NOTICE OF INTENT FOR DISCHARGE - UNDER MASSACHUSETTS DEWATERING - GENERAL PERMIT MAG070000 -

MISSION PARK GARAGE - 10 VINING STREET -

BOSTON, MASSACHUSETTS -

JULY 7, 2015 -

Prepared For:

U.S. Environmental Protection Agency -
Office of Ecosystem Protection -
5 Post Office Square -
Boston, MA 02109 -

On Behalf Of:

Roxbury Tenants of Harvard
11 New Whitney Street
Boston, MA, 02115

PROJECT NO. 5347 -

2269 Massachusetts Avenue -
Cambridge, MA 02140 -
www.mcphailgeo.com -
(617) 868 1420 -

July 7, 2015

U.S. Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP 06-4)
5 Post Office Square
Boston, MA 02109

Attention: - To Whom It May Concern

Reference: - Mission Park Garage – 10 Vining Street; Boston, Massachusetts
Notice of Intent – Discharge General Permit

Ladies and Gentlemen:

On behalf of the Roxbury Tenants of Harvard, McPhail Associates, LLC has prepared the attached updated Notice of Intent (NOI) for coverage under the Massachusetts Dewatering General Permit MAG070000 (DGP) for the discharge of groundwater from a foundation sump pit into the Muddy River via a designated drainage pipe at Mission Park Garage located at 10 Vining Street in Boston, Massachusetts (the "subject site"). Refer to **Figure 1** entitled Project Location Plan for the general site locus.

These services were performed and this permit application was prepared in accordance with our proposal dated June 5, 2015, and the subsequent authorization of Roxbury Tenants of Harvard. These services are subject to the limitations contained in **Appendix A**.

The NOI application has been filed electronically to the designated US EPA e-mail address for a DGP application and sent to the Massachusetts Department of Environmental Protection (DEP). As indicated above, the suggested NOI form and Transmittal Form is contained in **Appendix B**. It should be noted that dewatering has occurred at the subject site since May 2012 under General Permit number MAG070379. This NOI has been prepared as an update to obtain renewal of permit authorization to discharge groundwater under the new DGP, effective May 20, 2015.

Site Location and Current Conditions

The existing multi-story residential building fronts onto Vining Street to the northeast, New Whitney Street to the southwest, and the Riverway to the west. The lower three levels of the existing structure are utilized for parking, the lowest two levels of which are generally located below-grade. The lowest level of the below-grade garage is situated below the surface of the groundwater table and occupies an approximate 155,000 square-foot plan area.

An underslab foundation drain is located beneath the lowest level slab. The foundation drains lead to a single sump pit equipped with duplex sump pumps which continuously discharge groundwater to maintain the garage in a dry condition.

Sketches showing the approximate location of existing site manholes, drainage pipes and the connection to the Muddy River are contained in **Appendix C**. These plans indicate that the foundation sump discharges to a site manhole that is located on the exterior of the west side of the existing building. The manhole is connected to a 10-inch diameter vitrified clay storm drain that discharges directly to the Muddy River, which is located approximately 200 feet west of the site.

Site Environmental Setting, Nearby DEP-listed Disposal Sites and Surrounding Historical Places

Based on the current Massachusetts Geographic Information Systems (GIS) Department of Environmental Protection (DEP) Phase I Site Assessment Map of Boston (**Figure 2**), the subject site is not located within the boundaries of a Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. According to the GIS Map, there are no public or private drinking water supply wells, no Areas of Critical Environmental Concern, no habitats of Species of Special Concern or Threatened or Endangered Species within 500 feet of the subject site. According to the GIS Map, there are no surface water bodies or wetland areas located at the subject site. The nearest surface water body is the Muddy River, classified by the DEP as a Class B Surface Water Body, that is located approximately 200 feet west of the subject site. The area immediately surrounding the Muddy River is indicated to be within the 100 year flood plain, and the banks are classified as Protected Open Space. The Protected Open Spaces are located within 500 feet of the subject site.

The DEP on-line waste site database indicates that there are three (3) DEP-listed disposal sites within 500 feet of the subject site. The disposal sites are identified as 75 Fenwood Road (RTN 3-29375), 74 Fenwood Road (RTN 3-31177), and 70 Francis Street (RTNs 3-24526 and 3-24527). According to the DEP Online Searchable Site database, each of these disposal sites has achieved a Permanent Solution, indicating that a condition of No Significant Risk exists with respect to the release conditions. Therefore, these release sites are not considered to pose a threat of impact to the foundation dewatering activities at the subject site.

A review of information provided by the U.S. Fish and Wildlife Service in an Information for Planning and Conservation (IPaC) Trust Resource Report for the subject site did not identify the presence of endangered species at or in the vicinity of the discharge location and/or discharge outfall. However, the report indicated that the Northern Long-eared Bat, which is classified as a "threatened" species, should be considered with regard to this project. Further, the Trust Resource Report indicated that there is not a critical habitat in the vicinity of the discharge outfall and/or discharge location. Based on correspondence with Ms. Maria Tur of the New England Field Office for the U.S. Fish and Wildlife Service, groundwater discharge from the subject site to the Muddy River is not considered likely to adversely affect the Northern Long-eared bat, given that no tree clearing or construction activities are anticipated to occur as part of the discharge activities. A copy of the IPaC Trust Resource Report and correspondence with Ms. Tur are included in **Appendix D**.

During initial application for authorization to discharge under the previous Massachusetts DGP, a review of the National Register of Historical Places for Suffolk County in Boston, Massachusetts did not identify records or addresses of Historic Places that exist in the immediate vicinity of the subject site and/or outfall location. Given that no new control measures, alteration to existing control measures, or subsurface land disturbances are anticipated during continued discharge activities, the discharge is not considered to have the potential to affect historic properties.

Permanent Foundation Sump Dewatering

The existing building is understood to have been constructed in the 1970s and off-site discharge of groundwater from a foundation sump is understood to have occurred since that time. The foundation drainage system is required to maintain the garage in a dry condition. The groundwater inflow into the foundation drainage system was measured on November 29, 2011 to be about 175 gallons per minute (GPM). The maximum daily flow is estimated to be 504,000 gallons per day (GPD). The average monthly flow is estimated to be 252,000 GPD.

Summary of Groundwater Analysis

Pursuant to Section 4.4.5 of the General Permit, a sample of the discharge water was sampled and analyzed for the presence of antimony, arsenic, cadmium, chromium (total), hexavalent chromium, chloride, copper, iron, lead, mercury, nickel, silver, zinc and pH. The receiving water was sampled for hardness.

On January 26, 2012, McPhail Associates, LLC obtained a sample of groundwater from the foundation sump pit at the subject site and submitted it for laboratory analysis for the presence of antimony, arsenic, cadmium, pH, total chromium, hexavalent chromium, copper, chloride, iron, mercury, nickel, silver and zinc, as required by the previous Dewatering General Permit (DGP). The purpose of this sample was to support the previous NOI submitted in 2012. The results of laboratory analysis of this sample from January 2012 did not identify the presence of these analytes above EPA effluent limits and/or dilution concentrations.

On June 12, 2015, a representative of McPhail Associates, LLC obtained a sample of groundwater from the foundation sump pit and submitted the sample to a certified laboratory for analysis for the presence of parameters required under the EPA's DGP application, including antimony, arsenic, cadmium, pH, total chromium, hexavalent chromium, copper, chloride, iron, mercury, nickel, silver and zinc. On January 26, 2012 during sampling pertaining to the previous NOI prepared in 2012, a sample of water was obtained from the Muddy River near the outfall of the drainage pipe and analyzed for hardness. The results of the laboratory analysis are summarized in **Table 1** and laboratory data is included in **Appendix E**. The results of laboratory analysis indicate the following:

1. - **pH**: The tested sample exhibited a pH level of 6.7 Standard Units (S.U.) which is within the permissible range of 6.5 to 8.5 S.U. for discharge into freshwater. During previous discharge monitoring conducted at the subject site since May 2012, pH levels have ranged from 6.2 S.U. to 7.4 S.U., with an average of 6.6 S.U.

2. - **Total Metals**: The laboratory analytical results did not identify the presence of detectable levels of hexavalent chromium, antimony, cadmium, chromium, iron, lead, mercury, nickel, selenium, and silver in the submitted sample of groundwater. Levels of copper and zinc were reported at levels of 5.7 micrograms per liter (ug/l) and 9 ug/L, respectively. The detected level zinc is below the EPA effluent limits of 66.6 ug/l for discharge to a freshwater body.

The detected level of copper exceeds the EPA effluent limit of 5.2 ug/l for discharge into a freshwater body. However, based on calculations of the applicable dilution factor as shown below, the detected concentration of copper is below the corresponding dilution concentration of 13 ug/l.

In addition, the laboratory reporting limit of 0.5 ug/L for cadmium exceeds the EPA effluent limit of 0.2 ug/L for discharge into a freshwater body. However, based on calculations of the applicable dilution factor as shown below, the laboratory reporting limit of 0.5 ug/L indicates that a potential concentration of cadmium present in the groundwater would be below the corresponding dilution concentration for cadmium of 0.5 ug/L.

Dilution Factor Application for Total Copper and Total Cadmium

As mentioned above, total copper was detected at a concentration of 5.7 ug/l and the EPA freshwater effluent limitation for copper is 5.2 ug/l. As a result, a Dilution Factor (DF) was calculated for the detected level of total copper and the laboratory reporting limit for cadmium pursuant to the procedure contained in DGP MAG070000, Appendix VII. The purpose of the DF calculation is to establish Total Recoverable Limits for metals, taking into consideration the anticipated dilution of the detected analyte upon discharge into the Muddy River. The calculated DF was then used to find the appropriate Dilution Range Concentration (DRC) contained in MAG910000, Appendix IV. The Minimum Flow Rate calculated by the USGS Streamstats GIS database at the location of discharge into the Muddy River for seven consecutive days with a recurrence interval of 10 years (7Q10 flow) is 0.57 cubic feet per second thus resulting in a DF of 2.5 using the average discharge rate of 252,000 GPD. Therefore, based on the calculation of the applicable dilution factor, the detected level of copper at 5.7 ug/l is less than the dilution concentration of 13 ug/l for discharge into a freshwater body. Further, the laboratory reporting limit of 0.5 ug/L for cadmium indicates that a potential concentration of cadmium present in the groundwater would be below the corresponding dilution concentration for cadmium of 0.5 ug/L.

In summary, the results of laboratory analysis did not identify the presence of total metals above EPA effluent limits and/or dilution concentrations. Further, these data indicate that concentrations of total metals are either consistent with or lower than concentrations identified during the January 2012 sampling.

3. - **Hardness**: The hardness of the receiving water (Muddy River Outfall) was 140 mg/l, which was sampled on January 26, 2012. The laboratory data for this sample is included in **Appendix E**.

Discussion of Groundwater Monitoring Results

Laboratory analysis indicates that groundwater within the foundation sump meets the requirements for discharge under an EPA DGP into a designated drain and, ultimately, into the Muddy River. Further, the average pH and Total Suspended Solids (TSS) levels identified during monthly monitoring activities since June 2012 are within the permissible ranges of 6.5 to 8.3 SU and <50 mg/kg, respectively, for discharge into a surface water body.

On eight (8) occasions during monthly groundwater monitoring, the pH of the groundwater was measured to be slightly outside of the permissible range for pH, at levels ranging from 6.2 to 6.4 S.U. Further, during the initial phase of discharge monitoring, which occurred in May 2012, McPhail performed weekly sampling and the results of one (1) test indicated a pH of 6.1 SU. Subsequently, McPhail contacted Mr. Victor Alvarez of the Environmental Protection Agency indicated that these pH levels were not a cause for concern given that the pH of the effluent and its flow rate are not great enough to alter the pH of the Muddy River beyond the mixing zone at the outfall.

Given that monthly groundwater monitoring data collected from the subject site since June 2012 indicate that TSS concentrations have consistently been within the permissible range, and that pH levels have consistently been either within the permissible range or at levels which were indicated by the EPA to not be likely to alter the pH of the Muddy River beyond the mixing zone at the outfall, we respectfully request that this discharge be considered for a total monitoring reduction for the duration of the permit term, pursuant Section 2.2.1 (b) of the Final National Pollutant Discharge Elimination System (NPDES) General Permit for Dewatering Activity Discharges.

Summary and Conclusions

The purpose of this report is to assess site environmental conditions and groundwater data to support an application for authorization to continue long-term discharge of groundwater from a foundation sump under the Massachusetts Dewatering General Permit. In summary, the results of the groundwater chemical analyses indicate that analytes were either not detected above the laboratory's detection limits or were detected at concentrations below the DGP effluent limitations. Sampling and analysis of the effluent will be carried out in

accordance with the terms of DGP MAG070000. As described above, based on previous analytical data collected in January 2012 for preparation of the previous NOI for the discharge, as well as monthly monitoring data collected from the subject site since June 2012, we respectfully request that this discharge be considered for a total monitoring reduction for the duration of the permit term, pursuant to Section 2.2.1 (b) of the Final National Pollutant Discharge Elimination System (NPDES) General Permits for Dewatering Activity Discharges.

We trust that the above satisfies your present requirements. Should you have any questions or comments concerning the above, please do not hesitate to contact us.

Very truly yours,

McPHAIL ASSOCIATES, LLC

Kevin D. Jordan

Ambrose J. Donovan, P.E., L.S.P.

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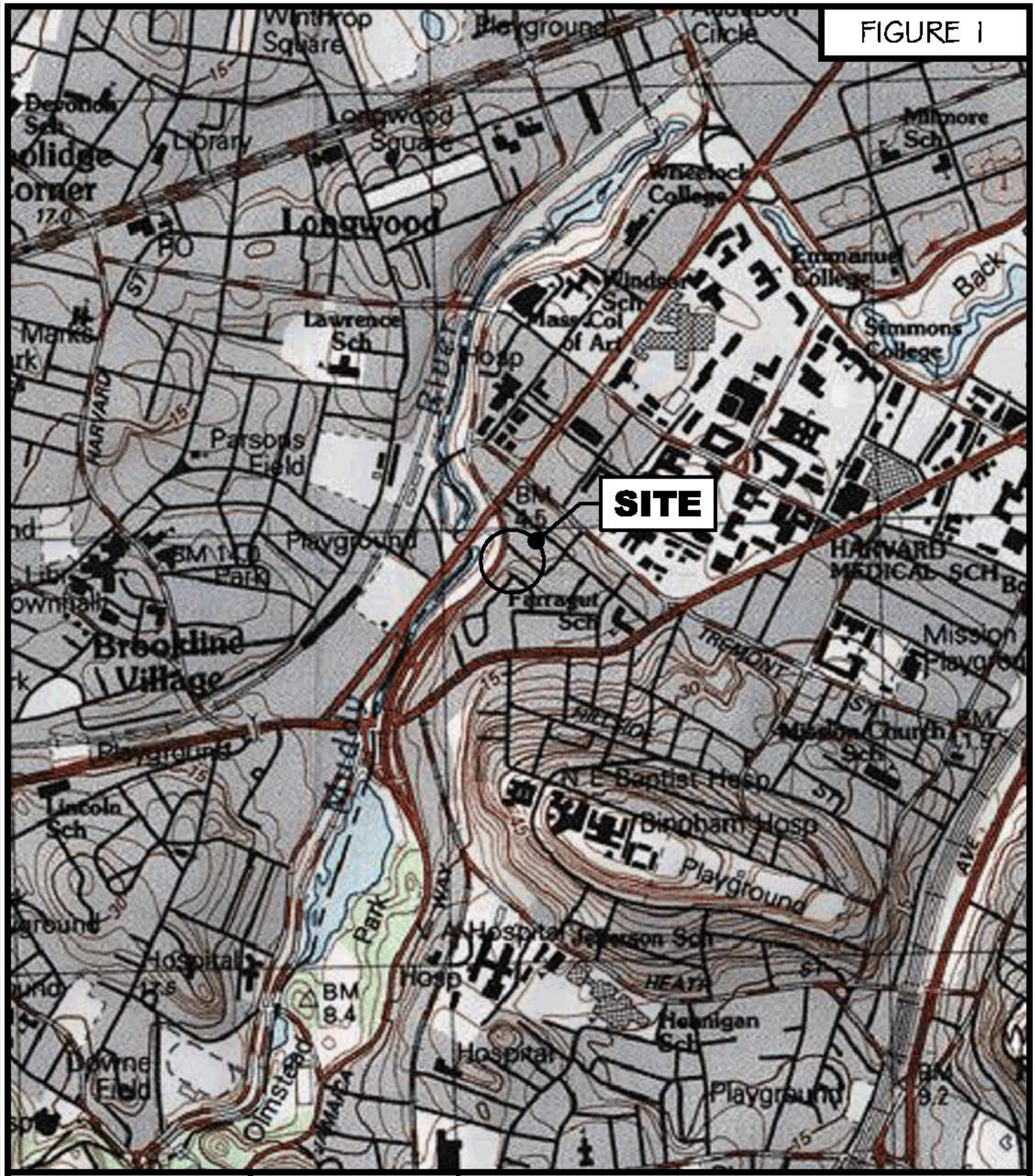
KDJ/wjb/ajd

FIGURE 1



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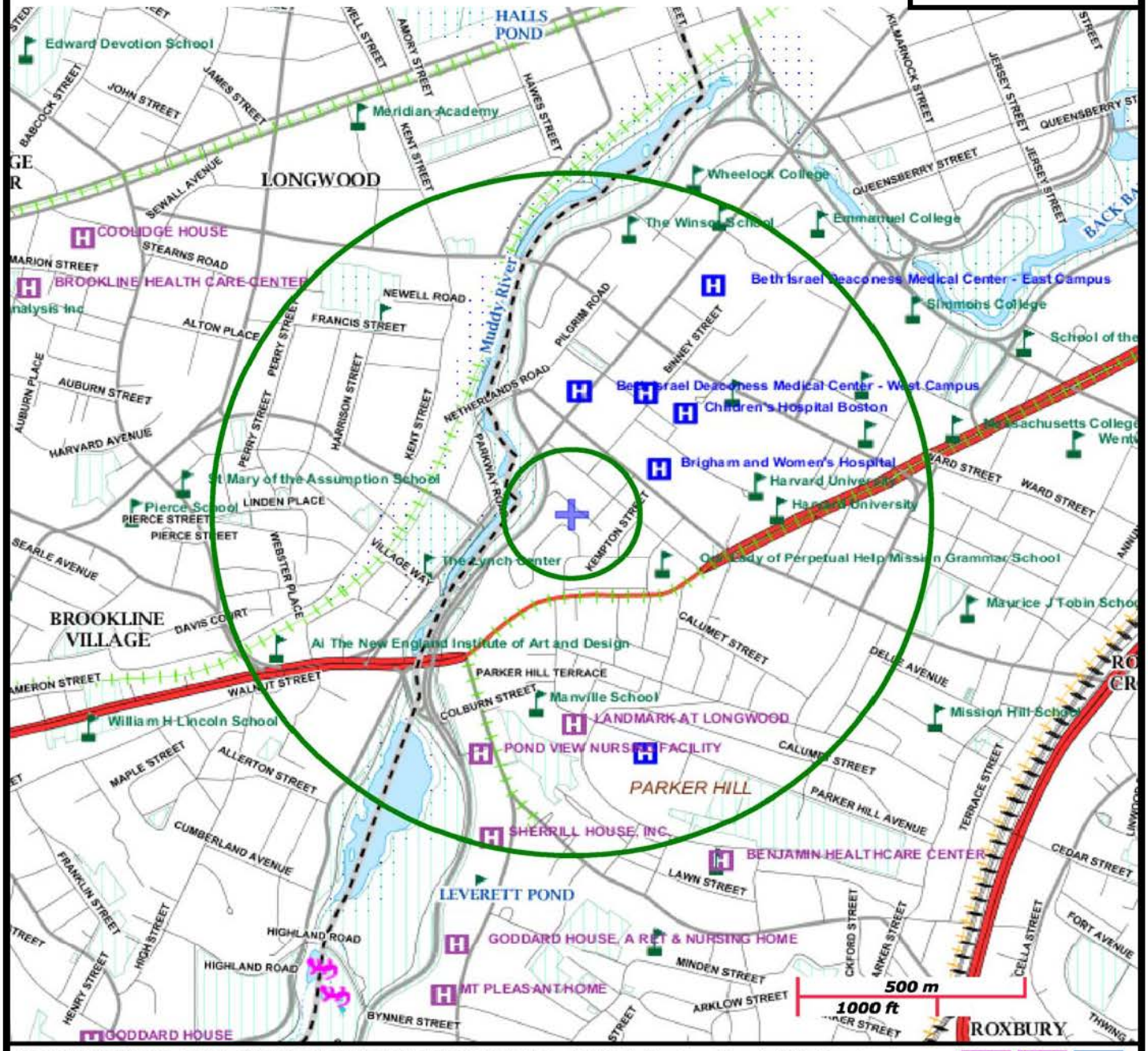
SCALE 1:12,500

PROJECT LOCATION PLAN

10 VINING STREET

BOSTON MASSACHUSETTS

FIGURE 2



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

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

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

REFERENCE: THIS PLAN WAS PREPARED FROM AN IMAGE OBTAINED FROM THE MASS.GOV WEBSITE

McPHAIL ASSOCIATES, LLC
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617/868-1423 (Fax)
www.mcphailgeo.com

10 VINING STREET

BOSTON MASSACHUSETTS

SITE PLAN

FOR

ROXBURY TENANTS OF HARVARD

BY

McPHAIL ASSOCIATES, LLC

Date: JUNE 2015	Dwn: I.J.M.	Chkd: K.J.D.	Scale: N.T.S.
Project No: 5347			

FILE NAME: H:\Acad\JOBS\5347\5347-502rev1.dwg

Table 1
Analytical Results - Groundwater
(DGP Application)

10 Vining Street Boston, MA
McPhail Project No. 5347

LOCATION	RGP Limits	RGP Limits with DF	Units	**Effluent**
SAMPLING DATE				**6/12/2015**
LAB SAMPLE ID				**L1513273-01**
pH (H)	6.5-8.3		SU	6.7
Chloride	Monitor Only		ug/l	568000
Total Recoverable Metal Limits				
Antimony	5.6	14	ug/l	ND (2)
Arsenic (freshwater)	10	25	ug/l	ND (0.5)
Cadmium (freshwater)	0.2	0.5	ug/l	ND (0.5)
Chromium III (freshwater)	48.8	122	ug/l	ND (0.5)
Chromium IV, Hexavalent (freshwater)	11.4	28.5	ug/l	ND (10)
Copper	5.2	13	ug/l	5.7
Lead	1.3	3.25	ug/l	ND (0.5)
Mercury	0.9	2.25	ug/l	ND (0.2)
Nickel	29	72.5	ug/l	ND (0.5)
Silver	1.2	3	ug/l	ND (0.5)
Zinc	66.6	166.5	ug/l	9
Iron	1000	2500	ug/l	ND (50)

ND()-not detected above laboratory method detection limit

APPENDIX A: -

LIMITATIONS -

LIMITATIONS

The purpose of this report is to present a summary of environmental conditions, including the results of testing of groundwater samples obtained from a foundation sump on the property located at 10 Vining Street in Boston, Massachusetts and a surface water sample from the Muddy River, in support of an application for approval of long-term dewatering discharge of groundwater from a foundation sump into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Dewatering General Permit MAG070000.

The observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the nature and extent of subsurface conditions between the spaced subsurface explorations become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon analytical data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used in disposal and other factors.

Laboratory analyses have been performed for specific constituents during the course of this assessment, as described in the text. However, it should be noted that additional constituents not searched for during the current study may be present in soil and/or groundwater at the site.

This report and application have been prepared on behalf of and for the exclusive use of the Roxbury Tenants of Harvard. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than the US EPA, the Massachusetts DEP, nor used in whole or in part by any other party without prior written consent of McPhail Associates, LLC.

APPENDIX B: -

NOTICE OF INTENT - NPDES DEWATERING GENERAL PERMIT - TRANSMITTAL FORM FOR PERMIT APPLICATION AND PAYMENT

II. Suggested Notice of Intent (NOI) Format

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

a) Name of facility: Mission Park Garage - 10 Vining Street	**Mailing Address for the Facility:** c/o RTH, 11 New Whitney Street, Boston, MA 02115	
b) Location Address of the Facility (if different from mailing address): 10 Vining Street, Boston, MA	**Facility Location** **longitude:** 71.11 W **latitude:** 42.33 N	**Type of Business:** Residential/Parking Garage **Facility SIC codes:** 7500

c) Name of facility owner: Roxbury Tenants of Harvard **Owner's email:** ltaylor@roxburytenants.org

Owner's Tel #: (617) 232-4306 **Owner's Fax #:** (617) 232-0571

Address of owner (if different from facility address)

c/o RTH, 11 New Whitney Street, Boston, MA 02115

Owner is (check one): 1. Federal____ 2. State _____ 3. Private__✓__ 4. Other _____(Describe)_____

Legal name of Operator, if not owner: _____

Operator Contact Name: _____

Operator Tel Number: _____ **Fax Number:** _____

Operator's email: _____

Operator Address (if different from owner)

d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? __✓__

e) Check Yes or No for the following:

1. **Has a prior NPDES permit been granted for the discharge? Yes __✓__ No____ If Yes, Permit Number:** MAG70379
2. **Is the discharge a "new discharger" as defined by 40 CFR Section 122.2? Yes_____ No__✓__**
3. **Is the facility covered by an individual NPDES permit? Yes_____ No__✓__ If Yes, Permit Number ____**
4. **Is there a pending application on file with EPA for this discharge? Yes _____ No __✓__ If Yes, date of submittal:**

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

a) Name of receiving water into which discharge will occur: Muddy River

State Water Quality Classification: Class B **Freshwater:** Yes **Marine Water:** No

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 504,000 **G**
Average Monthly Flow 252,000 **GPD**

e.) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 6.2 **Min pH** 7.4

f.) Identify the source of the discharge (i.e. potable water, surface water, orgroundwater). If groundwater, the facility shall subm required in Section 4.4.5 of the General Permit.

g.) What treatment does the wastewater receive prior to discharge? None

h.) Is the discharge continuous? Yes ✓ **No** _____ **If no, is the discharge periodic (P) (occurs regularly, ie., mon not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B)** _____
If (P), number of days or months per year of the discharge _____ **and the specific months of discharge** _____
If (I), number of days/year there is a discharge _____
Is the discharge temporary? Yes _____ **No** ✓
If yes, approximate start date of dewatering N/A **approximate end date of dewatering** N/A

i.) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. 71.11036 **l 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 attach any calculation sheets used to support stream flow and dilution calculations N/A **cfs**
(See Appendix VIII 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 En (ACEC):

k.) Does the discharge occur in an ACEC? Yes _____ No __✓___
If yes, provide the name of the ACEC: N/A

3. Contaminant Information

a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and man average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and th toxicity (NOAEL and/or LC_{50} in percent for aquatic organism(s)).

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge.

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix to the following questions.

a) Which of the three eligibility criteria listed in Appendix IV, Criterion (A, B, or C) have you met? B_____
b) Please attach documentation with your NOI supporting your response. Please see Appendix IV for acceptable documentation See letter report

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

a) See Screening Process in AppendixIII and respond to questions regarding your site and any historic properties listed or eligible f Register of Historic Places. Question 1: Yes __✓__ No ____ ; Question 2: No _____ Yes _____ N/A, see letter report

b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No __✓__ If yes, at consultation(s).

c) Which of the three National Historic Preservation Act eligibility criterion listed in Appendix III, Criterion (A, B, or C) have you m

d) Is the project located on property of religious or cultural significance to an Indian Tribe? Yes _____ or No __✓__ If yes, provide t Tribe associated with the property. _____

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

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 C 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: Mission Park Garage

Operator signature:

Print Full Name and Title: Karen T. Gately - Executive Director

Date: 7-7-15

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.

Enter your transmittal number → X266653 (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

WM14	Dewatering General Permit
1. Permit Code: 7 or 8 character code from permit instructions	2. Name of Permit Category

General Permit for Surface Water Discharge NOI
3. Type of Project or Activity

B. Applicant Information – Firm or Individual

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

2. **Last Name** of Individual	3. **First Name** of Individual	4. MI

11 New Whitney Street
5. Street Address

6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
Boston	MA	02115	617-232-4306	

11. Contact Person	12. e-mail address (optional)
Lori Taylor	

C. Facility, Site or Individual Requiring Approval

Mission Park Garage
1. Name of Facility, Site Or Individual

10 Vining Street
2. Street Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Boston	MA	02115		

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)*

McPhail Associates, LLC
1. Name of Firm Or Individual

2269 Massachusetts Avenue
2. Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Cambridge	MA	02140	617-868-1420	

8. Contact Person	9. LSP Number (BWSC Permits only)
Jonathan Patch	

E. Permit - Project Coordination

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

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

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).

34116	$440.00	7/1/15
Check Number	Dollar Amount	Date

34116

MCPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140

Cambridge Trust Company
CAMBRIDGE, MASS.
53-59-113

EZShield™ Check Fraud Protection for Business

7/1/2015

PAY TO THE ORDER OF Commonwealth of Mass. $ **440.00

Four Hundred Forty and 00/100********** DOLLARS

Commonwealth of Mass.

AUTHORIZED SIGNATURE

MEMO 5347.9.02

Security features. Details on back.

⑈034116⑈ ⑆011300595⑆ ⑈5055280⑈

APPENDIX C: -

SKETCHES OF THE GARAGE DRAINAGE SYSTEM PREPARED BY - T.G. O'CONNOR CONTRACTING CORP. AND DATED JUNE 15, 2010.

TGO
T.G. O'Connor Contracting Corp.
1098 Turnpike Street
STOUGHTON, MA 02072
(781) 341-5084 Fax (781) 341-5086

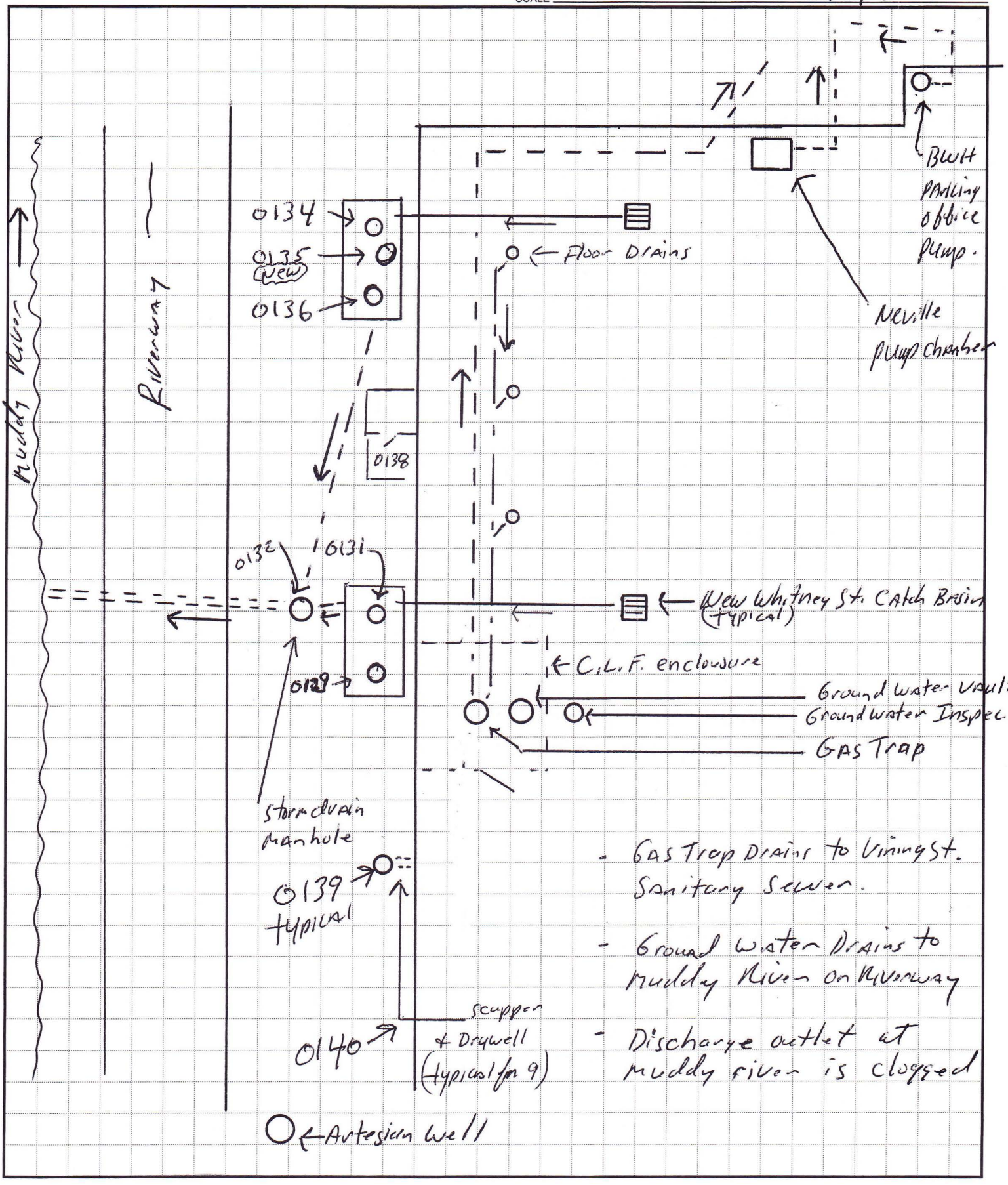
JOB Mission Park

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE 6-15-10

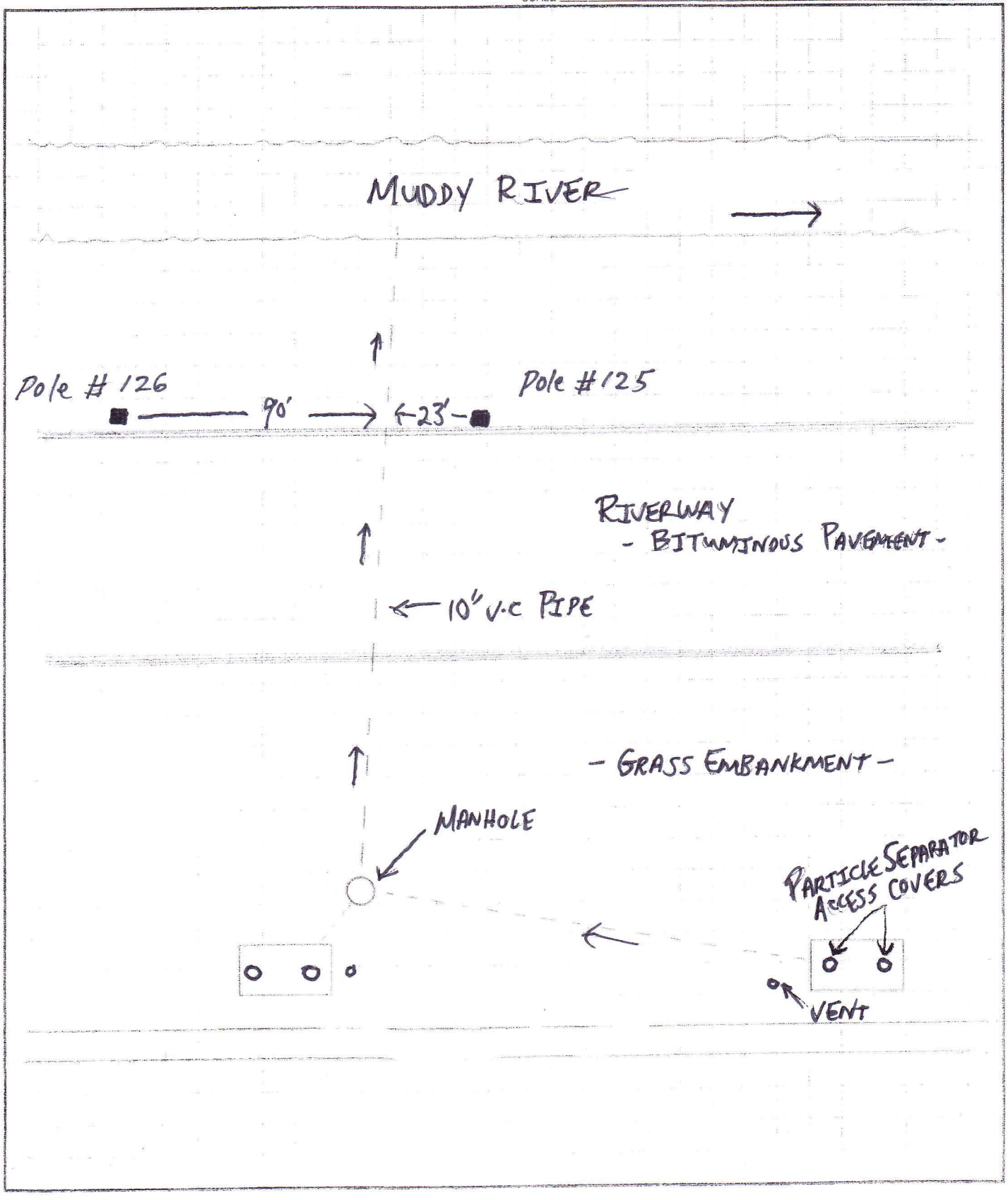
CHECKED BY _____ DATE _____

SCALE _____ Vining St.



TGO
T.G. O'Connor Contracting Corp.
1098 Turnpike Street
STOUGHTON, MA 02072
(781) 341-5084 Fax (781) 341-5086

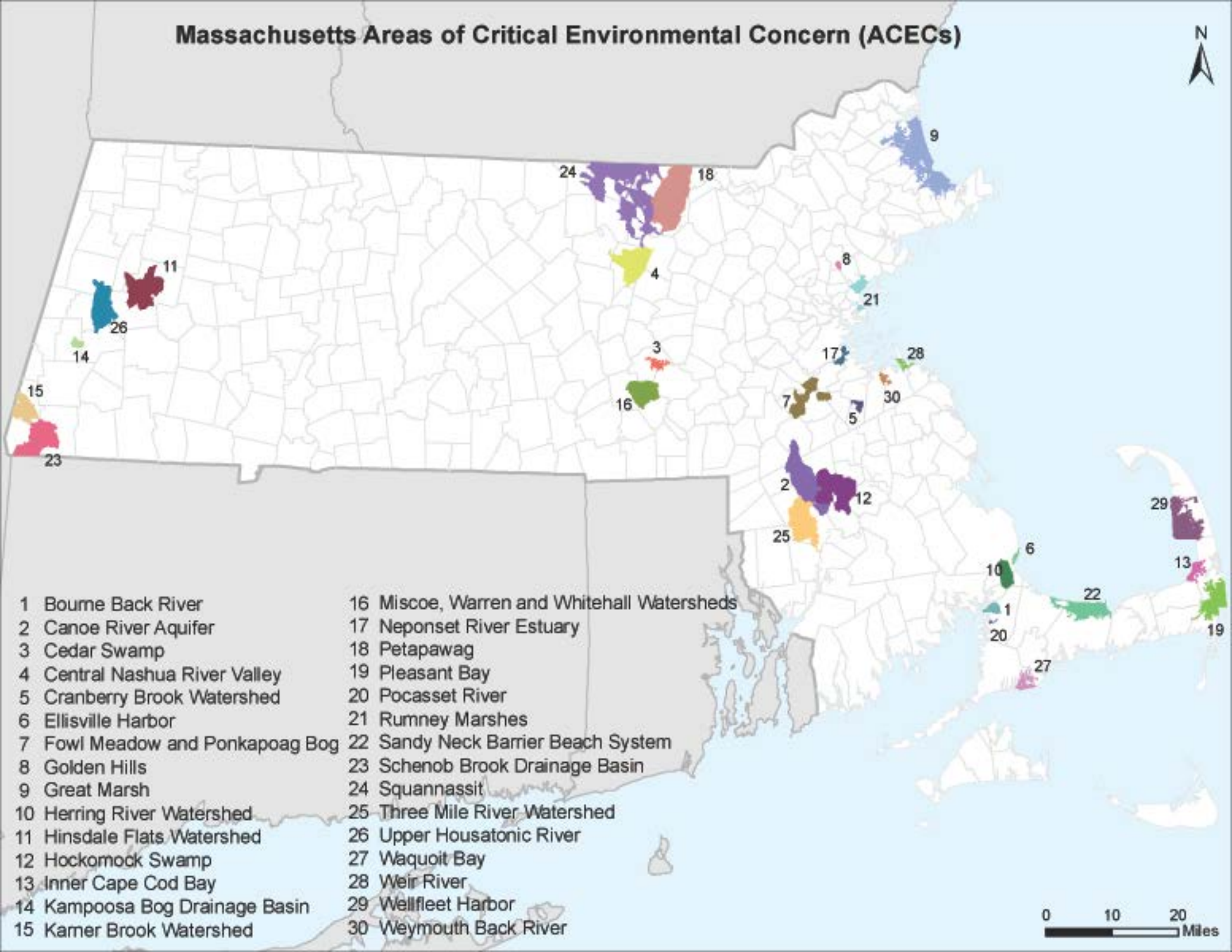
JOB MISSION PARK STORM DRAIN TO MUDDY RIVER
SHEET NO. _____ OF LOCATION
CALCULATED BY TEO DATE 9/27/10
CHECKED BY _____ DATE _____
SCALE _____



APPENDIX D: -

MASSACHUSETTS AREAS OF CRITICAL CONCERN -
IPAC TRUST RESOURCE REPORT -
CORRESPONDENCE WITH U.S. FISH AND WILDLIFE SERVICE -

Massachusetts Areas of Critical Environmental Concern (ACECs)



1 Bourne Back River
2 Canoe River Aquifer
3 Cedar Swamp
4 Central Nashua River Valley
5 Cranberry Brook Watershed
6 Ellisville Harbor
7 Fowl Meadow and Ponkapoag Bog
8 Golden Hills
9 Great Marsh
10 Herring River Watershed
11 Hinsdale Flats Watershed
12 Hockomock Swamp
13 Inner Cape Cod Bay
14 Kampoosa Bog Drainage Basin
15 Karner Brook Watershed
16 Miscoe, Warren and Whitehall Watersheds
17 Neponset River Estuary
18 Petapawag
19 Pleasant Bay
20 Pocasset River
21 Rumney Marshes
22 Sandy Neck Barrier Beach System
23 Schenob Brook Drainage Basin
24 Squannassit
25 Three Mile River Watershed
26 Upper Housatonic River
27 Waquoit Bay
28 Weir River
29 Wellfleet Harbor
30 Weymouth Back River

U.S. Fish & Wildlife Service

My project

IPaC Trust Resource Report

Generated June 23, 2015 07:57 AM MDT

US Fish & Wildlife Service

IPaC Trust Resource Report

Project Description

NAME

My project

PROJECT CODE

AHR2I-U2BAR-GRLGP-MZBBD-42S47U

LOCATION

Norfolk and Suffolk counties, Massachusetts

DESCRIPTION

No description provided

U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 3301-5094
(603) 223-2541

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the Endangered Species Program and should be considered as part of an effect analysis for this project.

Mammals

Northern Long-eared Bat Myotis septentrionalis — **Threatened**

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

American Oystercatcher Haematopus palliatus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G8

American Bittern Botaurus lentiginosus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3

Bald Eagle Haliaeetus leucocephalus — **Bird of conservation concern**
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008

Black-billed Cuckoo Coccyzus erythropthalmus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI

Blue-winged Warbler Vermivora pinus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JY

Canada Warbler Wilsonia canadensis — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0LL

Hudsonian Godwit Limosa haemastica — **Bird of conservation concern**
Season: Migrating
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JM

Least Bittern Ixobrychus exilis — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JW

Pied-billed Grebe Podilymbus podiceps — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JQ

Prairie Warbler Dendroica discolor — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0K4

Purple Sandpiper Calidris maritima **Bird of conservation concern**
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0L1

Saltmarsh Sparrow Ammodramus caudacutus **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0MY

Seaside Sparrow Ammodramus maritimus **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0N0

Short-eared Owl Asio flammeus **Bird of conservation concern**
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD

Snowy Egret Egretta thula **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0LC

Upland Sandpiper Bartramia longicauda **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HC

Wood Thrush Hylocichla mustelina **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0IB

Worm Eating Warbler Helmitheros vermivorum **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0II

Refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to NWI 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.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Riverine

R2UBH 9.68 acres

Kevin Jordan

From: Tur, Maria <maria_tur@fws.gov>
Sent: Tuesday, June 23, 2015 11:15 AM
To: Kevin Jordan
Subject: Re: Mission Park Garage - NOI

Hello Kevin,

My understanding is that this is a re-issuance of an existing wastewater discharge permit. There will be no tree clearing or other construction activities associated with this project. If this is the case, then I do not anticipate there to be any impact on the federally threatened northern long-eared bat. Thank you for coordinating.

Maria E. Tur
U.S. Fish and Wildlife Service
New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301
Phone (603) 223-2541 x6419
FAX (603) 223-0104

http://www.fws.gov/newengland/

On Tue, Jun 23, 2015 at 10:10 AM, Kevin Jordan <kjordan@mcphailgeo.com> wrote:

Maria,

Following up on our discussion from a few minutes ago, I was hoping to get written confirmation for a Notice of Intent we are preparing that the groundwater discharge from Mission Park Garage in Boston, MA will not affect the Northern Long-eared Bat, which is listed as a threatened species in the vicinity of the project site. This project is an ongoing discharge to the Muddy River which has occurred for the past few years under the Massachusetts Discharge General Permit and no tree clearing or construction will be involved to continue this discharge. For reference, the IPaC Trust Recourse Report the project is attached. The project details are below:

Facility: Mission Park Garage

Address: 10 Vining Street, Boston, Massachusetts

Discharge Location: Muddy River (Class B)

Thank you for the help, and please let me know if there is any additional information you need.

Regards,

Kevin

Kevin D. Jordan

McPHAIL ASSOCIATES, LLC

2269 Massachusetts Avenue

Cambridge, MA 02140

Tel: 617-868-1420 Ext. 336

Direct: 617-349-7336

www.mcphailgeo.com

APPENDIX E: -

LABORATORY ANALYTICAL DATA -

ANALYTICAL REPORT

Lab Number:	L1513273
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	MPG
Project Number:	5347.9.01
Report Date:	06/19/15

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1513273-01	EFFLUENT	WATER	BOSTON, MA	06/12/15 14:30	06/12/15

Project Name: MPG **Lab Number:** L1513273

Project Number: 5347.9.01 **Report Date:** 06/19/15

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is 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
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
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
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E 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).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
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

A response to questions G, H and I is 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
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Case Narrative (continued)

MCP Related Narratives

Metals

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative

Date: 06/19/15

METALS

Project Name: MPG
Project Number: 5347.9.01
Lab Number: L1513273
Report Date: 06/19/15

SAMPLE RESULTS

Lab ID: L1513273-01
Client ID: EFFLUENT
Sample Location: BOSTON, MA
Matrix: Water
Date Collected: 06/12/15 14:30
Date Received: 06/12/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0020	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Cadmium, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Chromium, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Copper, Total	0.0057		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Iron, Total	ND		mg/l	0.05	--	1	06/17/15 21:02	06/18/15 13:52	EPA 3005A	97,6010C	JH
Lead, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Mercury, Total	ND		mg/l	0.0002	--	1	06/16/15 10:52	06/17/15 00:24	EPA 7470A	97,7470A	EA
Nickel, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Selenium, Total	ND		mg/l	0.005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Silver, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM
Zinc, Total	0.0090		mg/l	0.0050	--	1	06/17/15 21:00	06/18/15 10:11	EPA 3005A	97,6020A	BM

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01 Batch: WG793956-1										
Mercury, Total	ND		mg/l	0.0002	--	1	06/16/15 10:52	06/17/15 00:15	97,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01 Batch: WG794582-1										
Iron, Total	ND		mg/l	0.05	--	1	06/17/15 21:02	06/18/15 12:53	97,6010C	JH

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01 Batch: WG794584-1										
Antimony, Total	ND		mg/l	0.0020	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Cadmium, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Chromium, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Copper, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Lead, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Nickel, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
~~Selenium, Total~~	~~ND~~		~~mg/l~~	~~0.005~~	--	~~1~~	~~06/17/15 21:00~~	~~06/18/15 09:55~~	~~97,6020A~~	~~BM~~
Silver, Total	ND		mg/l	0.0005	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM
Zinc, Total	ND		mg/l	0.0050	--	1	06/17/15 21:00	06/18/15 09:55	97,6020A	BM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MPG

Project Number: 5347.9.01

Lab Number: L1513273

Report Date: 06/19/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG793956-2 WG793956-3								
Mercury, Total	108		109		80-120	1		20
MCP Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG794582-2 WG794582-3								
Iron, Total	96		97		80-120	1		20
MCP Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG794584-2 WG794584-3								
Antimony, Total	98		99		80-120	1		20
Arsenic, Total	104		106		80-120	2		20
Cadmium, Total	109		114		80-120	4		20
Chromium, Total	98		101		80-120	3		20
Copper, Total	100		105		80-120	5		20
Lead, Total	99		102		80-120	3		20
Nickel, Total	98		101		80-120	3		20
Selenium, Total	112		111		80-120	1		20
Silver, Total	100		101		80-120	1		20
Zinc, Total	104		105		80-120	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

SAMPLE RESULTS

Lab ID: L1513273-01
Client ID: EFFLUENT
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 06/12/15 14:30
Date Received: 06/12/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/12/15 21:00	06/12/15 21:44	97,7196A	DE
General Chemistry - Westborough Lab										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/17/15 14:10	30,2540D	DW
pH (H)	6.7		SU	-	NA	1	-	06/12/15 23:30	30,4500H+-B	LH
Anions by Ion Chromatography - Westborough Lab										
Chloride	568.		mg/l	12.5	--	25	-	06/12/15 20:06	44,300.0	AU

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab for sample(s): 01 Batch: WG793253-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/12/15 21:00	06/12/15 21:42	97,7196A	DE
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG793281-1										
Chloride	ND		mg/l	0.500	--	1	-	06/12/15 19:42	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG794339-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/17/15 14:10	30,2540D	DW

Lab Control Sample Analysis

Batch Quality Control

Project Name: MPG

Project Number: 5347.9.01

Lab Number: L1513273

Report Date: 06/19/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG793253-2 WG793253-3								
Chromium, Hexavalent	101		100		80-120	1		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG793276-1								
pH	100		-		99-101	-		5
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG793281-2								
Chloride	99		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG793281-3 QC Sample: L1513273-01 Client ID: EFFLUENT												
Chloride	568	100	668	100		-	-		40-151	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG793281-4 QC Sample: L1513273-01 Client ID: EFFLUENT						
Chloride	568	569	mg/l	0		18

Project Name: MPG
Project Number: 5347.9.01

Lab Number: L1513273
Report Date: 06/19/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1513273-01A	Plastic 500ml HNO3 preserved	A	<2	5.2	Y	Absent	MCP-FE-6010T-10(180),MCP-CR-6020T-10(180),MCP-7470T-10(28),MCP-CU-6020T-10(180),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180)
L1513273-01B	Plastic 250ml unpreserved	A	7	5.2	Y	Absent	CL-300(28)
L1513273-01C	Plastic 500ml unpreserved	A	7	5.2	Y	Absent	MCP-HEXCR7196-10(1)
L1513273-01D	Plastic 950ml unpreserved	A	7	5.2	Y	Absent	PH-4500(.01),TSS-2540(7)

*Values in parentheses indicate holding time in days

Project Name:	MPG	**Lab Number:**	L1513273
Project Number:	5347.9.01	**Report Date:**	06/19/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

Report Format: Data Usability Report

Project Name:	MPG	**Lab Number:**	L1513273
Project Number:	5347.9.01	**Report Date:**	06/19/15

Data Qualifiers

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	MPG	**Lab Number:**	L1513273
Project Number:	5347.9.01	**Report Date:**	06/19/15

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 6/12/15

ALPHA Job #: L1513273

Client Information

Client: McPhail Associates, LLC
Address: 2269 Massachusetts Ave
Cambridge, MA 02140
Phone: 617 868 1420
Fax:
Email: kjordan@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: MPG
Project Location: Boston, MA
Project #: 5347.9.01
Project Manager: Kevin Jordan
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program NPDES DGP Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
(If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed. (Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

★ Total metals = antimony, arsenic, cadmium, chromium (total), copper, iron, lead, mercury, nickel, silver, ~~selenium~~, zinc

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

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TSS	pH	Total Metals ★	Hexavalent Chromium	Chloride	Sample Specific Comments	TOTAL # BOTTLES
13273-01	Effuent	6/12/15	2:30pm	E	SGH	☒	☒	☒	☒	☒		4
Container Type						P	P	P	P	P		
Preservative						A	A	HNO3	A	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 20-JAN-2010)

Relinquished By:	Date/Time	Received By:	Date/Time
SGH/[signature]	6/12/15 2:30	[signature]	6/12/15 14:30
		[signature]	6/12/15 [illegible]

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.