		43-120			
2,4,6-Tribromophenol	67.0	%		10-120			
4-Terphenyl-d14	73.0	%		33-120			
Blank Analysis for sample(s) 01 (WG296454-1)							
PAH by GC/MS SIM 8270M				1	8270C-M	1002 19:00	1003 11:35 RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.50				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296454-1)							
PAH by GC/MS SIM 8270M cont'd				1 8270C-M	1002 19:00	1003 11:35	RL
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.80				
Hexachlorobenzene	ND	ug/l	0.80				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.80				
Surrogate(s)	Recovery						QC Criteria
2-Fluorophenol	55.0	%					21-120
Phenol-d6	49.0	%					10-120
Nitrobenzene-d5	109	%					23-120
2-Fluorobiphenyl	72.0	%					43-120
2,4,6-Tribromophenol	75.0	%					10-120
4-Terphenyl-d14	117	%					33-120

ALPHA ANALYTICAL LABORATORIES
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.



CHAIN OF CUSTODY

PAGE 1 OF 1Date Rec'd in Lab: 10/11/07ALPHA Job #: L0714428

WESTBORO, MA RAYNHAM, MA
 TEL: 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Project InformationProject Name: NA Soil ExcavationProject Location: Raytheon WayfordProject #: 0051545Project Manager: Jason Flatteny

ALPHA Quote #:

Turn-Around Time Standard RUSH (only confirmed if pre-approved!)Date Due: 72 HR per
10/4/07 ERA Time:**Client Information**Client: ERM - BostonAddress: 399 Boylston St. 6th Floor
Boston, MA 02116Phone: (617) 646-7800Fax: (617) 267-6447Email: jason.flatteny@erm.com These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Report Information - Data Deliverables
 FAX EMAIL
 ADEX Add'l Deliverables
Billing Information Same as Client info PO #:**Regulatory Requirements/Report Limits**

State /Fed Program Criteria

EPA RCP**MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS**
 Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS		SAMPLE HANDLING	
<u>VOCS by LE24</u>	<input type="checkbox"/> Done	<input checked="" type="checkbox"/> Not needed	TOTAL # BOTTLES <u>7</u>
<u>Total Ar, Cu, Ni, Fe</u>	<input type="checkbox"/> Lab to do	<input type="checkbox"/> Lab to do	
<u>TSS</u>	<input type="checkbox"/> Lab to do		
<u>pH</u>	<input type="checkbox"/> Lab to do		
<u>DOC by 8070</u>	(Please specify below)		
Sample Specific Comments			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Analysis	Sample Specific Comments	TOTAL # BOTTLES
		Date	Time					
<u>14428-1</u>	<u>EFF-20071001-01</u>	<u>10/01/07</u>	<u>1440</u>	<u>GW</u>	<u>BM</u>	<u>2 1 1 2</u>		<u>7</u>

PLEASE ANSWER QUESTIONS ABOVE!
 IS YOUR PROJECT
 MA MCP or CT RCP?

Container Type	<u>V</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>A</u>
Preservative	<u>H</u>	<u>C</u>	<u>A</u>	<u>A</u>	<u>A</u>

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>10/1/07 15:24</u>	<u>[Signature]</u>	<u>10/1/07 15:26</u>
	<u>10/1/07 13:54</u>	<u>[Signature]</u>	<u>10/1/07 15:59</u>

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com
MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England **Laboratory Job Number:** L0714521
Address: 399 Boylston Street **Date Received:** 02-OCT-2007
6th Floor **Date Reported:** 05-OCT-2007
Boston, MA 02116 **Delivery Method:** Alpha
Attn: Mr. Jason Flattery **Site:** NA SOIL EXCAVATION
Project Number: 0051545

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714521-01	EFF-20071002-01	RAYTHEON WAYLAND

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 report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Michelle M. Morris
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0714521

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Semivolatile Organics

The WG296453-2 LCS % recovery for 2,4-Dinitrotoluene is above method acceptance criteria.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 624 cont'd				5 624	1003 11:34 MM		
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Methyl tert butyl ether	ND	ug/l	20.				
1,4-Dioxane	ND	ug/l	2000				
Tert-Butyl Alcohol	ND	ug/l	100				
Tertiary-Amyl Methyl Ether	ND	ug/l	20.				
Surrogate(s)	Recovery		QC Criteria				
Pentafluorobenzene	101	%	80-120				
Fluorobenzene	107	%	80-120				
4-Bromofluorobenzene	97.0	%	80-120				
SVOC's by GC/MS 8270				1 8270C	1002 19:00 1003 13:06 RL		
Acenaphthene	ND	ug/l	4.9				
Benzidine	ND	ug/l	49.				
1,2,4-Trichlorobenzene	ND	ug/l	4.9				
Hexachlorobenzene	ND	ug/l	4.9				
Bis(2-chloroethyl)ether	ND	ug/l	4.9				
1-Chloronaphthalene	ND	ug/l	4.9				
2-Chloronaphthalene	ND	ug/l	5.9				
1,2-Dichlorobenzene	ND	ug/l	4.9				
1,3-Dichlorobenzene	ND	ug/l	4.9				
1,4-Dichlorobenzene	ND	ug/l	4.9				
3,3'-Dichlorobenzidine	ND	ug/l	49.				
2,4-Dinitrotoluene	ND	ug/l	5.9				
2,6-Dinitrotoluene	ND	ug/l	4.9				
Azobenzene	ND	ug/l	4.9				
Fluoranthene	ND	ug/l	4.9				
4-Chlorophenyl phenyl ether	ND	ug/l	4.9				
4-Bromophenyl phenyl ether	ND	ug/l	4.9				
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9				
Bis(2-chloroethoxy)methane	ND	ug/l	4.9				
Hexachlorobutadiene	ND	ug/l	9.8				
Hexachlorocyclopentadiene	ND	ug/l	29.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 13:06	RL
Hexachloroethane	ND	ug/l	4.9				
Isophorone	ND	ug/l	4.9				
Naphthalene	ND	ug/l	4.9				
Nitrobenzene	ND	ug/l	4.9				
NDPA/DPA	ND	ug/l	15.				
n-Nitrosodi-n-propylamine	ND	ug/l	4.9				
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.9				
Butyl benzyl phthalate	ND	ug/l	4.9				
Di-n-butylphthalate	ND	ug/l	4.9				
Di-n-octylphthalate	ND	ug/l	4.9				
Diethyl phthalate	ND	ug/l	4.9				
Dimethyl phthalate	ND	ug/l	4.9				
Benzo(a)anthracene	ND	ug/l	4.9				
Benzo(a)pyrene	ND	ug/l	4.9				
Benzo(b)fluoranthene	ND	ug/l	4.9				
Benzo(k)fluoranthene	ND	ug/l	4.9				
Chrysene	ND	ug/l	4.9				
Acenaphthylene	ND	ug/l	4.9				
Anthracene	ND	ug/l	4.9				
Benzo(ghi)perylene	ND	ug/l	4.9				
Fluorene	ND	ug/l	4.9				
Phenanthrene	ND	ug/l	4.9				
Dibenzo(a,h)anthracene	ND	ug/l	4.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.8				
Pyrene	ND	ug/l	4.9				
Benzo(e)pyrene	ND	ug/l	4.9				
Biphenyl	ND	ug/l	4.9				
Perylene	ND	ug/l	4.9				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	4.9				
1-Methylnaphthalene	ND	ug/l	4.9				
2-Nitroaniline	ND	ug/l	4.9				
3-Nitroaniline	ND	ug/l	4.9				
4-Nitroaniline	ND	ug/l	6.8				
Dibenzofuran	ND	ug/l	4.9				
a,a-Dimethylphenethylamine	ND	ug/l	49.				
Hexachloropropene	ND	ug/l	9.8				
Nitrosodi-n-butylamine	ND	ug/l	9.8				
2-Methylnaphthalene	ND	ug/l	4.9				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	24.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	9.8				
Dimethoate	ND	ug/l	20.				
4-Aminobiphenyl	ND	ug/l	9.8				
Pentachloronitrobenzene	ND	ug/l	9.8				
Isodrin	ND	ug/l	9.8				
p-Dimethylaminoazobenzene	ND	ug/l	9.8				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 13:06	RL
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.				
n-Nitrosodimethylamine	ND	ug/l	49.				
2,4,6-Trichlorophenol	ND	ug/l	4.9				
p-Chloro-m-cresol	ND	ug/l	4.9				
2-Chlorophenol	ND	ug/l	5.9				
2,4-Dichlorophenol	ND	ug/l	9.8				
2,4-Dimethylphenol	ND	ug/l	9.8				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	9.8				
2,4-Dinitrophenol	ND	ug/l	29.				
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	9.8				
Phenol	ND	ug/l	6.8				
2-Methylphenol	ND	ug/l	5.9				
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9				
2,4,5-Trichlorophenol	ND	ug/l	4.9				
2,6-Dichlorophenol	ND	ug/l	9.8				
Benzoic Acid	ND	ug/l	49.				
Benzyl Alcohol	ND	ug/l	9.8				
Carbazole	ND	ug/l	4.9				
Pyridine	ND	ug/l	49.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	35.0	%		21-120			
Phenol-d6	30.0	%		10-120			
Nitrobenzene-d5	74.0	%		23-120			
2-Fluorobiphenyl	57.0	%		43-120			
2,4,6-Tribromophenol	57.0	%		10-120			
4-Terphenyl-d14	65.0	%		33-120			
PAH by GC/MS SIM 8270M				1 8270C-M	1002 19:00	1003 15:13	RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.49				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	1002 19:00	1003 15:13 RL
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.78				
Hexachlorobenzene	ND	ug/l	0.78				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.78				
Surrogate(s)	Recovery		QC Criteria				
2-Fluorophenol	36.0	%	21-120				
Phenol-d6	32.0	%	10-120				
Nitrobenzene-d5	100	%	23-120				
2-Fluorobiphenyl	73.0	%	43-120				
2,4,6-Tribromophenol	68.0	%	10-120				
4-Terphenyl-d14	119	%	33-120				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714521

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0714571-01, WG296853-2)					
Solids, Total Suspended	2700	2600	mg/l	4	32
pH for sample(s) 01 (L0714521-01, WG296441-1)					
pH (H)	7.7	7.8	SU	1	5
Total Metals for sample(s) 01 (L0714521-01, WG296626-1)					
Iron, Total	ND	ND	mg/l	NC	
Total Metals for sample(s) 01 (L0714521-01, WG296625-1)					
Arsenic, Total	0.0182	0.0190	mg/l	4	20
Copper, Total	0.0019	0.0022	mg/l	10	20
Nickel, Total	0.0046	0.0050	mg/l	7	20
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714233-02, WG296515-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714521

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714233-02, WG296515-2)					
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	101	102	%		80-120
Fluorobenzene	103	103	%		80-120
4-Bromofluorobenzene	104	105	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01 (WG296441-2)		
pH	99	99-101
Total Metals LCS for sample(s) 01 (WG296626-4)		
Iron, Total	96	
Total Metals LCS for sample(s) 01 (WG296625-4)		
Arsenic, Total	95	80-120
Copper, Total	94	80-120
Nickel, Total	94	80-120
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296515-7)		
Methylene chloride	112	10-221
1,1-Dichloroethane	99	59-155
Chloroform	106	51-138
Carbon tetrachloride	110	70-140
1,2-Dichloropropane	103	10-210
Dibromochloromethane	98	53-149
1,1,2-Trichloroethane	99	52-150
2-Chloroethylvinyl ether	100	10-305
Tetrachloroethene	103	64-148
Chlorobenzene	98	37-160
Trichlorofluoromethane	124	17-181
1,2-Dichloroethane	108	49-155
1,1,1-Trichloroethane	102	52-162
Bromodichloromethane	103	35-155
trans-1,3-Dichloropropene	107	17-183
cis-1,3-Dichloropropene	104	10-227
Bromoform	97	45-169
1,1,2,2-Tetrachloroethane	98	46-157
Benzene	115	37-151
Toluene	110	47-150
Ethylbenzene	107	37-162
Chloromethane	135	10-273
Bromomethane	132	10-242
Vinyl chloride	122	10-251
Chloroethane	124	14-230
1,1-Dichloroethene	115	10-234
trans-1,2-Dichloroethene	115	54-156
cis-1,2-Dichloroethene	102	60-140
Trichloroethene	111	71-157
1,2-Dichlorobenzene	100	18-190
1,3-Dichlorobenzene	100	59-156
1,4-Dichlorobenzene	103	18-190
p/m-Xylene	112	40-160
o-Xylene	102	40-160
XYLENE (TOTAL)	108	40-160
Styrene	101	40-160
Acetone	106	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296515-7)		
Carbon disulfide	133	40-160
2-Butanone	88	40-160
Vinyl acetate	103	40-160
4-Methyl-2-pentanone	100	40-160
2-Hexanone	96	40-160
Acrolein	98	40-160
Acrylonitrile	117	40-160
Surrogate(s)		
Pentafluorobenzene	100	80-120
Fluorobenzene	105	80-120
4-Bromofluorobenzene	99	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG296453-2)		
Acenaphthene	81	46-118
1,2,4-Trichlorobenzene	68	39-98
2-Chloronaphthalene	73	40-140
1,2-Dichlorobenzene	66	40-140
1,4-Dichlorobenzene	64	36-97
2,4-Dinitrotoluene	101	24-96
2,6-Dinitrotoluene	103	40-140
Fluoranthene	92	40-140
4-Chlorophenyl phenyl ether	81	40-140
n-Nitrosodi-n-propylamine	73	41-116
Butyl benzyl phthalate	100	40-140
Anthracene	76	40-140
Pyrene	87	26-127
Hexachloropropene	62	40-140
P-Chloro-M-Cresol	79	23-97
2-Chlorophenol	66	27-123
2-Nitrophenol	81	30-130
4-Nitrophenol	52	10-80
2,4-Dinitrophenol	92	30-130
Pentachlorophenol	79	9-103
Phenol	31	12-110
Surrogate(s)		
2-Fluorophenol	46	21-120
Phenol-d6	40	10-120
Nitrobenzene-d5	84	23-120
2-Fluorobiphenyl	73	43-120
2,4,6-Tribromophenol	80	10-120
4-Terphenyl-d14	82	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Acenaphthene	73	40-140
2-Chloronaphthalene	82	40-140
Fluoranthene	102	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Anthracene	83	40-140
Pyrene	91	40-140
Pentachlorophenol	66	30-130
Surrogate(s)		
2-Fluorophenol	52	21-120
Phenol-d6	44	10-120
Nitrobenzene-d5	118	23-120
2-Fluorobiphenyl	71	43-120
2,4,6-Tribromophenol	91	10-120
4-Terphenyl-d14	112	33-120
Total Metals SPIKE for sample(s) 01 (L0714521-01, WG296626-2)		
Iron, Total	100	
Total Metals SPIKE for sample(s) 01 (L0714521-01, WG296625-2)		
Arsenic, Total	102	80-120
Copper, Total	99	80-120
Nickel, Total	98	80-120
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714233-02, WG296515-1)		
Methylene chloride	100	10-221
1,1-Dichloroethane	93	59-155
Chloroform	97	51-138
Carbon tetrachloride	105	70-140
1,2-Dichloropropane	102	10-210
Dibromochloromethane	95	53-149
1,1,2-Trichloroethane	98	52-150
2-Chloroethylvinyl ether	94	10-305
Tetrachloroethene	98	64-148
Chlorobenzene	96	37-160
Trichlorofluoromethane	122	17-181
1,2-Dichloroethane	105	49-155
1,1,1-Trichloroethane	101	52-162
Bromodichloromethane	97	35-155
trans-1,3-Dichloropropene	90	17-183
cis-1,3-Dichloropropene	92	10-227
Bromoform	93	45-169
1,1,2,2-Tetrachloroethane	94	46-157
Benzene	104	35-151
Toluene	101	47-150
Ethylbenzene	106	37-162
Chloromethane	107	10-273
Bromomethane	113	10-242
Vinyl chloride	122	10-251
Chloroethane	122	14-230
1,1-Dichloroethene	108	10-234
trans-1,2-Dichloroethene	104	54-156

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714233-02, WG296515-1)		
cis-1,2-Dichloroethene	96	60-140
Trichloroethene	105	71-157
1,2-Dichlorobenzene	95	18-190
1,3-Dichlorobenzene	93	59-156
1,4-Dichlorobenzene	94	18-190
p/m-Xylene	115	40-160
o-Xylene	101	40-160
XYLENE (TOTAL)	110	40-160
Styrene	100	40-160
Acetone	117	40-160
Carbon disulfide	109	40-160
2-Butanone	100	40-160
Vinyl acetate	91	40-160
4-Methyl-2-pentanone	103	40-160
2-Hexanone	101	40-160
Acrolein	95	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	95	80-120
Fluorobenzene	104	80-120
4-Bromofluorobenzene	99	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0714521

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0714428-01, WG296453-4)					
Acenaphthene	66	75	13	30	46-118
1,2,4-Trichlorobenzene	52	66	24	30	39-98
2-Chloronaphthalene	61	66	8	30	40-140
1,2-Dichlorobenzene	52	66	24	30	40-140
1,4-Dichlorobenzene	52	61	16	30	36-97
2,4-Dinitrotoluene	80	89	11	30	24-96
2,6-Dinitrotoluene	85	94	10	30	40-140
Fluoranthene	75	80	6	30	40-140
4-Chlorophenyl phenyl ether	66	75	13	30	40-140
n-Nitrosodi-n-propylamine	56	66	16	30	41-116
Butyl benzyl phthalate	85	89	5	30	40-140
Anthracene	61	66	8	30	40-140
Pyrene	71	75	5	30	26-127
Hexachloropropene	52	66	24	30	40-140
P-Chloro-M-Cresol	66	73	10	30	23-97
2-Chlorophenol	54	63	15	30	27-123
2-Nitrophenol	63	75	17	30	30-130
4-Nitrophenol	66	73	10	30	10-80
2,4-Dinitrophenol	78	87	11	30	30-130
Pentachlorophenol	63	68	8	30	9-103
Phenol	35	45	25	30	12-110
Surrogate(s)					
2-Fluorophenol	46	57	21		21-120
Phenol-d6	50	59	17		10-120
Nitrobenzene-d5	67	78	15		23-120
2-Fluorobiphenyl	59	66	11		43-120
2,4,6-Tribromophenol	65	70	7		10-120
4-Terphenyl-d14	69	73	6		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0714428-01, WG296454-4)					
Acenaphthene	66	75	13	40	40-140
2-Chloronaphthalene	75	80	6	40	40-140
Fluoranthene	100	110	10	40	40-140
Anthracene	75	80	6	40	40-140
Pyrene	94	99	5	40	40-140
Pentachlorophenol	63	66	5	40	30-130
Surrogate(s)					
2-Fluorophenol	51	64	23		21-120
Phenol-d6	56	65	15		10-120
Nitrobenzene-d5	101	117	15		23-120
2-Fluorobiphenyl	79	85	7		43-120
2,4,6-Tribromophenol	86	90	5		10-120
4-Terphenyl-d14	102	111	8		33-120

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296853-1)							
Solids, Total Suspended	ND	mg/l	5.0	30 2540D		1005 09:10	DW
Blank Analysis for sample(s) 01 (WG296626-3)							
Total Metals				19 200.7			
Iron, Total	ND	mg/l	0.05	19 200.7		1003 17:45 1005 11:05	AI
Blank Analysis for sample(s) 01 (WG296625-3)							
Total Metals							
Arsenic, Total	ND	mg/l	0.0005	1 6020		1003 17:45 1004 21:46	BM
Copper, Total	ND	mg/l	0.0005	1 6020		1003 17:45 1004 21:46	BM
Nickel, Total	ND	mg/l	0.0020	1 6020		1003 17:45 1004 21:46	BM
Blank Analysis for sample(s) 01 (WG296515-8)							
Volatile Organics by GC/MS 624				5 624		1003 09:48	MM
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
Tetrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.5				
1,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
Bromoform	ND	ug/l	1.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Benzene	ND	ug/l	1.0				
Toluene	ND	ug/l	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Vinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ND	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296515-8)							
Volatile Organics by GC/MS 624 cont'd				5 624		1003 09:48	MM
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Methyl Acetate	ND	ug/l	20.				
Ethyl Acetate	ND	ug/l	20.				
Tetrahydrofuran	ND	ug/l	20.				
Acetonitrile	ND	ug/l	40.				
n-Hexane	ND	ug/l	20.				
Isopropyl Ether	ND	ug/l	20.				
Cyclohexane	ND	ug/l	20.				
Heptane	ND	ug/l	20.				
Butyl Acetate	ND	ug/l	20.				
Methyl tert butyl ether	ND	ug/l	20.				
Ethyl Ether	ND	ug/l	20.				
Dibromomethane	ND	ug/l	20.				
1,4-Dioxane	ND	ug/l	2000				
Tert-Butyl Alcohol	ND	ug/l	100				
Tertiary-Amyl Methyl Ether	ND	ug/l	20.				
Surrogate(s)	Recovery			QC Criteria			
Pentafluorobenzene	102	%		80-120			
Fluorobenzene	106	%		80-120			
4-Bromofluorobenzene	106	%		80-120			
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270				1 8270C		1002 19:00	1003 11:11 RL
Acenaphthene	ND	ug/l	5.0				
Benzidine	ND	ug/l	50.				
1,2,4-Trichlorobenzene	ND	ug/l	5.0				
Hexachlorobenzene	ND	ug/l	5.0				
Bis(2-chloroethyl)ether	ND	ug/l	5.0				
1-Chloronaphthalene	ND	ug/l	5.0				
2-Chloronaphthalene	ND	ug/l	6.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 11:11	RL
3,3'-Dichlorobenzidine	ND	ug/l	50.				
2,4-Dinitrotoluene	ND	ug/l	6.0				
2,6-Dinitrotoluene	ND	ug/l	5.0				
Azobenzene	ND	ug/l	5.0				
Fluoranthene	ND	ug/l	5.0				
4-Chlorophenyl phenyl ether	ND	ug/l	5.0				
4-Bromophenyl phenyl ether	ND	ug/l	5.0				
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0				
Bis(2-chloroethoxy)methane	ND	ug/l	5.0				
Hexachlorobutadiene	ND	ug/l	10.				
Hexachlorocyclopentadiene	ND	ug/l	30.				
Hexachloroethane	ND	ug/l	5.0				
Isophorone	ND	ug/l	5.0				
Naphthalene	ND	ug/l	5.0				
Nitrobenzene	ND	ug/l	5.0				
NDPA/DPA	ND	ug/l	15.				
n-Nitrosodi-n-propylamine	ND	ug/l	5.0				
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0				
Butyl benzyl phthalate	ND	ug/l	5.0				
Di-n-butylphthalate	ND	ug/l	5.0				
Di-n-octylphthalate	ND	ug/l	5.0				
Diethyl phthalate	ND	ug/l	5.0				
Dimethyl phthalate	ND	ug/l	5.0				
Benzo(a)anthracene	ND	ug/l	5.0				
Benzo(a)pyrene	ND	ug/l	5.0				
Benzo(b)fluoranthene	ND	ug/l	5.0				
Benzo(k)fluoranthene	ND	ug/l	5.0				
Chrysene	ND	ug/l	5.0				
Acenaphthylene	ND	ug/l	5.0				
Anthracene	ND	ug/l	5.0				
Benzo(ghi)perylene	ND	ug/l	5.0				
Fluorene	ND	ug/l	5.0				
Phenanthrene	ND	ug/l	5.0				
Dibenzo(a,h)anthracene	ND	ug/l	5.0				
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0				
Pyrene	ND	ug/l	5.0				
Benzo(e)pyrene	ND	ug/l	5.0				
Biphenyl	ND	ug/l	5.0				
Perylene	ND	ug/l	5.0				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	5.0				
1-Methylnaphthalene	ND	ug/l	5.0				
2-Nitroaniline	ND	ug/l	5.0				
3-Nitroaniline	ND	ug/l	5.0				
4-Nitroaniline	ND	ug/l	7.0				
Dibenzofuran	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270 cont'd				1 8270C	1002 19:00	1003 11:11	RL
a,a-Dimethylphenethylamine	ND	ug/l	50.				
Hexachloropropene	ND	ug/l	10.				
Nitrosodi-n-butylamine	ND	ug/l	10.				
2-Methylnaphthalene	ND	ug/l	5.0				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	25.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	10.				
Dimethoate	ND	ug/l	20.				
4-Aminobiphenyl	ND	ug/l	10.				
Pentachloronitrobenzene	ND	ug/l	10.				
Isodrin	ND	ug/l	10.				
p-Dimethylaminoazobenzene	ND	ug/l	10.				
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.				
n-Nitrosodimethylamine	ND	ug/l	50.				
2,4,6-Trichlorophenol	ND	ug/l	5.0				
p-Chloro-m-cresol	ND	ug/l	5.0				
2-Chlorophenol	ND	ug/l	6.0				
2,4-Dichlorophenol	ND	ug/l	10.				
2,4-Dimethylphenol	ND	ug/l	10.				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	10.				
2,4-Dinitrophenol	ND	ug/l	30.				
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	10.				
Phenol	ND	ug/l	7.0				
2-Methylphenol	ND	ug/l	6.0				
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0				
2,4,5-Trichlorophenol	ND	ug/l	5.0				
2,6-Dichlorophenol	ND	ug/l	10.				
Benzoic Acid	ND	ug/l	50.				
Benzyl Alcohol	ND	ug/l	10.				
Carbazole	ND	ug/l	5.0				
Pyridine	ND	ug/l	50.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG296453-1)							
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11 RL
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	56.0	%		21-120			
Phenol-d6	51.0	%		10-120			
Nitrobenzene-d5	89.0	%		23-120			
2-Fluorobiphenyl	63.0	%		43-120			
2,4,6-Tribromophenol	67.0	%		10-120			
4-Terphenyl-d14	73.0	%		33-120			
Blank Analysis for sample(s) 01 (WG296454-1)							
PAH by GC/MS SIM 8270M				1	8270C-M	1002 19:00	1003 11:35 RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.50				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.80				
Hexachlorobenzene	ND	ug/l	0.80				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.80				
Surrogate(s)	Recovery			QC Criteria			
2-Fluorophenol	55.0	%		21-120			
Phenol-d6	49.0	%		10-120			
Nitrobenzene-d5	109	%		23-120			
2-Fluorobiphenyl	72.0	%		43-120			
2,4,6-Tribromophenol	75.0	%		10-120			
4-Terphenyl-d14	117	%		33-120			

ALPHA ANALYTICAL LABORATORIES
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

Technical Report

PROJECT NAME: Wayland - 07029

prepared for

Maxymillian Technologies, Inc.
1801 East Street
Pittsfield, MA 01201

Attention: R. Simmons

October 2, 2007

Report Status

- Final Report
 Re-issued Report

Analytical Report Certification

Laboratory Name: *Maxymillian Technologies, Inc.* **Laboratory Project #:** **07029**

Project Name: **Wayland** **Project Location:** **Former Raytheon Facility, Wayland, MA**

This form provides certifications for the following data set:

Sample Matrices: Groundwater Soil/Sediment Drinking Water Other: Carbon

Methods	8260B (X)	8270C ()	8082 ()	8100M ()	9045 ()
	1010 ()	SW 846 Ch 7 ()	6010 ()	7471 ()	415.1 ()
	As specified in MADEP Compendium of Methods MAEPH ()	MAVPH ()			

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 condition consistent with that described on the Chain of Custody documentation for the data set. Yes No ¹

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 ¹

C Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in Section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? Yes No ¹

D VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3? Yes No ¹

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 No ¹

F Were results for all analyte-list compounds/elements for the specified method(s) reported? Yes No ¹

¹ All negative responses must be addressed in an attached Environmental 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: _____ **Position:** Laboratory Director

Printed Name: John M. Massimiano **Date:** _____

LABORATORY SERVICES TECHNICAL REPORT - NARRATIVE

PREPARED FOR:

Maxymillian Technologies, Inc.
1801 East Street
Pittsfield, MA 01201
(413) 499-3050

PROJECT: **Wayland**

ATTENTION: **R. Simmons**

One (1) soil sample for VOC analysis was received by the Maxymillian Technologies' Analytical Laboratory on October 1, 2007. A rush turnaround time was requested.

All samples were analyzed within the method specified maximum allowed holding times. All quality control was within laboratory determined acceptable limits.

All samples are analyzed by approved methodologies. The *MT* analytical laboratory is a MA DEP certified testing facility.

A standardized analyte list for EPA Method 8260B is reported.

Some of the VOC compounds in the LCS/LCSD analysis were outside the recommended control limits.

Surrogate recoveries were low which is typical when analyzing activated carbon samples.

MA Certification Number M-MA 146

Issue Date
October 2, 2007

Report Number
2007/Maxy/Wayland/100107

SAMPLE RECEPTION INFORMATION

Project	Requested TAT				
Wayland		Rush			
Quantity	Matrix	Analysis Method	Description	Collection Date	Preservative ¹
1	Soil	EPA 8260B	VOC	10/1/07	On Ice/meth
1	Trip Blank	EPA 8260B	VOC	10/1/07	On Ice/meth

1. Samples received on ice are acceptable as evidence that the cooling process has begun. A temperature blank is used to represent the temperature of the samples received in the cooler.

Temperature inspected upon receipt:	Inspected by:	Date Received
4.8° C	JM	10/1/07

Volatile Organic Compounds

Field ID: **Carbon**

Laboratory ID: **10010701**

% Moisture: **56.9**

Dilution: **1**

Analysis EPA Method 8260B	Extraction Method 5035	Matrix Soil	Instrument GC-MS	Analyst JM
------------------------------	---------------------------	----------------	---------------------	---------------

Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)	Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)
Dichlorodifluoromethane	ND	0.100	1,3-Dichloropropane	ND	0.100
Chloromethane	ND	0.100	Chlorodibromomethane	ND	0.100
Vinyl chloride	ND	0.100	1,2-Dibromoethane(EDB)	ND	0.100
Bromomethane	ND	0.100	Bromoform	ND	0.100
Chloroethane	ND	0.250	2-Hexanone (MBK)	ND	0.500
Trichlorofluoromethane	ND	0.100	Toluene	ND	0.100
Acetone	ND	0.750	4-Methyl-2-Pentanone	ND	0.500
1,1-Dichloroethene	ND	0.100	Tetrachloroethene	ND	0.100
Acrylonitrile	ND	0.500	Chlorobenzene	ND	0.100
Iodomethane	ND	0.250	1,1,1,2-Tetrachloroethane	ND	0.100
Methylene chloride	ND	0.500	Ethylbenzene	ND	0.100
Carbon disulfide	ND	0.100	m,p-Xylene	ND	0.100
trans-1,2-Dichloroethene	ND	0.100	o-Xylene	ND	0.100
Acrolein	ND	0.500	Styrene	ND	0.100
cis-1,2-Dichloroethene	ND	0.100	1,1,2,2-Tetrachloroethane	ND	0.100
Methyl-t-butyl ether (MtBE)	ND	0.100	Isopropylbenzene	ND	0.100
1,1-Dichloroethane	ND	0.100	1,2,3-Trichloropropane	ND	0.100
Chloroform	ND	0.100	Bromobenzene	ND	0.100
1,2-Dichloroethane	ND	0.100	2-Chlorotoluene	ND	0.100
Vinyl acetate	ND	0.500	n-Propylbenzene	ND	0.100
2-Butanone (MEK)	ND	0.500	4-Chlorotoluene	ND	0.100
2,2-Dichloropropane	ND	0.100	1,3,5-Trimethylbenzene	ND	0.100
1,1,1-Trichloroethane	ND	0.100	tert-Butylbenzene	ND	0.100
1,1-Dichloropropene	ND	0.100	1,2,4-Trimethylbenzene	ND	0.100
Benzene	ND	0.100	1,3-Dichlorobenzene	ND	0.100
Carbon Tetrachloride	ND	0.100	sec-Butylbenzene	ND	0.100
Trichloroethene	ND	0.100	1,4-Dichlorobenzene	ND	0.100
Dibromomethane	ND	0.100	p- Isopropyltoluene	ND	0.100
1,2-dichloropropane	ND	0.100	1,2-Dichlorobenzene	ND	0.100
Bromodichloromethane	ND	0.100	n-Butylbenzene	ND	0.100
2-Chloroethyl vinyl ether	ND	0.250	1,2-Dibromo-3-chloropropane	ND	0.250
cis-1,3-Dichloropropene	ND	0.100	1,2,4-Trichlorobenzene	ND	0.100
trans-1,3-Dichloropropene	ND	0.100	Naphthalene	ND	0.250
1,1,2-Trichloroethane	ND	0.100	Hexachlorobutadiene	ND	0.500
			1,2,3-Trichlorobenzene	ND	0.100

Sample Analysis Information, QC Lot identification

Sample Date 10/1/07	Extraction Date 10/2/07	Analysis Date 10/2/07	QC Lot: 1002078260-S
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Surrogate Compound % Recovery, QC Lot identification

1,2-Dichloroethane-d4 79.9	Toluene-d8 43.4*	4-Bromofluorobenzene 37.1*
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MDL = Analytical Method Detection Limit.

ND = Analyte of interest was not detected at the laboratory determined Analytical Method Detection Limit

* Surrogate recoveries were low see narrative

QC LOT INFORMATION /VOLATILE ORGANIC COMPOUNDS

QC Lot: 1002078260-S

Extraction Date: 10/2/07

Analysis Date: 10/2/07

Spike
Sample

File ID : V-002.D
Sample : SOIL LCS

Compound	Sample Conc	Spike Added	Spike Res	Spike %Rec	QC Limits % Rec
Dichlorodifluorometh	0.0	100	141	141#	70-130
Chloromethane	0.0	100	91	91	70-130
Vinyl chloride	0.0	100	40	40#	70-130
Bromomethane	0.0	100	67	67#	70-130
Chloroethane	0.0	100	79	79	70-130
Trichlorofluorometha	0.0	100	125	125	70-130
1,1-Dichloroethene	0.0	100	134	134#	70-130
Methylene chloride	0.0	100	138	138	70-130
trans-1,2-Dichloroet	0.0	100	134	134#	70-130
cis-1,2-Dichloroethe	0.0	100	124	124	70-130
1,1-Dichloroethane	0.0	100	128	128	70-130
Chloroform	0.0	100	130	130	70-130
1,2-Dichloroethane	0.0	100	127	127	70-130
2,2-Dichloropropane	0.0	100	111	111	70-130
1,1,1-Trichloroethan	0.0	100	110	110	70-130
1,1-Dichloropropene	0.0	100	110	110	70-130
Benzene	0.0	100	109	109	70-130
Carbon tetrachloride	0.0	100	103	103	70-130
Trichloroethene	0.0	100	95	95	70-130
Dibromomethane	0.0	100	103	103	70-130
1,2-dichloropropane	0.0	100	108	108	70-130
Bromodichloromethane	0.0	100	109	109	70-130
cis-1,3-Dichloroprop	0.0	100	110	110	70-130
trans-1,3-Dichloropr	0.0	100	108	108	70-130
1,1,2-Trichloroethan	0.0	100	97	97	70-130
1,3-Dichloropropane	0.0	100	109	109	70-130
Chlorodibromomethane	0.0	100	93	93	70-130
1,2-Dibromoethane (E	0.0	100	95	95	70-130
Bromoform	0.0	100	74	74	70-130
Toluene	0.0	100	108	108	70-130
Tetrachloroethene	0.0	100	88	88	70-130
Chlorobenzene	0.0	100	96	96	70-130
1,1,1,2-Tetrachloroe	0.0	100	91	91	70-130
Ethylbenzene	0.0	100	97	97	70-130
m,p-xylene	0.0	200	196	98	70-130
o-Xylene	0.0	100	104	104	70-130
Styrene	0.0	100	101	101	70-130
1,1,2,2-Tetrachloroe	0.0	100	96	96	70-130
Isopropylbenzene	0.0	100	111	111	70-130
1,2,3-Trichloropropa	0.0	100	95	95	70-130
Bromobenzene	0.0	100	88	88	70-130
2-Chlorotoluene	0.0	100	103	103	70-130
n-Propylbenzene	0.0	100	105	105	70-130
4-Chlorotoluene	0.0	100	119	119	70-130
1,3,5-Trimethylbenze	0.0	100	114	114	70-130
tert-Butylbenzene	0.0	100	105	105	70-130

QC LOT INFORMATION /VOLATILE ORGANIC COMPOUNDS

QC Lot: 1002078260-S

Extraction Date: 10/2/07

Analysis Date: 10/2/07

1,2,4-Trimethylbenze	0.0	100	107	107	70-130
1,3-Dichlorobenzene	0.0	100	94	94	70-130
sec-Butylbenzene	0.0	100	109	109	70-130
1,4-Dichlorobenzene	0.0	100	93	93	70-130
p-Isopropyltoluene	0.0	100	105	105	70-130
1,2-Dichlorobenzene	0.0	100	95	95	70-130
n-Butylbenzene	0.0	100	112	112	70-130
1,2-Dibromo-3-chloro	0.0	100	99	99	70-130
1,2,4-Trichlorobenze	0.0	100	77	77	70-130
Naphthalene	0.7	100	78	77	70-130
Hexachlorobutadiene	0.0	100	62	62#	70-130
1,2,3-Trichlorobenze	0.0	100	77	77	70-130

Volatile Organic Compounds

Field ID: **MB**

Laboratory ID:

% Moisture:

Dilution: **1**

Analysis EPA Method 8260B	Extraction Method 5035	Matrix Soil	Instrument GC-MS	Analyst JM
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Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)	Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)
Dichlorodifluoromethane	ND	0.100	1,3-Dichloropropane	ND	0.100
Chloromethane	ND	0.100	Chlorodibromomethane	ND	0.100
Vinyl chloride	ND	0.100	1,2-Dibromoethane(EDB)	ND	0.100
Bromomethane	ND	0.100	Bromoform	ND	0.100
Chloroethane	ND	0.250	2-Hexanone (MBK)	ND	0.500
Trichlorofluoromethane	ND	0.100	Toluene	ND	0.100
Acetone	ND	0.750	4-Methyl-2-Pentanone	ND	0.500
1,1-Dichloroethene	ND	0.100	Tetrachloroethene	ND	0.100
Acrylonitrile	ND	0.500	Chlorobenzene	ND	0.100
Iodomethane	ND	0.250	1,1,1,2-Tetrachloroethane	ND	0.100
Methylene chloride	ND	0.500	Ethylbenzene	ND	0.100
Carbon disulfide	ND	0.100	m,p-Xylene	ND	0.100
trans-1,2-Dichloroethene	ND	0.100	o-Xylene	ND	0.100
Acrolein	ND	0.500	Styrene	ND	0.100
cis-1,2-Dichloroethene	ND	0.100	1,1,2,2-Tetrachloroethane	ND	0.100
Methyl-t-butyl ether (MtBE)	ND	0.100	Isopropylbenzene	ND	0.100
1,1-Dichloroethane	ND	0.100	1,2,3-Trichloropropane	ND	0.100
Chloroform	ND	0.100	Bromobenzene	ND	0.100
1,2-Dichloroethane	ND	0.100	2-Chlorotoluene	ND	0.100
Vinyl acetate	ND	0.500	n-Propylbenzene	ND	0.100
2-Butanone (MEK)	ND	0.500	4-Chlorotoluene	ND	0.100
2,2-Dichloropropane	ND	0.100	1,3,5-Trimethylbenzene	ND	0.100
1,1,1-Trichloroethane	ND	0.100	tert-Butylbenzene	ND	0.100
1,1-Dichloropropene	ND	0.100	1,2,4-Trimethylbenzene	ND	0.100
Benzene	ND	0.100	1,3-Dichlorobenzene	ND	0.100
Carbon Tetrachloride	ND	0.100	sec-Butylbenzene	ND	0.100
Trichloroethene	ND	0.100	1,4-Dichlorobenzene	ND	0.100
Dibromomethane	ND	0.100	p- Isopropyltoluene	ND	0.100
1,2-dichloropropane	ND	0.100	1,2-Dichlorobenzene	ND	0.100
Bromodichloromethane	ND	0.100	n-Butylbenzene	ND	0.100
2-Chloroethyl vinyl ether	ND	0.250	1,2-Dibromo-3-chloropropane	ND	0.250
cis-1,3-Dichloropropene	ND	0.100	1,2,4-Trichlorobenzene	ND	0.100
trans-1,3-Dichloropropene	ND	0.100	Naphthalene	ND	0.250
1,1,2-Trichloroethane	ND	0.100	Hexachlorobutadiene	ND	0.500
			1,2,3-Trichlorobenzene	ND	0.100

Sample Analysis Information, QC Lot identification

Sample Date	Extraction Date	Analysis Date	QC Lot:
	10/2/07	10/2/07	1002078260-S

Surrogate Compound % Recovery, QC Lot identification

1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
104	93.7	87.9

MDL = Analytical Method Detection Limit.

ND = Analyte of interest was not detected at the laboratory determined Analytical Method Detection Limit