



GeoInsight®

Environmental Strategy & Engineering
Practical in Nature

June 14, 2013

GeoInsight Project 7034-000

Via E-mail: GeneralPermit.Dewatering@epa.gov

Environmental Protection Agency – Region 1
Office of Ecosystem Protection (OEP06-3)
Dewater General Permit NOI Processing
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: Notice of Intent
NPDES Dewatering General Permit
Yawkey Way Extension and Improvements
Boston, Massachusetts

To Whom It May Concern:

GeoInsight, Inc. (GeoInsight) prepared this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Dewatering General Permit (DGP), Massachusetts General Permit (MAG070000) at the request of R. Zoppo Corp. (Zoppo). This NOI was prepared in accordance with the general requirements of the NPDES DGP under Federal Register dated October 7, 2008 and related guidance documentation provided by the U.S. Environmental Protection Agency (EPA). A completed NOI form is provided in Attachment A.

1.0 SITE INFORMATION

This NOI has been prepared to address the treatment and potential discharge of dewatering effluent during the excavation associated with the rehabilitation and construction of roadways and subsurface utilities. The project generally encompasses Yawkey Way, Maitland Street, and Overland Street (the Site). The geographic location of the Site is depicted on the Site Locus presented as Figure 1 and the location of pertinent existing Site features are shown on the Site Plan presented as Figure 2. The vicinity of the project Site is a heavily urbanized mix of office/commercial, industrial, and residential buildings, the Fenway Park facility, and roadway/parking areas. The specific Site areas generally consist of an existing paved roadways and parking lots. The areas are located just to the southeast and northwest of Brookline Avenue.

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2.0 DISCHARGE AND RECEIVING WATER INFORMATION

Some excavation dewatering will likely be necessary during localized excavations associated with removal and/or installation of underground utilities. Urban fill is expected to be present within the excavation areas and may influence groundwater quality. This DGP is intended to provide a controlled method of discharging treated water from the project Site to local City of Boston storm drain infrastructure. However, recharge of ground water on Site may also be pursued depending upon quantities and construction conditions/phasing at the time dewatering is required.

Potential influent concentrations were evaluated based upon a groundwater sample collected from an exploratory test pit within the Site area on June 7, 2013. The sample was analyzed for:

- VOCs by Method 8260B;
- Extractable Petroleum Hydrocarbons (Target Ranges and PAHs) by the MADEP Method;
- Priority Pollutant Metals by Method 6000/7000 series;
- and
- PCBs by Method 8082

The laboratory data report for the sample is provided in Attachment B. The analytical results indicated several elevated metals above laboratory detection limits, however the samples were not field filtered and it is likely that after settling within the frac tank, the metals concentrations in the effluent will be significantly lower than those identified during the field sample collection.

During excavation and construction-related activities, the collected water will be treated to remove suspended solids, and, if necessary, VOCs, metals, and PAHs. The proposed treatment system is shown in the process flow diagram on Figure 3. The treated water will be discharged to a municipal storm drain located in Beacon Street. City of Boston drain system maps indicating the catch basin that will receive discharge and the ultimate outfall location are included in Attachment C. Discharged will be directed into stormwater catch basins CB 94 located on Brookline Avenue, and the outfall will be to No. SDO 042 (from below Deerfield Street). The nearest adjacent surface water body (Charles River), is illustrated on Figure 1. The Charles River is approximately 1,600 feet to the north of the project Site.

3.0 CONSULTATION WITH FEDERAL SERVICES

GeoInsight reviewed online electronic data viewers and databases from the Massachusetts Geographical Information System (MassGIS), the Massachusetts Division of Fisheries and Wildlife (MassWildlife; Natural Heritage and Endangered Species Program), and the U.S. National Parks Service National Historic Places (NPS). Based on this review, neither the Site nor the points where the proposed discharge reaches the receiving surface water body are Areas of Critical Environmental Concern (ACEC), Habitats of Rare Wetland Wildlife, Habitats of Rare Species or Estimated Habitats of Rare Wildlife, or listed as a National Historic Place. The Site and surroundings are heavily urban (commercial, industrial, and some residential) and have been urban since the early 1900s. A copy of the most current Suffolk county endangered species list is in Attachment D. Based on this information, specific consultation with federal and/or state officials was deemed not to be necessary for this permit application.



4.0 COVERAGE UNDER THE DGP

It is GeoInsight's opinion that the proposed discharge is eligible for coverage under the NPDES DGP based on the requirements of the NPDES DGP and our evaluation of the available site-specific information. At the request of Zoppo, GeoInsight is requesting coverage under the NPDES DGP for the intermittent discharge of recovered water during soil excavation and construction activities at the Site to storm drains and eventually surface water (Charles River).

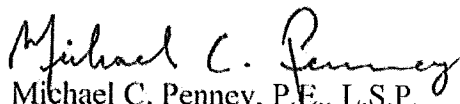
The enclosed NOI form and attachments provide required information on the general Site conditions, discharge, treatment system, receiving water, and evaluation of federal services databases. For this project, Zoppo will be the Operator and have control over the construction activities, including the ability to make modifications to those activities to comply with plans and specifications for the project (as issued by the MassDOT). Zoppo will be responsible for directing the implementation of day-to-day operations and activities that are necessary to ensure compliance with the NPDES DGP, including operation, inspection, monitoring, and reporting.

Discharge of treated water may commence as soon as authorization from the EPA and the Boston Water and Sewer Commission (BWSC) is received, although recharge to on-site infiltration pits is also possible, as described previously. Based upon research of the Massachusetts Department of Environmental Protection on-line database, the Site is not listed as a Massachusetts Contingency Plan disposal site, nor does it include disposal sites within the limits of the construction. Therefore, completion and submittal of the MADEP Bureau of Resource Protection Water Management (BRP WM 10) form and fee payment to the Commonwealth of Massachusetts are required (included in Attachment E).

Attachment F includes Best Management Practices intended to guide the proper use and operation of the dewatering, treatment, and discharge activities. The BWSC Dewatering Discharge Permit Application Form is included in Attachment G.

If you have questions or comments regarding this submittal, please call us at 603-314-0820.

Sincerely,
GEOINSIGHT, INC.


Michael C. Penney, P.E., L.S.P.
Senior Engineer/Principal

Attachments

cc: Robert Kubit, Division of Watershed Management, MassDEP
Francis McLaughlin, City of Boston, BWSC
Chris McManus, R. Zoppo Corp.

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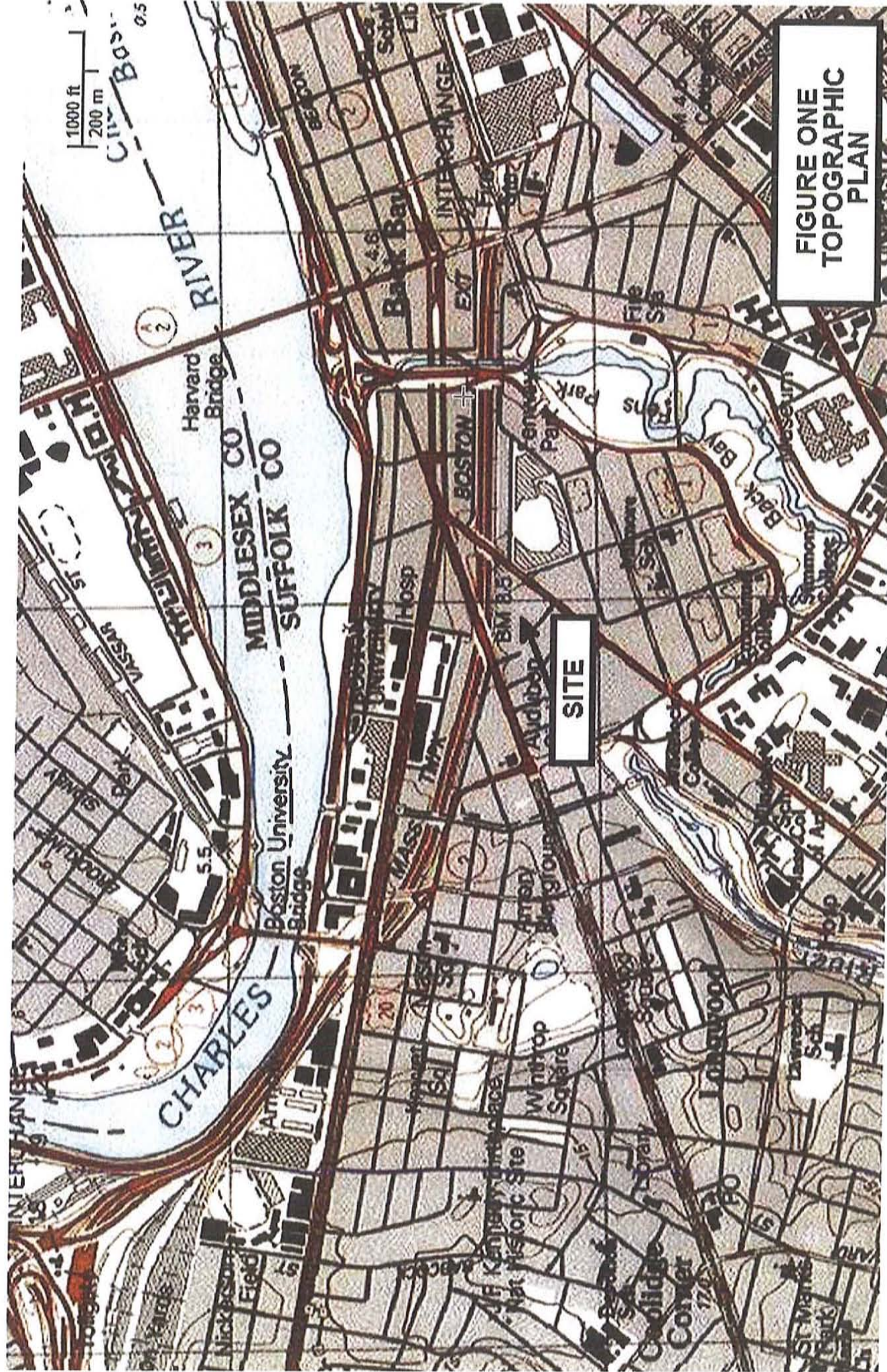
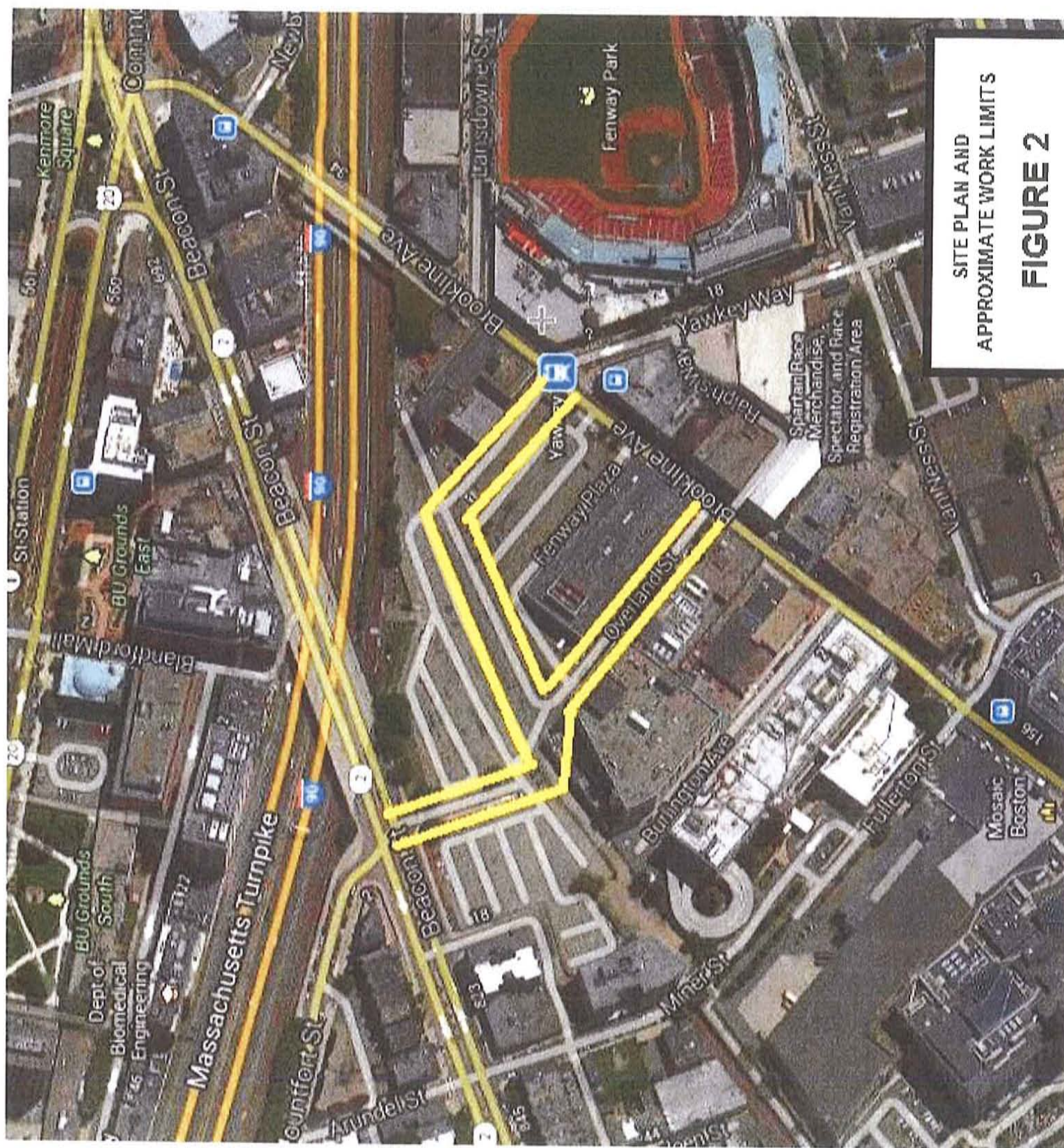
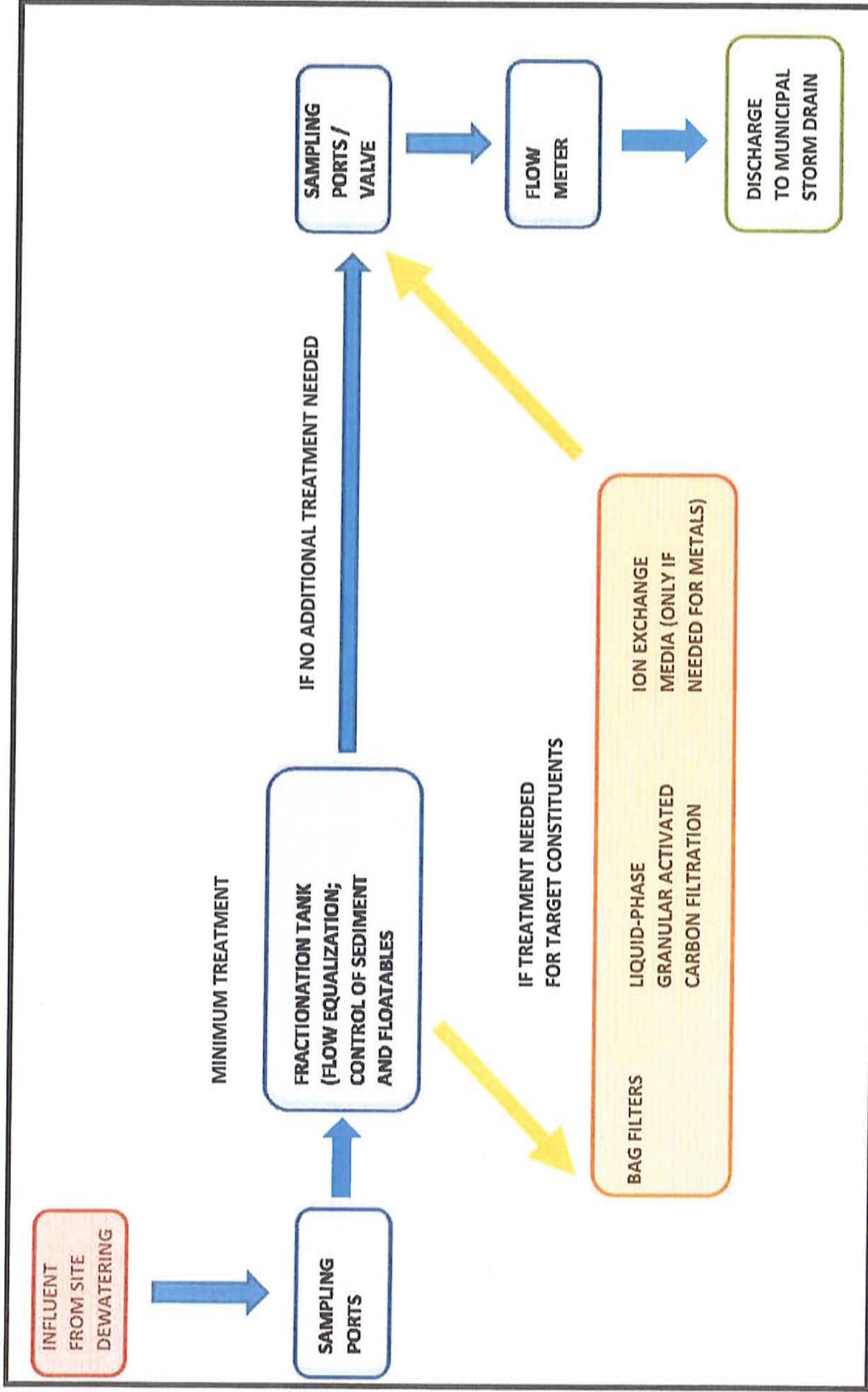


FIGURE ONE
TOPOGRAPHIC
PLAN



**SITE PLAN AND
APPROXIMATE WORK LIMITS**

FIGURE 2



CLIENT:	R ZOPPO CORP	
PROJECT:	YAWKEY WAY ROADWAY EXTENSION	
	BOSTON, MA	
CONSTRUCTION DEWATERING GENERAL PERMIT GROUNDWATER TREATMENT PROCESS DIAGRAM		



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FIGURE 3

ATTACHMENT A

NOI FORM

II. Suggested Notice of Intent (NOD Form)

1. General facility information. Please provide the following information about the facility.

a) Name of facility: <u>Yawkey Way Roadway Extension and Reconstruction</u>		Mailing Address for the Facility: <u>Facility has not mailing address. Use address for R. Zoppo Corp. provided below.</u>	
b) Location Address of the Facility (if different from mailing address): <u>Generally located at the intersection of Maitland and Overland Streets (this is the expected location of the temporary construction trailer)</u>		Facility Location longitude: <u>71° 6' 1'</u> latitude: <u>42° 20' 49'</u>	Type of Business: <u>Urban Streets and Parking Lots</u> Facility SIC codes: <u>1611 (for planned activity)</u>
c) Name of facility owner: <u>Massachusetts DOT</u> Owner's Rep: <u>Fritz Dubuisson MassDOT Resident Engineer (fritz.dubuisson@state.me.us)</u> Owner's Tel #: <u>(617) 973-7695 or 781-853-8870</u> Owner's Fax #: <u>857-368-0601</u> Address of owner (if different from facility address) <u>10 Park Plaza, Suite 4160</u> <u>Boston, MA 02116</u>			
Legal name of Operator, if not owner: <u>R. Zoppo Corp.</u>			
Operator Contact Name: <u>Paul Scally, Project Superintendent</u>			
Operator Tel Number: <u>781-344-8822</u> Fax Number: <u>781-344-7382</u>			
Operator's email: <u>pscally@zoppo.com</u>			
Operator Address (if different from owner) <u>160 Old Maple Street</u> <u>Stoughton, MA 02072</u>			
d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? <u>Yes</u>			
e) Check Yes or No for the following:			
1. Has a prior NPDES permit been granted for the discharge? Yes <u> </u> No <u>X</u> If Yes, Permit Number: <u> </u>			
2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes <u>X</u> No <u> </u>			
3. Is the facility covered by an individual NPDES permit? Yes <u> </u> No <u>X</u> If Yes, Permit Number <u> </u> Facility is covered by existing NPDES CGP <u>MAR12A167</u>			
4. Is there a pending application on file with EPA for this discharge? Yes <u>X</u> No <u> </u> If Yes, date of submittal: <u>June 14, 2013</u>			

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

a) Name of receiving water into which discharge will occur: Charles River (Outfall No. SDO 042)
State Water Quality Classification: Class B Freshwater: X Marine Water: _____

b) Describe the discharge activities for which the owner/applicant is seeking coverage:

1. Construction dewatering of groundwater intrusion and/or storm water accumulation.
2. Short-term or long-term dewatering of foundation sumps.
3. Other.

c) Number of outfalls 1

For each outfall:

d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow 60,000 GPD
Average Monthly Flow 10,000 GPD

e) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 6.7 Min pH _____

f) Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit. Groundwater

g) What treatment does the wastewater receive prior to discharge? Refer to Treatment System Schematic Figure 3 (minimum treatment will be settling within a fractionation tank)

h) Is the discharge continuous? Yes _____ No X If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B) Intermittent
If (P), number of days or months per year of the discharge NA and the specific months of discharge NA;
If (I), number of days/year there is a discharge Approx. 150
Is the discharge temporary? Yes X No _____
If yes, approximate start date of dewatering June 21, 2013 approximate end date of dewatering November 15, 2014

i) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. 42.35111 lat. -71.09765 Outfall 2: long. _____ lat. _____; Outfall 3: long. _____ lat. _____.

j) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations NA cfs
(See Appendix VII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

k) Does the discharge occur in an ACEC? Yes _____ No X
If yes, provide the name of the ACEC:

3. Contaminant Information

- a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC₅₀ in percent for aquatic organism(s)). Treatment chemicals not anticipated
- b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge. None known to exist

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendices III and IV. In addition, respond to the following questions.

- a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes _____ No X
- b) Has any consultation with the federal services been completed? Yes X* No _____ (*online research of federal databases performed)
- c) Is consultation underway? Yes _____ No X
- d) What were the results of the consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service (check one): a "no jeopardy" opinion _____ or written concurrence X on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.
- e) Which of the five eligibility criteria listed in Appendix 2, Section B (A,B,C,D, or E) have you met? A
- f) Please attach a copy of the most current federal listing of endangered and threatened species, found at USF&W website. Attached

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

- a) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes _____ No X
- b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No X If yes, attach the results of the consultation(s).
- c) Which of the three National Historic Preservation Act requirements listed in Appendix 3, Section C (1,2 or 3) have you met? 2

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

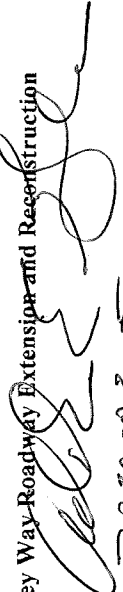
7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or

dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: Yawkey Way Roadway Extension and Reconstruction

Operator signature: 

Title:

Vice President

Date:

6/17/13

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

ATTACHMENT B
LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT



Wednesday, June 12, 2013

Chris McManus
R. Zoppo Corp
160 Old Maple St
Stoughton, MA 02072

GeoLabs, Inc.
45 Johnson Lane
Braintree MA 02184
Tele: 781 848 7844
Fax: 781 848 7811

TEL: (781) 953-0290

FAX: (781) 344-7382

Project: 457

Location: Yawkey Way Extension

Order No.: 1306059

Dear Chris McManus:

GeoLabs, Inc. received 1 sample(s) on 6/7/2013 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted. All data for associated QC met method or laboratory specifications, except where noted in the Case Narrative.

Analytical methods and results meet requirements of 310CMR 40.1056(J) as per MADEP Compendium of Analytical Methods (CAM).

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Mick", is written over a light blue horizontal line.

David Mick
Laboratory Director

For current certifications, please visit our website at www.geolabs.com

Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252)

Accredited in Accordance with NELAC

MassDEP Analytical Protocol Certification Form					
Laboratory Name: GeoLabs, Inc.			Project #:		
Project Location: Yawkey Way Extension			RTN:		
This Form provides certification for the following data set: 1306059-001					
Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other					
CAM Protocol (check all that apply below):					
8260 VOC CAM II A ☒	7470/7471 Hg CAM III B ☒	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☒	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☒	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☒	6020 Metals CAM III D ☐	8082 PCB CAM V A ☒	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐	
Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				☒ Yes ☐ No
D	Does the laboratory report comply with all reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				☒ Yes ☐ No
E	VPH, EPH, APH and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications.) b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				☒ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)				☒ Yes ☐ No
Responses to Questions G, H, and I below are required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				☒ Yes ☐ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2) (k) and WSC-07-350.					
H	Were all QC performance standards in specified in the CAM protocol(s) achieved?				☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				☐ Yes ☒ No ¹
¹ All negative responses must be addressed in an attached laboratory 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: <u>David Mick</u>			Position: <u>Laboratory Director</u>		
Printed Name: <u>David Mick</u>			Date: <u>06/12/13</u>		

Date: 12-Jun-13

CLIENT: R. Zoppo Corp
Project: 457
Lab Order: 1306059

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

Select metals reported via 6010, per client request.

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. The following analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples.:

8260 LCS/LCSD % Recoveries are outside of recovery limits- see QC pages.

SIGNATURE:



LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/12/13

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
Project: 457
Lab Order: 1306059

CASE NARRATIVE

EPH Methods

Method for Ranges: MADEP EPH 04-1.1
Method for Target Analytes: 8270 GC/MS

Carbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

Were all QA/QC procedures REQUIRED by the EPH Method followed? YES

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

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

SIGNATURE:



LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/12/13

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT**Reported Date:** 12-Jun-13

CLIENT:	R. Zoppo Corp	Client Sample ID:	Yawkey Way #1
Lab Order:	1306059	Tag Number:	
Project:	457	Collection Date:	6/7/2013 1:30:00 PM
Lab ID:	1306059-001A	Date Received:	6/7/2013
		Matrix:	GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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POLYCHLORINATED BIPHENYLS - SW8082**Analyst:** KG**Prep Method:** (SW3510B)**Prep Date:** 6/10/2013 9:15:22 AM

Aroclor 1016	ND	0.284		µg/L	1	6/10/2013
Aroclor 1221	ND	0.284		µg/L	1	6/10/2013
Aroclor 1232	ND	0.284		µg/L	1	6/10/2013
Aroclor 1242	ND	0.284		µg/L	1	6/10/2013
Aroclor 1248	ND	0.284		µg/L	1	6/10/2013
Aroclor 1254	ND	0.284		µg/L	1	6/10/2013
Aroclor 1260	ND	0.284		µg/L	1	6/10/2013
Surr: Decachlorobiphenyl Sig 1	59.5	30-150		%REC	1	6/10/2013
Surr: Decachlorobiphenyl Sig 2	62.6	30-150		%REC	1	6/10/2013
Surr: Tetrachloro-m-Xylene Sig 1	73.9	30-150		%REC	1	6/10/2013
Surr: Tetrachloro-m-Xylene Sig 2	79.8	30-150		%REC	1	6/10/2013

Qualifiers:	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT**Reported Date:** 12-Jun-13**CLIENT:** R. Zoppo Corp**Client Sample ID:** Yawkey Way #1**Lab Order:** 1306059**Tag Number:****Project:** 457**Collection Date:** 6/7/2013 1:30:00 PM**Lab ID:** 1306059-001B**Date Received:** 6/7/2013**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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EPH RANGES - MADEP EPH**Analyst:** KG**Prep Method:** (eph_Wpr)**Prep Date:** 6/10/2013 11:14:36 AM

Adjusted C11-C22 Aromatics	ND	104		µg/L	1	6/12/2013
C09-C18 Aliphatics	ND	104		µg/L	1	6/12/2013
C19-C36 Aliphatics	ND	104		µg/L	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	104		µg/L	1	6/12/2013
Surr: 1-Chlorooctadecane	45.2	40-140		%REC	1	6/12/2013
Surr: o-Terphenyl	85.8	40-140		%REC	1	6/12/2013

EPH TARGET ANALYTES - MADEP EPH**Analyst:** Jsi**Prep Method:** (eph_Wpr)**Prep Date:** 6/10/2013 11:14:36 AM

Naphthalene	ND	1.04		µg/L	1	6/11/2013
2-Methylnaphthalene	ND	1.04		µg/L	1	6/11/2013
Acenaphthene	ND	1.04		µg/L	1	6/11/2013
Phenanthrene	ND	1.04		µg/L	1	6/11/2013
Acenaphthylene	ND	1.04		µg/L	1	6/11/2013
Fluorene	ND	1.04		µg/L	1	6/11/2013
Anthracene	ND	1.04		µg/L	1	6/11/2013
Fluoranthene	ND	1.04		µg/L	1	6/11/2013
Pyrene	ND	1.04		µg/L	1	6/11/2013
Benzo(a)Anthracene	ND	0.417		µg/L	1	6/11/2013
Chrysene	ND	1.04		µg/L	1	6/11/2013
Benzo(b)Fluoranthene	ND	0.208		µg/L	1	6/11/2013
Benzo(k)Fluoranthene	ND	0.208		µg/L	1	6/11/2013
Benzo(a)Pyrene	ND	0.198		µg/L	1	6/11/2013
Indeno(1,2,3-cd)Pyrene	ND	0.417		µg/L	1	6/11/2013
Dibenz(a,h)Anthracene	ND	0.417		µg/L	1	6/11/2013
Benzo(g,h,i)Perylene	ND	1.04		µg/L	1	6/11/2013
Total PAH Target Concentration	ND	0.208		µg/L	1	6/11/2013
Surr: 2,2-Difluorobiphenyl	54.5	40-140		%REC	1	6/11/2013
Surr: 2-Fluorobiphenyl	51.6	40-140		%REC	1	6/11/2013

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
S Spike Recovery outside recovery limits

BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT

Reported Date: 12-Jun-13

CLIENT:	R. Zoppo Corp	Client Sample ID:	Yawkey Way #1
Lab Order:	1306059	Tag Number:	
Project:	457	Collection Date:	6/7/2013 1:30:00 PM
Lab ID:	1306059-001C	Date Received:	6/7/2013
		Matrix:	GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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TOTAL METALS BY ICP - SW6010B

Analyst: QS

Prep Method: (SW3010A)

Prep Date: 6/10/2013 3:45:02 PM

Antimony	0.0120	0.00600	mg/L	1	6/10/2013
Arsenic	ND	0.0100	mg/L	1	6/10/2013
Beryllium	ND	0.00100	mg/L	1	6/10/2013
Cadmium	ND	0.00400	mg/L	1	6/10/2013
Chromium	ND	0.0700	mg/L	1	6/10/2013
Copper	0.0400	0.0400	mg/L	1	6/10/2013
Lead	0.0240	0.0100	mg/L	1	6/10/2013
Nickel	ND	0.100	mg/L	1	6/10/2013
Selenium	ND	0.0500	mg/L	1	6/10/2013
Silver	ND	0.00200	mg/L	1	6/10/2013
Thallium	ND	0.0100	mg/L	1	6/10/2013
Zinc	ND	0.180	mg/L	1	6/10/2013

TOTAL MERCURY - 7470A

Analyst: EC

Prep Method: (SW7470A/E245.1)

Prep Date: 6/11/2013 3:28:49 PM

Mercury	ND	0.000200	mg/L	1	6/11/2013
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Qualifiers:	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT**Reported Date:** 12-Jun-13

CLIENT:	R. Zoppo Corp	Client Sample ID:	Yawkey Way #1
Lab Order:	1306059	Tag Number:	
Project:	457	Collection Date:	6/7/2013 1:30:00 PM
Lab ID:	1306059-001D	Date Received:	6/7/2013
		Matrix:	GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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PH - SM4500-H-B**Analyst:** WFR**Prep Method:****Prep Date:**

pH	6.7	0	pH units	1	6/7/2013
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NOTES:

taken at 20.8 deg.C

Qualifiers:	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT

Reported Date: 12-Jun-13

CLIENT: R. Zoppo Corp

Client Sample ID: Yawkey Way #1

Lab Order: 1306059

Tag Number:

Project: 457

Collection Date: 6/7/2013 1:30:00 PM

Lab ID: 1306059-001E

Date Received: 6/7/2013

Matrix: GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS - SW8260B

Analyst: ZYZ

Prep Method:	Prep Date:					
1,1,1,2-Tetrachloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,1,1-Trichloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,1,2,2-Tetrachloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,1,2-Trichloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,1-Dichloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,1-Dichloroethene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,1-Dichloropropene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2,3-Trichlorobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2,3-Trichloropropane	ND	5.00		µg/L	1	6/12/2013 3:16:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2,4-Trimethylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2-Dibromo-3-Chloropropane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2-Dibromoethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2-Dichlorobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2-Dichloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,2-Dichloropropane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,3,5-Trimethylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,3-Dichlorobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,3-Dichloropropane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
1,4-Dichlorobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
2-Butanone	ND	10.0		µg/L	1	6/12/2013 3:16:00 AM
2-Chloroethyl Vinyl Ether	ND	5.00		µg/L	1	6/12/2013 3:16:00 AM
2-Chlorotoluene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
2-Hexanone	ND	10.0		µg/L	1	6/12/2013 3:16:00 AM
4-Chlorotoluene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
4-Isopropyltoluene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
4-Methyl-2-Pentanone	ND	5.00		µg/L	1	6/12/2013 3:16:00 AM
Acetone	ND	50.0		µg/L	1	6/12/2013 3:16:00 AM
Acrolein	ND	50.0		µg/L	1	6/12/2013 3:16:00 AM
Acrylonitrile	ND	50.0		µg/L	1	6/12/2013 3:16:00 AM
Benzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Bromobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Bromochloromethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Bromodichloromethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT

Reported Date: 12-Jun-13

CLIENT:	R. Zoppo Corp	Client Sample ID:	Yawkey Way #1
Lab Order:	1306059	Tag Number:	
Project:	457	Collection Date:	6/7/2013 1:30:00 PM
Lab ID:	1306059-001E	Date Received:	6/7/2013
		Matrix:	GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS - SW8260B

Analyst: ZYZ

Prep Method:

Prep Date:

Bromoform	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Bromomethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Carbon Disulfide	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Carbon Tetrachloride	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Chlorobenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Chloroethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Chloroform	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Chloromethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
cis-1,2-Dichloroethene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
cis-1,3-Dichloropropene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Dibromochloromethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Dibromomethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Dichlorodifluoromethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Ethylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Hexachlorobutadiene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Isopropylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Methyl Tert-Butyl Ether	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Methylene Chloride	ND	5.00		µg/L	1	6/12/2013 3:16:00 AM
Naphthalene	ND	10.0		µg/L	1	6/12/2013 3:16:00 AM
n-Butylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
n-Propylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
sec-Butylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Styrene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
tert-Butylbenzene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Tetrachloroethene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Toluene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
trans-1,2-Dichloroethene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
trans-1,3-Dichloropropene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Trichloroethene	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Trichlorofluoromethane	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Vinyl Chloride	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Xylenes, Total	ND	2.00		µg/L	1	6/12/2013 3:16:00 AM
Surr: 1,2-Dichloroethane-d4	109	70-130		%REC	1	6/12/2013 3:16:00 AM
Surr: 4-Bromofluorobenzene	89.1	70-130		%REC	1	6/12/2013 3:16:00 AM
Surr: Dibromofluoromethane	102	70-130		%REC	1	6/12/2013 3:16:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT**Reported Date:** 12-Jun-13

CLIENT:	R. Zoppo Corp	Client Sample ID:	Yawkey Way #1
Lab Order:	1306059	Tag Number:	
Project:	457	Collection Date:	6/7/2013 1:30:00 PM
Lab ID:	1306059-001E	Date Received:	6/7/2013
		Matrix:	GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS - SW8260B**Analyst:** ZYZ

Prep Method:	Prep Date:
Surr: Toluene-d8	101 70-130 %REC 1 6/12/2013 3:16:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

GeoLabs, Inc.
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ANALYTICAL QC SUMMARY REPORT

Date: 12-Jun-13

CLIENT: R. Zoppo Corp

Work Order: 1306059

Project: 457

TestCode: 6010B_W

Sample ID: MBLK-22436		SampType: MBLK		TestCode: 6010B_W		Units: mg/L		Prep Date: 6/10/2013		RunNo: 50593	
Client ID: ZZZZZ		Batch ID: 22436		TestNo: SW6010B		(SW3010A)		Analysis Date: 6/10/2013		SeqNo: 573687	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.00600									
Arsenic	ND	0.0133									
Beryllium	ND	0.00100									
Cadmium	ND	0.00400									
Chromium	ND	0.0700									
Copper	ND	0.0200									
Lead	ND	0.0100									
Nickel	ND	0.100									
Selenium	ND	0.0500									
Silver	ND	0.00200									
Thallium	ND	0.0100									
Zinc	ND	0.180									

Sample ID: LCS-22436	Sample Type: LCS	TestCode: 6010B_W	Units: mg/L	Prep Date: 6/10/2013	RunNo: 50593						
Client ID: ZZZZZ	Batch ID: 22436	TestNo: SW6010B	(SW3010A)	Analysis Date: 6/10/2013	SeqNo: 573685						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.900	0.00600	2	0	95.0	80	120				
Arsenic	1.933	0.0133	2	0	96.6	80	120				
Beryllium	2.047	0.00100	2	0	102	80	120				
Cadmium	1.910	0.00400	2	0	95.5	80	120				
Chromium	1.927	0.0700	2	0	96.4	80	120				
Copper	2.009	0.0200	2	0	100	80	120				
Lead	1.874	0.0100	2	0	93.7	80	120				
Nickel	1.938	0.100	2	0	96.9	80	120				
Selenium	1.865	0.0500	2	0	93.2	80	120				

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 6010B_W

Sample ID: LCS-22436	Sample Type: LCS	TestCode: 6010B_W	Units: mg/L	Prep Date: 6/10/2013	RunNo: 50593						
Client ID: ZZZZZ	Batch ID: 22436	TestNo: SW6010B	(SW3010A)	Analysis Date: 6/10/2013	SeqNo: 573685						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.4910	0.00200	0.5	0	98.2	80	120				
Thallium	1.928	0.0100	2	0	96.4	80	120				
Zinc	1.951	0.180	2	0	97.6	80	120				

Sample ID: LCSD-22436		SampType: LCSD		TestCode: 6010B_W		Units: mg/L		Prep Date: 6/10/2013		RunNo: 50593	
Client ID: ZZZZZ		Batch ID: 22436		TestNo: SW6010B		{SW3010A}		Analysis Date: 6/10/2013		SeqNo: 573686	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.936	0.00600	2	0	96.8	80	120	1.9	1.88	20	
Arsenic	1.940	0.0133	2	0	97.0	80	120	1.933	0.361	20	
Beryllium	2.065	0.00100	2	0	103	80	120	2.047	0.876	20	
Cadmium	1.906	0.00400	2	0	95.3	80	120	1.91	0.210	20	
Chromium	1.928	0.0700	2	0	96.4	80	120	1.927	0.0519	20	
Copper	2.045	0.0200	2	0	102	80	120	2.009	1.78	20	
Lead	1.892	0.0100	2	0	94.6	80	120	1.874	0.956	20	
Nickel	1.940	0.100	2	0	97.0	80	120	1.938	0.103	20	
Selenium	1.881	0.0500	2	0	94.0	80	120	1.865	0.854	20	
Silver	0.4930	0.00200	0.5	0	98.6	80	120	0.491	0.407	20	
Thallium	1.951	0.0100	2	0	97.6	80	120	1.928	1.19	20	
Zinc	1.959	0.180	2	0	98.0	80	120	1.951	0.409	20	

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.
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CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8082_W

Sample ID: MB-22429	SampleType: mbik	TestCode: 8082_W	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50582						
Client ID: ZZZZZ	Batch ID: 22429	TestNo: SW8082	(SW3510B)	Analysis Date: 6/10/2013	SeqNo: 573567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016											

Aroclor 1016	ND	0.250									
Aroclor 1221	ND	0.250									
Aroclor 1232	ND	0.250									
Aroclor 1242	ND	0.250									
Aroclor 1248	ND	0.250									
Aroclor 1254	ND	0.250									
Aroclor 1260	ND	0.250									
Surr: Decachlorobiphenyl Sig 1	0.3543	0	0.5			70.9	30	150			
Surr: Decachlorobiphenyl Sig 2	0.3419	0	0.5			68.4	30	150			
Surr: Tetrachloro-m-Xylene Sig 1	0.3821	0	0.5			76.4	30	150			
Surr: Tetrachloro-m-Xylene Sig 2	0.3803	0	0.5			76.1	30	150			

Sample ID: LCS-22429	SampleType: Lcs	TestCode: 8082_W	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50582						
Client ID: ZZZZZ	Batch ID: 22429	TestNo: SW8082	(SW3510B)	Analysis Date: 6/10/2013	SeqNo: 573568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016											

Aroclor 1016	0.4018	0.250	0.5	0	80.4	40	140				
Aroclor 1260	0.4307	0.250	0.5	0	86.1	40	140				
Surr: Decachlorobiphenyl Sig 1	0.3421	0	0.5	0	68.4	30	150				
Surr: Decachlorobiphenyl Sig 2	0.3323	0	0.5	0	66.5	30	150				
Surr: Tetrachloro-m-Xylene Sig 1	0.3615	0	0.5	0	72.3	30	150				
Surr: Tetrachloro-m-Xylene Sig 2	0.3726	0	0.5	0	74.5	30	150				

Sample ID: LCS1-22429	Sample Type: Lcsd	TestCode: 8082_W	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50582						
Client ID: ZZZZZ	Batch ID: 22429	TestNo: SW8082	(SW3510B)	Analysis Date: 6/10/2013	SeqNo: 573569						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantization range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8082_W

Sample ID: LCS1-22429		SampType: Lcsd		TestCode: 8082_W		Units: µg/L		Prep Date: 6/10/2013		RunNo: 50582		
Client ID: ZZZZZ		Batch ID: 22429		TestNo: SW8082		(SW3510B)		Analysis Date: 6/10/2013		SeqNo: 573569		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Atroclor 1016		0.4543	0.250	0.5	0	90.9	40	140	0.4018	12.3	20	
Atroclor 1260		0.4470	0.250	0.5	0	89.4	40	140	0.4307	3.71	20	
Surr: Decachlorobiphenyl Sig 1		0.3669	0	0.5	0	73.4	30	150	0	0	0	
Surr: Decachlorobiphenyl Sig 2		0.3580	0	0.5	0	71.6	30	150	0	0	0	
Surr: Tetrachloro-m-Xylene Sig 1		0.3852	0	0.5	0	77.0	30	150	0	0	0	
Surr: Tetrachloro-m-Xylene Sig 2		0.3939	0	0.5	0	78.8	30	150	0	0	0	

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: MBLK	Sample Type: MBLK	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/12/2013	SeqNo: 574174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	2.00									
1,1,1-Trichloroethane	ND	2.00									
1,1,2,2-Tetrachloroethane	ND	2.00									
1,1,2-Trichloroethane	ND	2.00									
1,1-Dichloroethane	ND	2.00									
1,1-Dichloroethene	ND	2.00									
1,1-Dichloropropane	ND	2.00									
1,2,3-Trichlorobenzene	ND	2.00									
1,2,3-Trichloropropane	ND	5.00									
1,2,4-Trichlorobenzene	ND	2.00									
1,2,4-Trimethylbenzene	ND	2.00									
1,2-Dibromo-3-Chloropropane	ND	2.00									
1,2-Dibromoethane	ND	2.00									
1,2-Dichlorobenzene	ND	2.00									
1,2-Dichloroethane	ND	2.00									
1,2-Dichloropropane	ND	2.00									
1,3,5-Trimethylbenzene	ND	2.00									
1,3-Dichlorobenzene	ND	2.00									
1,3-Dichloropropane	ND	2.00									
1,4-Dichlorobenzene	ND	2.00									
2,2-Dichloropropane	ND	2.00									
2-Butanone	ND	10.0									
2-Chloroethyl Vinyl Ether	ND	5.00									
2-Chlorotoluene	ND	2.00									
2-Hexanone	ND	10.0									
4-Chlorotoluene	ND	2.00									
4-Isopropyltoluene	ND	2.00									
4-Methyl-2-Pentanone	ND	5.00									

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: MBLK	SampleType: MBLK	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/12/2013	SeqNo: 574174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	ND	50.0									
Acrolein	ND	50.0									
Acrylonitrile	ND	50.0									
Benzene	ND	2.00									
Bromobenzene	ND	2.00									
Bromochloromethane	ND	2.00									
Bromodichloromethane	ND	2.00									
Bromoform	ND	2.00									
Bromomethane	ND	2.00									
Carbon Disulfide	ND	2.00									
Carbon Tetrachloride	ND	2.00									
Chlorobenzene	ND	2.00									
Chloroethane	ND	2.00									
Chloroform	ND	2.00									
Chloromethane	ND	2.00									
cis-1,2-Dichloroethene	ND	2.00									
cis-1,3-Dichloropropene	ND	2.00									
Dibromochloromethane	ND	2.00									
Dibromomethane	ND	2.00									
Dichlorodifluoromethane	ND	2.00									
Ethylbenzene	ND	2.00									
Hexachlorobutadiene	ND	2.00									
Isopropylbenzene	ND	2.00									
Methyl Tert-Butyl Ether	ND	2.00									
Methylene Chloride	ND	5.00									
Naphthalene	ND	10.0									
n-Butylbenzene	ND	2.00									
n-Propylbenzene	ND	2.00									

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: MBLK	Sample Type: MBLK	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/12/2013	SeqNo: 574174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	2.00									
Styrene	ND	2.00									
tert-Butylbenzene	ND	2.00									
Tetrachloroethene	ND	2.00									
Toluene	ND	2.00									
trans-1,2-Dichloroethene	ND	2.00									
trans-1,3-Dichloropropene	ND	2.00									
Trichloroethene	ND	2.00									
Trichlorofluoromethane	ND	2.00									
Vinyl Chloride	ND	2.00									
Xylenes, Total	ND	2.00									
Surr: 1,2-Dichloroethane-d4	31.69	0	30	0	106	70	130				
Surr: 4-Bromofluorobenzene	31.88	0	30	0	106	70	130				
Surr: Dibromofluoromethane	29.19	0	30	0	97.3	70	130				
Surr: Toluene-d8	32.90	0	30	0	110	70	130				

Sample ID: LCS	SampleType: LCS	TestCode: 8260B_W	Units: µg/L	Prep Date:		RunNo: 50657					
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013		SeqNo: 574172					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	51.34	2.00	50	0	103	70	130				
1,1,1-Trichloroethane	61.78	2.00	50	0	124	70	130				
1,1,2,2-Tetrachloroethane	54.32	2.00	50	0	109	70	130				
1,1,2-Trichloroethane	50.23	2.00	50	0	100	70	130				
1,1-Dichloroethane	59.75	2.00	50	0	120	70	130				
1,1-Dichloroethene	54.48	2.00	50	0	109	70	130				
1,1-Dichloropropene	53.19	2.00	50	0	106	70	130				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: LCS	SampType: LCS	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574172						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichlorobenzene	57.90	2.00	50	0	116	70	130				
1,2,3-Trichloropropane	50.56	5.00	50	0	101	70	130				
1,2,4-Trichlorobenzene	60.86	2.00	50	0	122	70	130				
1,2,4-Trimethylbenzene	55.24	2.00	50	0	110	70	130				
1,2-Dibromo-3-Chloropropane	58.95	2.00	50	0	118	70	130				
1,2-Dibromoethane	51.79	2.00	50	0	104	70	130				
1,2-Dichlorobenzene	55.82	2.00	50	0	112	70	130				
1,2-Dichloroethane	56.53	2.00	50	0	113	70	130				
1,2-Dichloropropane	56.19	2.00	50	0	112	70	130				
1,3,5-Trimethylbenzene	52.22	2.00	50	0	104	70	130				
1,3-Dichlorobenzene	53.25	2.00	50	0	106	70	130				
1,3-Dichloropropane	54.49	2.00	50	0	109	70	130				
1,4-Dichlorobenzene	49.86	2.00	50	0	99.7	70	130				
2,2-Dichloropropane	80.43	2.00	50	0	161	70	130				
2-Butanone	47.27	10.0	50	0	94.5	70	130				
2-Chloroethyl Vinyl Ether	63.13	5.00	50	0	126	70	130				
2-Chlorotoluene	51.32	2.00	50	0	103	70	130				
2-Hexanone	53.37	10.0	50	0	107	70	130				
4-Chlorotoluene	54.54	2.00	50	0	109	70	130				
4-Isopropyltoluene	53.19	2.00	50	0	106	70	130				
4-Methyl-2-Pentanone	46.52	5.00	50	0	93.0	70	130				
Acetone	51.75	50.0	50	0	104	70	130				
Acrolein	120.4	50.0	100	0	120	70	130				
Acrylonitrile	125.2	50.0	100	0	125	70	130				
Benzene	57.86	2.00	50	0	116	70	130				
Bromobenzene	54.28	2.00	50	0	109	70	130				
Bromochloromethane	59.34	2.00	50	0	119	70	130				
Bromodichloromethane	53.59	2.00	50	0	107	70	130				

S

Qualifiers: BRL Below Reporting Limit
 J Analyte detected below quantization limits
 S Spike Recovery outside recovery limits
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside recovery limits

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: LCS	Batch ID: R50657	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574172						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	56.63	2.00	50	0	113	70	130				
Bromomethane	50.46	2.00	50	0	101	70	130				
Carbon Disulfide	60.10	2.00	50	0	120	70	130				
Carbon Tetrachloride	53.57	2.00	50	0	107	70	130				
Chlorobenzene	52.21	2.00	50	0	104	70	130				
Chloroethane	59.08	2.00	50	0	118	70	130				
Chloroform	56.34	2.00	50	0	113	70	130				
Chloromethane	46.58	2.00	50	0	93.2	70	130				
cis-1,2-Dichloroethene	55.97	2.00	50	0	112	70	130				
cis-1,3-Dichloropropene	60.79	2.00	50	0	122	70	130				
Dibromochloromethane	51.53	2.00	50	0	103	70	130				
Dibromomethane	52.95	2.00	50	0	106	70	130				
Dichlorodifluoromethane	48.32	2.00	50	0	96.6	70	130				
Ethylbenzene	52.60	2.00	50	0	105	70	130				
Hexachlorobutadiene	47.51	2.00	50	0	95.0	70	130				
Isopropylbenzene	55.44	2.00	50	0	111	70	130				S
Methyl Tert-Butyl Ether	77.71	2.00	50	0	155	70	130				S
Methylene Chloride	57.03	5.00	50	0	114	70	130				
Naphthalene	67.51	10.0	50	0	135	70	130				
n-Butylbenzene	53.89	2.00	50	0	108	70	130				
n-Propylbenzene	53.00	2.00	50	0	106	70	130				
sec-Butylbenzene	54.28	2.00	50	0	109	70	130				
Styrene	53.83	2.00	50	0	108	70	130				
tert-Butylbenzene	56.74	2.00	50	0	113	70	130				
Tetrachloroethene	48.11	2.00	50	0	96.2	70	130				
Toluene	51.90	2.00	50	0	104	70	130				
trans-1,2-Dichloroethene	55.27	2.00	50	0	111	70	130				
trans-1,3-Dichloropropene	50.38	2.00	50	0	101	70	130				

Qualifiers: BRL Below Reporting Limit
 J Analyte detected below quantitation limits
 S Spike Recovery outside recovery limits
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside recovery limits

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: LCS	SampType: LCS	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574172						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene	53.35	2.00	50	0	107	70	130				
Trichlorofluoromethane	40.60	2.00	50	0	81.2	70	130				
Vinyl Chloride	46.80	2.00	50	0	93.6	70	130				
Xylenes, Total	157.0	2.00	150	0	105	70	130				
Surr: 1,2-Dichloroethane-d4	31.03	0	30	0	103	70	130				
Surr: 4-Bromofluorobenzene	30.53	0	30	0	102	70	130				
Surr: Dibromofluoromethane	28.99	0	30	0	96.6	70	130				
Surr: Toluene-d8	30.33	0	30	0	101	70	130				

Sample ID: LCSD	SampType: LCSD	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574173						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	45.42	2.00	50	0	90.8	70	130				
1,1,1-Trichloroethane	64.77	2.00	50	0	130	70	130				
1,1,2,2-Tetrachloroethane	44.28	2.00	50	0	88.6	70	130				
1,1,2-Trichloroethane	42.20	2.00	50	0	84.4	70	130				
1,1-Dichloroethane	60.93	2.00	50	0	122	70	130				
1,1-Dichloroethene	55.52	2.00	50	0	111	70	130				
1,1-Dichloropropene	55.15	2.00	50	0	110	70	130				
1,2,3-Trichlorobenzene	56.93	2.00	50	0	114	70	130				
1,2,3-Trichloropropane	41.09	5.00	50	0	82.2	70	130				
1,2,4-Trichlorobenzene	54.66	2.00	50	0	109	70	130				
1,2,4-Trimethylbenzene	51.51	2.00	50	0	103	70	130				
1,2-Dibromo-3-Chloropropane	48.69	2.00	50	0	97.4	70	130				
1,2-Dibromoethane	44.21	2.00	50	0	88.4	70	130				
1,2-Dichlorobenzene	49.80	2.00	50	0	99.6	70	130				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: LCSD	SampType: LCSD	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574173						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	52.75	2.00	50	0	106	70	130				
1,2-Dichloropropane	53.69	2.00	50	0	107	70	130				
1,3,5-Trimethylbenzene	50.01	2.00	50	0	100	70	130				
1,3-Dichlorobenzene	48.92	2.00	50	0	97.8	70	130				
1,3-Dichloropropane	44.64	2.00	50	0	89.3	70	130				
1,4-Dichlorobenzene	45.62	2.00	50	0	91.2	70	130				
2,2-Dichloropropane	80.63	2.00	50	0	161	70	130				
2-Butanone	40.00	10.0	50	0	80.0	70	130				S
2-Chloroethyl Vinyl Ether	54.82	5.00	50	0	110	70	130				
2-Chlorotoluene	47.44	2.00	50	0	94.9	70	130				
2-Hexanone	46.02	10.0	50	0	92.0	70	130				
4-Chlorotoluene	49.84	2.00	50	0	99.7	70	130				
4-Isopropyltoluene	49.63	2.00	50	0	99.3	70	130				
4-Methyl-2-Pentanone	43.21	5.00	50	0	86.4	70	130				
Acetone	ND	50.0	50	0	0	70	130				S
Acrolein	121.3	50.0	100	0	121	70	130				
Acrylonitrile	103.6	50.0	100	0	104	70	130				
Benzene	60.04	2.00	50	0	120	70	130				
Bromobenzene	35.08	2.00	50	0	70.2	70	130				
Bromochloromethane	53.48	2.00	50	0	107	70	130				
Bromodichloromethane	53.21	2.00	50	0	106	70	130				
Bromoform	44.97	2.00	50	0	89.9	70	130				
Bromomethane	56.13	2.00	50	0	112	70	130				
Carbon Disulfide	63.17	2.00	50	0	126	70	130				
Carbon Tetrachloride	57.63	2.00	50	0	115	70	130				
Chlorobenzene	48.93	2.00	50	0	97.9	70	130				
Chloroethane	57.50	2.00	50	0	115	70	130				
Chloroform	58.43	2.00	50	0	117	70	130				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: 8260B_W

Sample ID: LCSD	SampType: LCSD	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657						
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574173						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	51.22	2.00	50	0	102	70	130				
cis-1,2-Dichloroethene	59.88	2.00	50	0	120	70	130				
cis-1,3-Dichloropropene	59.54	2.00	50	0	119	70	130				
Dibromochloromethane	44.46	2.00	50	0	88.9	70	130				
Dibromomethane	51.37	2.00	50	0	103	70	130				
Dichlorodifluoromethane	52.63	2.00	50	0	105	70	130				
Ethylbenzene	50.11	2.00	50	0	100	70	130				
Hexachlorobutadiene	46.51	2.00	50	0	93.0	70	130				
Isopropylbenzene	52.21	2.00	50	0	104	70	130				
Methyl Tert-Butyl Ether	75.80	2.00	50	0	152	70	130				
Methylene Chloride	43.71	5.00	50	0	87.4	70	130				
Naphthalene	59.70	10.0	50	0	119	70	130				
n-Butylbenzene	51.23	2.00	50	0	102	70	130				
n-Propylbenzene	49.55	2.00	50	0	99.1	70	130				
sec-Butylbenzene	51.48	2.00	50	0	103	70	130				
Styrene	50.60	2.00	50	0	101	70	130				
tert-Butylbenzene	53.08	2.00	50	0	106	70	130				
Tetrachloroethene	44.75	2.00	50	0	89.5	70	130				
Toluene	48.75	2.00	50	0	97.5	70	130				
trans-1,2-Dichloroethene	58.30	2.00	50	0	117	70	130				
trans-1,3-Dichloropropene	44.43	2.00	50	0	88.9	70	130				
Trichloroethene	55.09	2.00	50	0	110	70	130				
Trichlorofluoromethane	56.10	2.00	50	0	112	70	130				
Vinyl Chloride	64.50	2.00	50	0	129	70	130				
Xylenes, Total	150.3	2.00	150	0	100	70	130				
Surr: 1,2-Dichloroethane-d4	29.75	0	30	0	99.2	70	130				
Surr: 4-Bromofluorobenzene	26.75	0	30	0	89.2	70	130				
Surr: Dibromofluoromethane	30.91	0	30	0	103	70	130				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
Work Order: 1306059
Project: 457

TestCode: 8260B_W

Sample ID: LCSD	Sample Type: LCSD	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 50657					
Client ID: ZZZZZ	Batch ID: R50657	TestNo: SW8260B		Analysis Date: 6/11/2013	SeqNo: 574173					
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr. Toluene-d8	28.13	0	30	0	93.8	70	130			

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

GeoLabs, Inc.
45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: EPHP_W

Sample ID: MB-22431	SampType: MBLK	TestCode: EPHP_W	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50597						
Client ID: ZZZZZ	Batch ID: 22431	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 6/11/2013	SeqNo: 574169						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND										

Naphthalene	ND	1.00									
2-Methylnaphthalene	ND	1.00									
Acenaphthene	ND	1.00									
Phenanthrene	ND	1.00									
Acenaphthylene	ND	1.00									
Fluorene	ND	1.00									
Anthracene	ND	1.00									
Fluoranthene	ND	1.00									
Pyrene	ND	1.00									
Benzo(a)Anthracene	ND	0.400									
Chrysene	ND	1.00									
Benzo(b)Fluoranthene	ND	0.200									
Benzo(k)Fluoranthene	ND	0.200									
Benzo(a)Pyrene	ND	0.190									
Indeno(1,2,3-cd)Pyrene	ND	0.400									
Dibenz(a,h)Anthracene	ND	0.400									
Benzo(g,h,i)Perylene	ND	1.00									
Total PAH Target Concentration	ND	0.200									
Surr: 2,2-Difluorobiphenyl	13.13	0	25	0	52.5	40	140				
Surr: 2-Fluorobiphenyl	15.06	0	25	0	60.2	40	140				

Sample ID: LCS-22431	Samp Type: LCS	TestCode: EPH_W	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50597						
Client ID: ZZZZZ	Batch ID: 22431	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 6/11/2013	SeqNo: 574170						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	25.39	1.00	50	0	50.8	40	140				
2-Methylnaphthalene	28.20	1.00	50	0	56.4	40	140				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit		R	RPD outside recovery limits
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: EPHP_W

Sample ID: LCS-22431		SampType: LCS		TestCode: EPHP_W		Units: µg/L		Prep Date: 6/10/2013		RunNo: 50597	
Client ID: ZZZZ		Batch ID: 22431		TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 6/11/2013		SeqNo: 574170			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	32.62	1.00	50	0	65.2	40	140				
Phenanthrene	43.73	1.00	50	0	87.5	40	140				
Acenaphthylene	33.82	1.00	50	0	67.6	40	140				
Fluorene	38.84	1.00	50	0	77.7	40	140				
Anthracene	52.52	1.00	50	0	105	40	140				
Fluoranthene	47.72	1.00	50	0	95.4	40	140				
Pyrene	43.81	1.00	50	0	87.6	40	140				
Benzo(a)Anthracene	46.55	0.400	50	0	93.1	40	140				
Chrysene	44.81	1.00	50	0	89.6	40	140				
Benzo(b)Fluoranthene	46.09	0.200	50	0	92.2	40	140				
Benzo(k)Fluoranthene	46.32	0.200	50	0	92.6	40	140				
Benzo(a)Pyrene	48.17	0.190	50	0	96.3	40	140				
Indeno(1,2,3-cd)Pyrene	49.99	0.400	50	0	100	40	140				
Dibenz(a,h)Anthracene	49.00	0.400	50	0	98.0	40	140				
Benzo(g,h,i)Perylene	46.63	1.00	50	0	93.3	40	140				
Total PAH Target Concentration	724.2	0.200									
Surr: 2,2-Difluorobiphenyl	12.80	0	25	0	51.2	40	140				
Surr: 2-Fluorobiphenyl	14.85	0	25	0	59.4	40	140				

Sample ID: LCS1-22431		SampType: LCS1		TestCode: EPHP_W		Units: µg/L		Prep Date: 6/10/2013		RunNo: 50597	
Client ID: ZZZZ		Batch ID: 22431		TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 6/11/2013		SeqNo: 574171			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	28.46	1.00	50	0	56.9	40	140				
2-Methylnaphthalene	29.34	1.00	50	0	58.7	40	140				
Acenaphthene	32.90	1.00	50	0	65.8	40	140				
Phenanthrene	42.87	1.00	50	0	85.7	40	140				

Qualifiers: BRL Below Reporting Limit
 J Analyte detected below quantitation limits
 S Spike Recovery outside recovery limits
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside recovery limits

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: EPHP_W

Sample ID: LCS1-22431	Batch ID: 22431	TestCode: EPHP_W	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50597						
Client ID: ZZZZZ	Batch ID: 22431	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 6/11/2013	SeqNo: 574171						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthylene	34.87	1.00	50	0	69.7	40	140				
Fluorene	38.77	1.00	50	0	77.5	40	140				
Anthracene	50.12	1.00	50	0	100	40	140				
Fluoranthene	44.09	1.00	50	0	88.2	40	140				
Pyrene	42.44	1.00	50	0	84.9	40	140				
Benzo(a)Anthracene	44.88	0.400	50	0	89.8	40	140				
Chrysene	42.32	1.00	50	0	84.6	40	140				
Benzo(b)Fluoranthene	45.92	0.200	50	0	91.8	40	140				
Benzo(k)Fluoranthene	44.73	0.200	50	0	89.5	40	140				
Benzo(a)Pyrene	46.92	0.190	50	0	93.8	40	140				
Indeno(1,2,3-cd)Pyrene	48.33	0.400	50	0	96.7	40	140				
Dibenz(a,h)Anthracene	44.88	0.400	50	0	89.8	40	140				
Benzo(g,h,i)Perylene	45.07	1.00	50	0	90.1	40	140				
Total PAH Target Concentration	706.9	0.200									
Surr: 2,2-Difluorobiphenyl	12.92	0	25	0	51.7	40	140				
Surr: 2-Fluorobiphenyl	14.30	0	25	0	57.2	40	140				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

GeoLabs, Inc.
 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: eph_t_w

Sample ID: MB-22431	SampleType: mbik	TestCode: eph_t_w	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50594						
Client ID: ZZZZZ	Batch ID: 22431	TestNo: MADEP EPH (eph_wpr)		Analysis Date: 6/10/2013	SeqNo: 574152						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Adjusted C11-C22 Aromatics	ND	100									

Adjusted C11-C22 Aromatics
 C09-C18 Aliphatics
 C19-C36 Aliphatics
 Unadjusted C11-C22 Aromatics
 Surr: 1-Chlorooctadecane
 Surr: o-Terphenyl

55.25
 84.33

0
 0

100
 100

0
 0

55.3
 84.3

40
 40

140
 140

Sample ID: LCS-22431	SampleType: Lcs	TestCode: eph_t_w	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50594						
Client ID: ZZZZZ	Batch ID: 22431	TestNo: MADEP EPH (eph_Wpr)		Analysis Date: 6/10/2013	SeqNo: 574153						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C09-C18 Aliphatics	ND	100	100								

C09-C18 Aliphatics
 C19-C36 Aliphatics
 Unadjusted C11-C22 Aromatics
 Surr: 1-Chlorooctadecane
 Surr: o-Terphenyl

59.3
 74.6
 57.7
 71.8
 89.8

0
 0
 0
 0
 0

100
 100
 100
 100
 100

0
 0
 0
 0
 0

59.3
 74.6
 57.7
 71.8
 89.8

40
 40
 40
 40
 40

140
 140
 140
 140
 140

Sample ID: LCS1-22431	SampleType: Lcsd	TestCode: epht_w	Units: µg/L	Prep Date: 6/10/2013	RunNo: 50594						
Client ID: ZZZZZ	Batch ID: 22431	TestNo: MADEP EPH (eph_Wpr)		Analysis Date: 6/10/2013	SeqNo: 574154						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
209-C18 Aliphatics	ND	100	100								

C09-C18 Aliphatics
 C19-C36 Aliphatics
 Unadjusted C11-C22 Aromatics
 Surr: 1-Chlorooctadecane
 Surr: o-Terphenyl

65.8
 74.1
 51.5
 68.6
 75.1

0
 0
 0
 0
 0

100
 100
 100
 100
 100

0
 0
 0
 0
 0

59.33
 74.63
 57.7
 0
 0

140
 140
 140
 140
 140

0
 0
 0
 0
 0

Qualifiers: BRL Below Reporting Limit
 J Analyte detected below quantization limits
 S Spike Recovery outside recovery limits
 E Value above quantization range
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside recovery limits

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

CLIENT: R. Zoppo Corp
 Work Order: 1306059
 Project: 457

TestCode: HG-7470A_W

Sample ID: MB-22450	Sample Type: MBLK	TestCode: HG-7470A_W	Units: mg/L	Prep Date: 6/11/2013	RunNo: 50619						
Client ID: ZZZZZ	Batch ID: 22450	TestNo: SW7470A	(SW7470A/E2)	Analysis Date: 6/11/2013	SeqNo: 573891						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

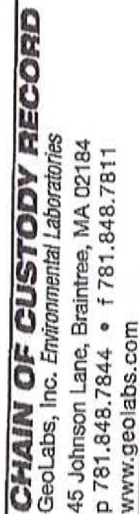
Sample ID: LCS-22450	SampleType: LCS	TestCode: HG-7470A_W	Units: mg/L	Prep Date: 6/11/2013	RunNo: 50619						
Client ID: ZZZZZ	Batch ID: 22450	TestNo: SW7470A	(SW7470A/E2)	Analysis Date: 6/11/2013	SeqNo: 573889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005360	0.000200	0.005	0	107	80	120				

Qualifiers:

BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
S	Spike Recovery outside recovery limits				

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811



Fax	email
Format:	
Excel	PDF

GW-1	MCP Methods
S-1	DEP
QC	Other

Client:	B. Zoppo Corp.	Phone:	781-953-0290
Address:	160 Old Maple St Saugham, MA 02072	Fax:	781-344-7382
Contact:	Chris McMenus	email:	CMcMenus@Zoppo.Com

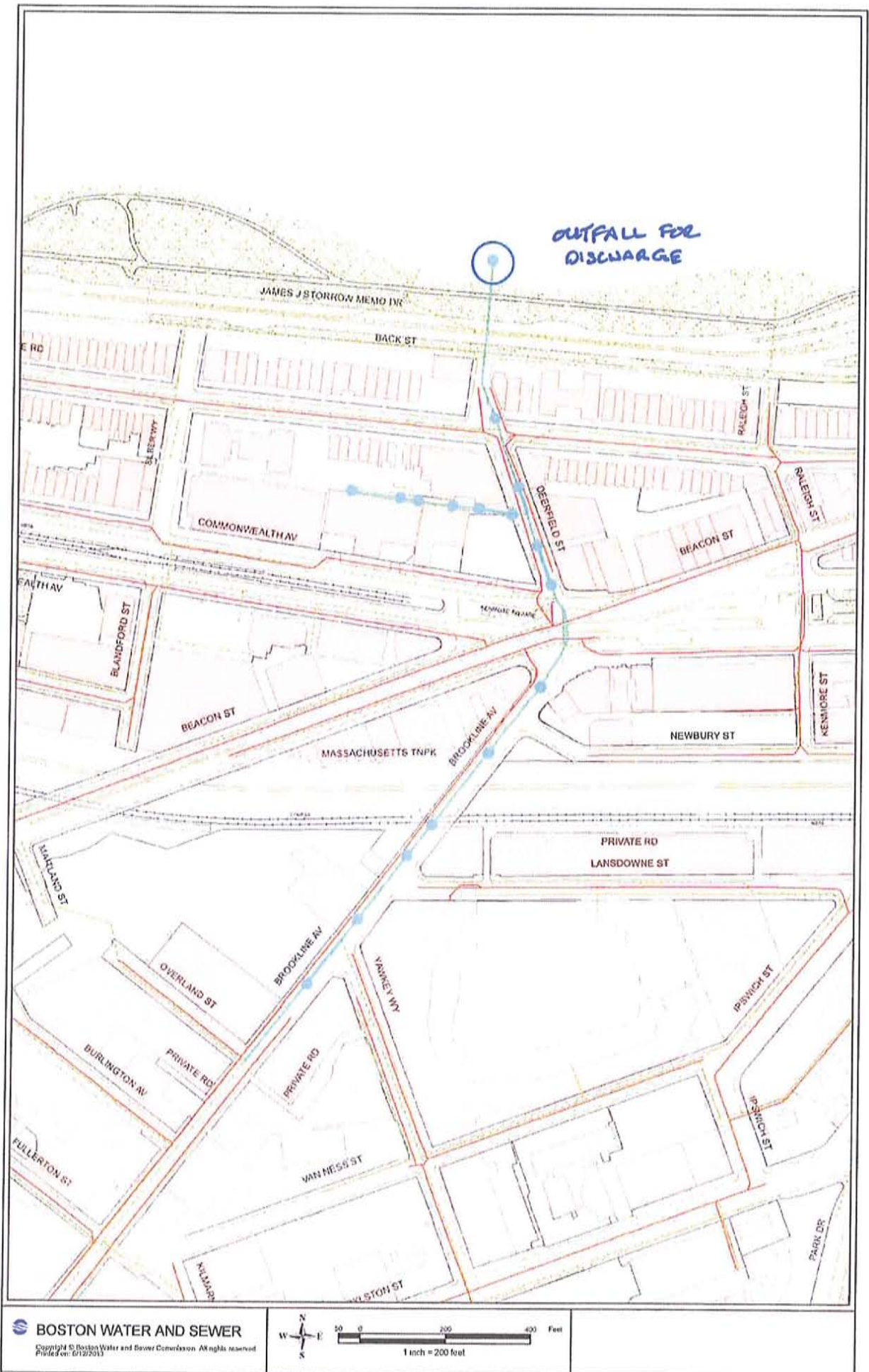
Project: Kawley Way Extension
Project PO: 457
Invoice to: *

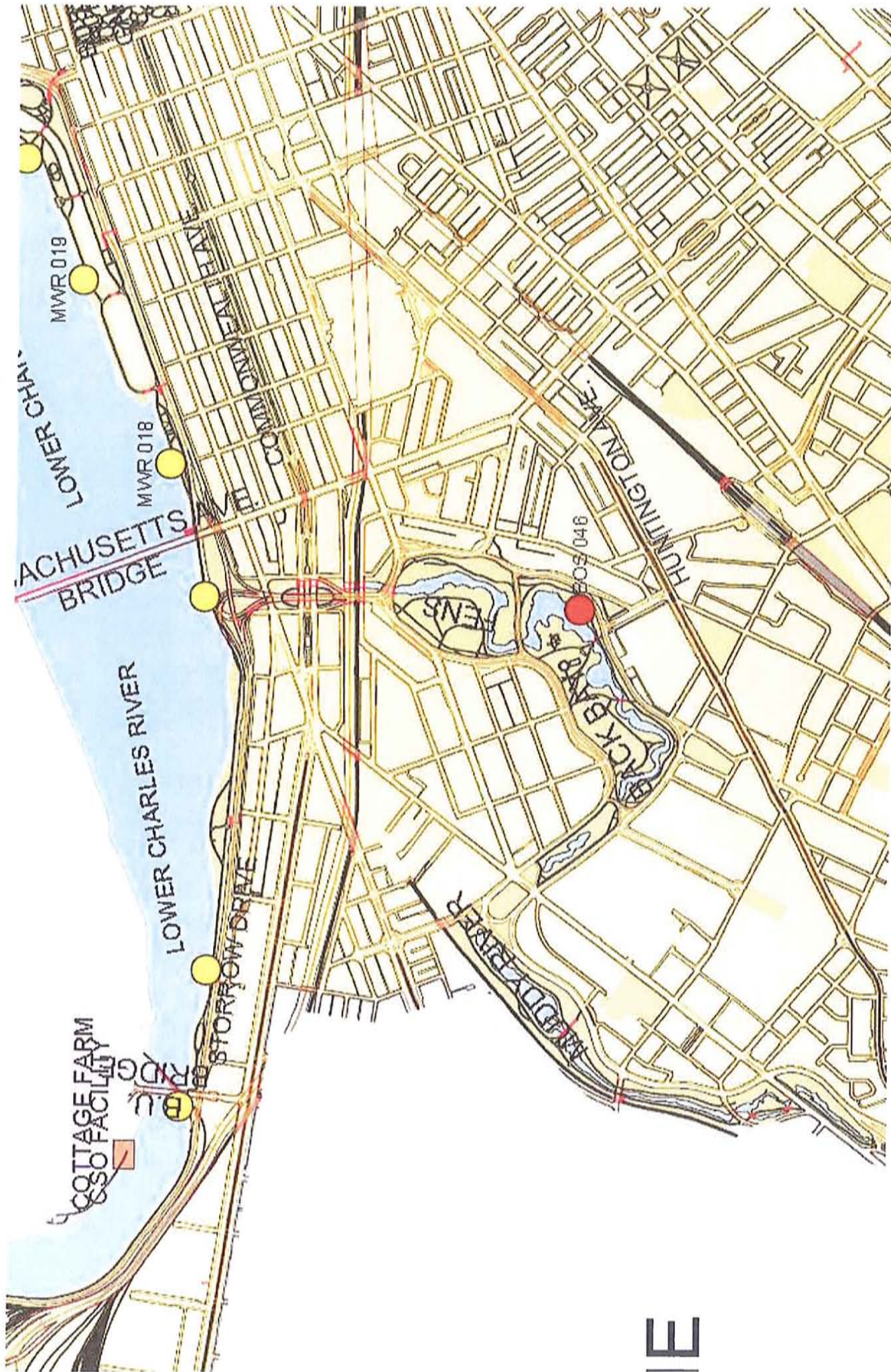
[illegible]

201010730, J&P.C. of CR.09/22/10 **THANK YOU - WE APPRECIATE YOUR BUSINESS** All discounting will be removed after 90 days * All Payment terms are NET 30 Days. A late payment charge of 1.5% per month or 18% per year, together with expenses above and beyond collection costs, including attorney's fees and court costs, will be applied to balances that go beyond NET 30 days. **CT (PH-0145)**

NH (25Q8) MA (MA-015)
FI (LA000252)

ATTACHMENT C
CITY OF BOSTON STORM DRAIN MAPS

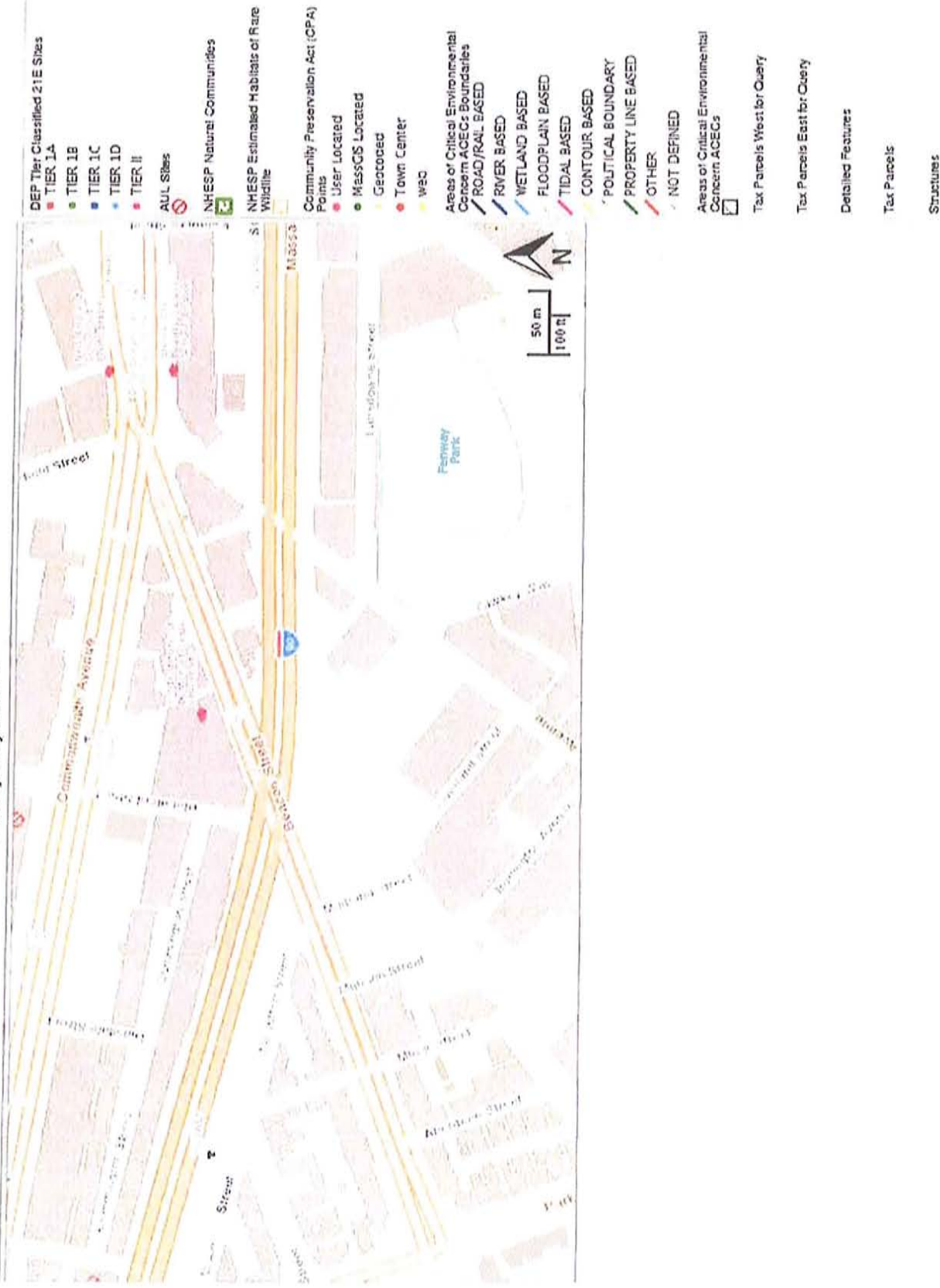




ATTACHMENT D

**DOCUMENTATION REGARDING ENDANGERED SPECIES
AND HISTORICAL RESOURCES**

Yawkey Way SWPPP



Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street Name: Maitland St; Area(s) of Significance: Archaeology, Historic, Archaeology, Prehistoric, Architecture; Designation Type(s): Local Historic District, Local Landmark, MA Archaeo/Historic Landmark, Nat'l Historic Landmark, Preservation Restriction, Nat'l Register District, Nat'l Register Individual Property; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
----------	---------------	--------	------	------

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street Name: Overland St; Area(s) of Significance: Archaeology, Historic, Archaeology, Prehistoric; Designation Type(s): Local Historic District, MA Archaeo/Historic Landmark, Nat'l Historic Landmark, Preservation Restriction; Resource Type(s): Building, Area, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
----------	---------------	--------	------	------

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street Name: Yawkey Way; Area(s) of Significance: Archaeology, Historic, Archaeology, Prehistoric, Architecture; Designation Type(s): Local Historic District, Local Landmark, MA Archaeo/Historic Landmark, Nat'l Historic Landmark, Nat'l Register Individual Property, Preservation Restriction; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS 7709	Fenway Park	24 Yawkey Way	Boston	1912
BOS 9748	Fenway Park Rooftop Structures	24 Yawkey Way	Boston	1947



U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

NEW ENGLAND ECOLOGICAL SERVICES FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
<http://www.fws.gov/newengland>

Project Name:

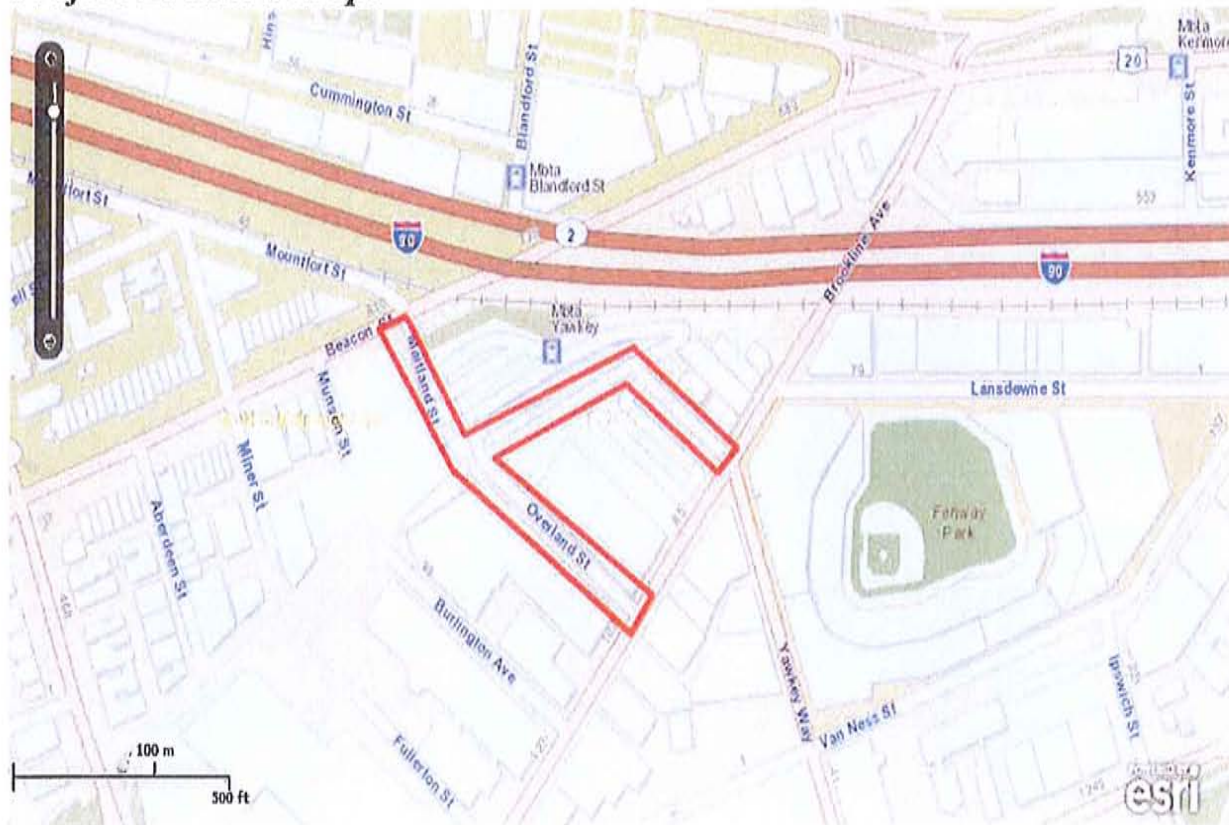
Yawkey Way, MassDOT



U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Suffolk, MA



U.S. Fish and Wildlife Service

Natural Resources of Concern

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-71.1017235 42.3475233, -71.1012239 42.3469714, -71.0997703 42.3473988, -71.0997625 42.3473995, -71.0997549 42.347397, -71.098865 42.3468979, -71.0988589 42.3468927, -71.0988554 42.3468854, -71.098855 42.3468774, -71.0988579 42.3468699, -71.0988634 42.3468641, -71.099035 42.3467451, -71.0990417 42.346742, -71.0990491 42.3467417, -71.0990561 42.346744, -71.0998318 42.347176, -71.1009156 42.3468304, -71.0995953 42.3461689, -71.0995894 42.3461644, -71.0995856 42.346158, -71.0995843 42.3461507, -71.0995858 42.3461434, -71.0995899 42.3461372, -71.0997723 42.3459469, -71.0997793 42.3459421, -71.0997878 42.3459407, -71.099796 42.345943, -71.1013372 42.346753, -71.1013426 42.3467572, -71.1019896 42.3474613, -71.1019938 42.3474683, -71.1019948 42.3474763, -71.1019926 42.3474842, -71.1019874 42.3474904, -71.1019801 42.3474941, -71.1017387 42.3475595, -71.1017309 42.34756, -71.1017235 42.3475575, -71.1017177 42.3475524, -71.1017142 42.3475454, -71.1017137 42.3475376, -71.1017162 42.3475302, -71.1017213 42.3475244, -71.1017235 42.3475233), (-71.1019379 42.3474641, -71.1013155 42.3467868, -71.0997907 42.3459854, -71.0996375 42.3461453, -71.1009775 42.3468166, -71.1009836 42.3468214, -71.1009875 42.3468283, -71.1009884 42.3468361, -71.1009863 42.3468436, -71.1009814 42.3468498, -71.1009746 42.3468536, -71.0998357 42.3472168, -71.0998276 42.3472176, -71.0998199 42.3472152, -71.0990476 42.346785, -71.0989125 42.3468787, -71.0997671 42.347358, -71.1012247 42.3469295, -71.1012321 42.3469288, -71.1012392 42.3469308, -71.1012451 42.3469353, -71.1017644 42.347509, -71.1017655 42.3475108, -71.1019379 42.3474641)))

Project Type:

Highway Safety and Maintenance

Endangered Species Act Species List ([USFWS Endangered Species Program](#)).

There are no listed species found within the vicinity of your project.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#)).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#)).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the [Bald and Golden Eagle Protection Act](#) (16 U.S.C. 668). The Service's [Birds of Conservation Concern \(2008\)](#) report



U.S. Fish and Wildlife Service

Natural Resources of Concern

identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

APPENDIX E
FORM BRP WM 10



Enter your transmittal number

X256353

Transmittal Number

Your unique Transmittal Number can be accessed online: <http://mass.gov/dep/service/online/trasmfrm.shtml>

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. Copy 2 must accompany your fee payment. Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

* Note:
For BWSC Permits,
enter the LSP.

A. Permit Information

BRP WM 10

1. Permit Code: 7 or 8 character code from permit instructions

Temporary Construction Dewatering

3. Type of Project or Activity

NPDES DGP

2. Name of Permit Category

B. Applicant Information - Firm or Individual

R. Zoppo Corp.

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. Last Name of Individual
160 Old Maple Street

3. First Name of Individual

4. MI

5. Street Address

Stoughton

MA

02072

781-344-8822

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Paul Scally

psccally@zoppo.com

11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Yawkey Way Roadway Extension and Reconstruction (MassDOT Project)

1. Name of Facility, Site Or Individual

Intersection of Maitland and Overland Streets

2. Street Address

Boston

MA

02215

NA

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

NA

NA

NA

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

GeoInsight, Inc.

1. Name of Firm Or Individual

186 Granite Street, 3rd Floor, Suite A

2. Address

Manchester

NH

03101

603-314-0820

207

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Michael C. Penney, P.E., L.S.P.

5166

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

Special Provisions:

1. ☐ Fee Exempt (city, town or municipal housing authority)(state agency if fee is \$100 or less)
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

76130

\$385.00

6/13/13

Check Number

Dollar Amount

Date

APPENDIX F

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES

NPDES Dewatering General Permit Yawkey Way Roadway Extension and Reconstruction Boston, Massachusetts

GeoInsight, Inc. (GeoInsight) prepared this narrative to describe Best Management Practices (BMPs) to be implemented, as warranted, to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) Dewatering General Permit (DGP) in Massachusetts. The BMPs described herein apply to the Site described in the accompanying Notice of Intent (NOI) and are intended for use during dewatering management activities. A separate Storm Water Pollution Prevention Plan has been prepared for the Site.

Health and Safety

Dewatering activities must be pursued in a manner that does not unduly put workers at risk for hazards associated with water, excavation safety, chemical exposure, or mechanical equipment. Work sequences should be planned and implemented carefully in accordance with applicable regulations and standards of practice.

Training of Dewatering Operations Personnel

The treatment system operation must be supervised by a licensed Operator. Employees involved in the dewatering and treatment system operations must be trained regarding the system controls, treatment quality objectives, sampling requirements, system maintenance, discharge conditions, and recording of proper data. Personnel who have responsibilities related to the dewatering efforts must be informed of the contents of the DGP, these BMPs and the NOI.

Minimizing Sediment in Influent

It is expected that dewatering will be performed using localized electric submersible pumps set within crushed-stone-lined sumps placed strategically at low points within the excavations and positioned away from areas that could adversely interfere with construction operations. The construction of the sumps must be conducted such that entrainment of sediment in the water removed is minimized. Removal of excess sediment during pumping undesirably increases the size of the excavation and transports material to the treatment train where it will require additional management.

Management of Generated Wastes

The construction excavations and the remediation excavations will be conducted within areas likely to contain urban fill. Although the Site is not listed as a Massachusetts Contingency Plan (MCP) release site, wastes may be generated during the operation of the dewatering treatment system that could require special management. The anticipated wastes are anticipated to be limited to accumulated sediment within the fractionalization tank, used bag filters, and spent

activated carbon. Unless disposed of on-Site, sediment will be sampled in a representative fashion and tested to facilitate disposal at a licensed facility. Used bag filters and other potential miscellaneous sampling wastes will be appropriately disposed of as solid or contaminated wastes, based on their characteristics. Spent activated carbon is anticipated to be managed by the subcontractor/vendor providing the clean carbon, and will include either off-site disposal at a licensed facility or processing and reuse (regeneration)

Normal Treatment System Operations

The treatment system must be operated in accordance with manufacturers' requirements. The system should be designed such that the maximum anticipated flow is accommodated by even the most restrictive aspect of the system. Multiple treatment units must be used to achieve treatment goals while still passing the required flow rate. During periods of active discharge, the system will be monitored with a continuous in-line flow meter. Influent and effluent sampling ports will be provided to assess treatment performance. Visual assessment should be made daily to verify operational parameters are consistent and that obvious changes to the system are not required due to the presence of significant free product, sediment, etc. If actual groundwater quality is not consistent with conditions expected as described in the NOI, changes to the treatment system may be necessary.

Regular sampling and testing must be conducted to evaluate the quality of the treated effluent as required by the DGP. This includes the appropriate frequency of chemical testing required within the first period of initial discharge, and then subsequent monthly testing to be conducted through the end of the scheduled discharge. Initial sampling should typically be performed on the first day, third day, seventh day, and then weekly for the first month, and then monthly. Performance monitoring will include recording daily flow rates and discharge quantities, significant adjustments made to the operation, and visual checks of the discharge location. Monthly monitoring reports must be compiled and maintained at the Site. When dewatering operations start up in a new area that is significantly different from a previous location, the sampling frequency should revert back to the initial schedule.

System Maintenance Operations

The treatment system will include a fractionation tank, bag filter, and activated carbon, along with pumps, piping, valves, and instrumentation. Regular maintenance will include daily checking the condition of the treatment system equipment such as the fractionization tanks and accumulation of sediment, seals and connections, hoses and valves, pumps, and flow meters. Either visual or laboratory monitoring data will be used to make decisions regarding change-outs necessary for bag filters and carbon units. Bag filters will be replaced whenever the pressure drop across the filters exceeds the system's design criteria. Preventative maintenance should be practiced to promote continuous availability of the treatment system and consistent treatment performance.

Discharge Operations

Treated water from the system will be drained into a nearby catch basin(s). The catchbasin structure(s) consists of solid sidewalls and bottom and, therefore, and is expected to be resistant to erosion from hose discharge. However, efforts should be made to avoid stirring up sediment present in the bottom of the catch basin(s), including dispersion or energy reduction devices. Based upon the design flow rate, it is not anticipated that the dewatering discharge will cause or contribute to erosion or scouring at the ultimate discharge outfall location.

Site Security

During construction activities, the dewatering and treatment system will be located within a area controlled by Zoppo and restricted to the general public. Zoppo shall verify that system controls are either supervised while in use or locked when unsupervised so that the treatment system is reasonably protected from misuse by vandals or other unauthorized persons. This should include locking of pumps and valves to prevent untreated discharge of potential oil or hazardous materials into the storm drain.

Demobilization

At the completion of the dewatering and treatment operations, sumps should be properly excavated and backfilled, grouted (if necessary), or otherwise left in place depending upon their condition. System components should be decontaminated and residuals managed accordingly.

ATTACHMENT G

BWSC DEWATERING DISCHARGE PERMIT APPLICATION FORM



Boston Water and
Sewer Commission
980 Harrison Avenue
Boston, MA 02119-2540

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: R. Zoppo Corp. Address: 160 Old Maple Street, Stoughton, MA 02072
Phone number: 781-344-8822 Fax number: 781-344-7382
Contact person name: Paul Scally Title: Project Superintendent
Cell number: 617-839-0551 Email address: pscally@zoppo.com
Permit Request (check one): ☒ New Application ☐ Permit Extension ☐ Other (Specify): _____

Owner's Information (if different from above):

Owner of property being dewatered: Massachusetts DOT

Owner's mailing address: 10 Park Plaza, Suite 4160, Boston, MA 02116 Phone number: (617) 973-7695

Location of Discharge & Proposed Treatment System(s):

Street number and name: Intersection of Maitland and Overland Streets Neighborhood Fenway/Kenmore

Discharge is to a: ☐ Sanitary Sewer ☐ Combined Sewer ☒ Storm Drain ☐ Other (specify): BWSC CB 94, Brookline Ave

Describe Proposed Pre-Treatment System(s): Fractionation Tank, and Bag Filters and Liquid Phase Carbon if Necessary

BWSC Outfall No. SDO 042 (Deerfield Street) Receiving Waters Charles River

Temporary Discharges (Provide Anticipated Dates of Discharge): From 06/21/13

To 11/15/14

☐ Groundwater Remediation
☒ Utility/Manhole Pumping
☐ Accumulated Surface Water

☐ Tank Removal/Installation
☐ Test Pipe
☐ Hydrogeologic Testing

☐ Foundation Excavation
☒ Trench Excavation
☐ Other _____

Permanent Discharges

☐ Foundation Drainage
☐ Accumulated Surface Water
☐ Non-contact/Uncontaminated Process

☐ Crawl Space/Footing Drain
☐ Non-contact/Uncontaminated Cooling
☐ Other; _____

1. Attach a Site Plan showing the source of the discharge and the location of the point of discharge (i.e. the sewer pipe or catch basin). Include meter type, meter number, size, make and start reading. Note. All discharges to the Commission's sewer system will be assessed current sewer charges.
2. If discharging to a sanitary or combined sewer, attach a copy of MWRA's Sewer Use Discharge permit or application.
3. If discharging to a separate storm drain, attach a copy of EPA's NPDES Permit or NOI application, or NPDES Permit exclusion letter for the discharge, as well as other relevant information.
4. Dewatering Drainage Permit will be denied or revoked if applicant fails to obtain the necessary permits from MWRA or EPA.

Submit Completed Application to: Boston Water and Sewer Commission
Engineering Customer Services
980 Harrison Avenue, Boston, MA 02119
Attn: Francis M. McLaughlin, Manager Engineering Customer Services
E-mail: McLaughlinf@bwsc.org
Phone: 617-989-7208 Fax: 617-989-7716

BWSC Use Only: Date Received _____

Comments: _____