GZA

Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

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May 24, 2019
File No. 01.0171521.52

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
205B Lowell Street
Wilmington, Massachusetts 01887

Re:

Immediate Response Action (IRA) Completion Report
Turbid Discharge – Outfall #3
(Former) Everett Staging Yard
One Broadway
Everett, Massachusetts
MassDEP Release Tracking Number (RTN) 3-35119

Dear Sir or Madam:

On behalf of Wynn MA, LLC ("Wynn MA"), GZA GeoEnvironmental, Inc. ("GZA") has prepared this Immediate Response Action ("IRA") Completion Report associated with the observed discharge of turbid water from a drainage structure (Outfall #3) located on the east side of the Site. The IRA disposal site is located within the Disposal Site at One Broadway in Everett (The "Site;" Figure 1) proximate to the southern end of the constructed wharf/bulkhead structures This discharge was considered a Condition of Substantial Release Migration ("SRM") as defined in the Massachusetts Contingency Plan ("MCP"). The turbid discharge was observed during a period of outgoing tidal flow while ongoing Release Abatement Measure ("RAM") activities were being conducted at the Site as part of continuing MCP Response Actions associated with Release Tracking Number ("RTN") 3-13341.

A Locus Plan and Site Plan are included as Figures 1 and 2, respectively. For the purposes of this filing, the IRA "Study Area" under RTN 3-35119 is defined as the eastern shoreline portion of the Site (as shown on Figure 2) where the turbid discharge of stormwater was released from Outfall 3 to the Mystic River.

This IRA Completion Report has been prepared in accordance with 310 CMR 40.0427 of the Massachusetts Contingency Plan ("MCP"), and is subject to the Limitations presented in Appendix A. This IRA Completion report will be submitted electronically through the eDEP online filing system. A copy of the IRA Transmittal Form BWSC-105 is included in Appendix B.

The disposal site under RTN 3-13341 has been designated as a Public Involvement Plan ("PIP") Site in accordance with Section 40.1404 of the MCP. A Notice of Availability of this IRA Completion Report has been emailed and/or mailed to local officials and residents on the PIP mailing list. A copy of this IRA Completion Report has also been made available at the designated information repositories, on the Encore Boston Harbor website, and on eDEP.

EXECUTIVE SUMMARY

On August 14, 2018, at approximately 10:00 a.m., GZA personnel observed a turbid discharge from a drainage structure on the Site into the Mystic River. The Site drainage structure, referred to as Outfall 3, is located along the eastern edge of the Site at the southern end of

the wharf/bulkhead structure, and is currently used as a point of discharge for storm water into the Mystic River. Upon observation of the turbid discharge, GZA immediately notified the responsible party of the observed condition, identifying the condition as a Condition of Substantial Release Migration as defined by the MCP with a 72-hour reporting requirement. On August 16, 2018, at approximately 2:30 p.m., a verbal notification was made to Mr. Paul Giddings of MassDEP notifying him of the IRA condition. Mr. Giddings provided verbal authorization on August 19 to proceed with IRA assessment only activities for this release. On August 22, Mr. Giddings provided verbal authorization to implement mitigation efforts, including the installation of a bladder to mitigate flow of turbid water into the stormwater drainage system and the flushing of on-Site tree pit drainage lines to remove sediment that might be contributing to the turbidity.

GZA submitted a written IRA Plan describing proposed IRA activities to MassDEP on October 15, 2018. IRA activities implemented in response to the Condition of Substantial Release Migration included flushing of the tree pit drainage lines to flush out material within the lines, installation of a temporary bladder within a section of tree pit drainage piping to mitigate flow into the stormwater collection system, and excavation of a tree pit to observe subsurface conditions proximate to the primary tree pit drainage line. As part of IRA assessment and monitoring activities, GZA performed daily observations of the stormwater discharge at Outfall 3 and monitored water levels within the tree pit drainage system. A second bladder was installed to temporarily block water flow from the tree pit drainage system into the stormwater drainage manhole upgradient of Outfall 3. This bladder was later supplemented by the installation of a hydraulic cement seal as a measure to permanently block flow from the tree pit drainage system into the drainage manhole upgradient of Outfall 3.

In February 2019, GZA submitted an IRA Status Report describing IRA activities completed through the end of January, 2019.

This IRA Completion Report describes IRA activities and monitoring performed to date to address the Condition of Substantial Release Migration.

IMMEDIATE RESPONSE ACTION COMPLETION REPORT

The information provided below addresses the requirements of the MCP for IRA Completion Reports, as outlined in 310 CMR 40.0427(4)(a) through (g). The IRA Completion Transmittal Form (BWSC105) was submitted electronically via eDEP in accordance with the current MassDEP policy. A copy of this form is included in Appendix B of this report.

(a) A description of the release or threat of release, site conditions, and surrounding receptors.

The following sections provide a description of the Site and surrounding area conditions, and a description of the release.

SITE AND SURROUNDING AREA CONDITIONS

The IRA disposal site is a small portion of the overall Disposal Site at One Broadway in Everett (the "Site;" Figure 1). The location of the observed turbid discharge is shown on Figure 2. The approximate latitude and longitude of the location of the turbid discharge are 42.3935 degrees north and 71.0710 degrees west, respectively. The Universal Transverse Mercator ("UTM") coordinates are 4,695,549 meters north and 329,535 meters east. Construction of the Encore Boston Harbor Resort is underway at the Site; the surrounding ground surface at the Site is generally bituminous pavement, hardscape (brick and/or concrete), artificial turf, or landscaped (grass, bushes, trees, etc.). The ground surface at the Site is currently highest proximate to the resort casino building, and slopes downward from that area to the east and south towards the Mystic River. Current ground surface elevations at the Site, based on the NAVD 88 datum, range from 15 feet (proximate to the building) to elevation 10 feet proximate to the top of the Coastal Bank. Grades slope downward to

about elevation 4.35 feet from the top of Coastal Bank to the bottom of the living shoreline. The observed discharge of turbid water emanates from Outfall #3 at approximately elevation -6.0 to -7.0 feet.

The Site is adjoined to the northeast by a vehicle maintenance and repair facility operated by the Massachusetts Bay Transportation Authority ("MBTA"); to the southeast by properties along Alford Street, including facilities operated by the Boston Water and Sewer Commission ("BWSC") and the Massachusetts Water Resources Authority ("MWRA"); to the southwest by the Mystic River; and to the northwest by railroad tracks for the MBTA Commuter Rail, beyond which are several large commercial/retail buildings associated with the Gateway Center.

The Site is located within the Boston Basin, a regional depression of bedrock consisting primarily of Cambridge Argillite, a partially metamorphosed siltstone. Site conditions generally consist of fill over a variable sequence of naturally deposited organics, sand and gravel, and silty clay over weathered rock and bedrock. Filling over naturally deposited materials occurred in the area of the Site from the late 1800s through the early 1960s. More recent naturally deposited sediments along the shoreline include sand, silt, and organics.

Depth to groundwater at the Site ranges from approximately 4 to 10 feet below ground surface and is tidally influenced. Groundwater at the Site flows generally toward the southeast on the southern portion of the Site and generally toward the south on the northern portion of the Site.

According to a Massachusetts Geographic Information System ("MassGIS") map, a copy of which is included in Appendix C, the Site is not located in or within 500 feet of a Zone II public water supply, a potentially productive aquifer, a Zone A surface water body, an Interim Wellhead Protection Area, a protected wetlands habitat, or an Area of Critical Environmental Concern. Protected open space associated with Gateway Park is located approximately 400 feet to the northwest of the Site.

Soil and groundwater at the Site have been contaminated by historic activities, including the former use of the Site as a chemical manufacturing facility. On August 18, 2015, Wynn MA and GZA submitted a RAM Plan under RTN 3-13341 documenting MCP Response Actions to be completed prior to the redevelopment of the Site. These activities were completed in May 2016, with a RAM Completion Report submitted to MassDEP on August 4, 2016. Redevelopment of the Site for construction of the resort casino building and associated utility installation, roadway construction, and grading operation are being performed under a second RAM plan submitted to MassDEP on May 2, 2016, and modified by RAM Plan Modifications on November 16, 2016, February 2, 2017, and November 1, 2017. The active RAM Plan at the Site addresses the management and disposal of excess soils from the Site, the treatment and discharge of impacted groundwater as necessary to perform excavation and construction activities below the groundwater table, and the installation of engineering controls to mitigate future exposures to contaminated soils.

RELEASE HISTORY

On August 14, 2018, GZA personnel observed a turbid discharge from a stormwater drainage structure into the Mystic River. The drainage structure, referred to as Outfall 3, is located along the eastern edge of the Site at the southern end of the wharf/bulkhead structure, and is currently used as a point of discharge for storm water into the Mystic River. Upon observation, GZA immediately notified the responsible party of the observed condition, identifying the condition as a Condition of Substantial Release Migration under the MCP with a 72-hour reporting requirement. On August 16, 2018, at approximately 2:30 p.m., a verbal notification was made to Mr. Paul Giddings (MassDEP) notifying him of the IRA condition. GZA was provided with verbal authorization on August 19, 2018 to perform IRA assessment only activities and on August 22, 2018 to implement specific mitigation efforts.

(b) A description of the work completed, including work undertaken in response to any conditions of approval imposed by the Department, and any work undertaken at the site that was not included in the scope of the Immediate Response Action Plan, where submitted; and (c) All investigatory and monitoring data obtained during the implementation of the Immediate Response Action.

Between August 22, 2018, and March 26, 2019 GZA personnel and others conducted the following activities to further evaluate and monitor the intermittent turbid discharge from Outfall 3:

Stormwater Discharge Observation and Monitoring and Drainage System Amendments.

On August 17, 2018, GZA collected a sample of water from the tree pit drainage system to visually evaluate the material causing the turbidity and for laboratory analytical testing. The sample was submitted to Alpha Analytical Laboratory in Westborough, Massachusetts, for analysis of total arsenic, copper, iron, lead, vanadium, and zinc, and for total suspended solids. Laboratory analytical results were received on August 21, 2018, and reviewed by Dr. Larry Feldman, LSP. The reported concentrations of contaminants were below RCGW-2 standards, but above the RCGW-1 standard for arsenic. The laboratory report is included in Appendix D. In addition, on August 22, 2018, GZA began assessment and monitoring activities in the vicinity of Outfall 3 and related drainage systems to evaluate the potential source of the turbid discharge. Observations indicated that the turbid discharge was typically present during low tide conditions.

The tree pit drainage system consists of piping installed inside tree pits and below tree root balls to prevent over-saturation of tree roots. The piping collects excess water from irrigation and precipitation and then directs this water into a central collection pipe which directs the water to the stormwater discharge system. The tree pits are lined with geosynthetic marker layer to separate imported soil above the marker layer from the underlying onsite soils.

GZA also collected water samples from multiple tree pit drainage locations for visual observation of water quality. Turbid water, similar to that observed at Outfall 3, was identified at one of the tree pit locations closest to the primary stormwater drainage pipe. In order to observe subgrade conditions in this area for potential contribution to the observed turbid discharge, the tree pit was excavated to approximately 5 feet below ground surface. GZA visually confirmed the presence of a geosynthetic layer between the bottom of the tree pit and underlying soils and noted that no turbid water was observed within the tree pit. The tree pit excavation was then backfilled using excavated material and the tree was replanted.

Laboratory analytical results from the water sample collected on August 17, 2018 were provided to MassDEP on August 22, 2018 along with proposed mitigation efforts consisting of the following:

- Installation of a temporary bladder in the drainage line from the one tree pit location where turbid water was observed in order to reduce the flow of water from this tree pit to the stormwater outfall;
- Flushing of the tree pit drainage piping (with the exception of the one tree pit piping where the bladder was installed) to evaluate the turbidity of water during flushing; and
- Continued monitoring of the discharge after flushing and bladder installation.

Mr. Giddings provided verbal notification to proceed with these mitigation efforts on August 22, 2018, and then confirmed this approval via email on September 4, 2018. The noted mitigation efforts began on September 11 and were completed by September 13, 2018. After flushing, the temporary bladder was removed from the tree pit location, since this bladder

had no visible impact on the turbid water discharge and only flushing the tree pit drainage system appeared to temporarily reduce the turbidity of the discharged water.

On September 19, 2018 a second bladder was installed to temporarily block water flow from the tree pit drainage system into the stormwater drainage manhole upgradient of Outfall 3. This second bladder appeared to effectively address the turbid discharge; since its installation, GZA has not observed turbidity at Outfall 3 attributable to the tree pit drainage. In order to permanently block flow from the tree pit drainage system into the manhole, the inflatable bladder was moved deeper into the pipe and a hydraulic cement seal was installed within the central collection pipe at the manhole on December 19, 2018.

GZA has continued to visually monitor the discharge at Outfall 3 as well as the groundwater elevation within the tree pit drainage system on a nearly daily basis, as the tidal schedule and work hours allowed. Water level monitoring performed from September 19, 2019 to March 26, 2019 demonstrated that the groundwater level periodically rose above the bottom of the tree pits immediately following significant precipitation events; however, water levels would return to normal levels shortly after the precipitation events, indicating that tree roots may only be saturated for short periods of time. Based on the water level observations made and on no observed turbid discharge related to the tree pit drainage system during this time period, water level monitoring was discontinued on March 26, 2019.

(d) A succinct statement on the findings and conclusions of the Immediate Response Action.
Since the installation of the permanent bladder and hydraulic cement seal within the tree pit drainage pipe entering the manhole upgradient of Outfall #3, GZA has not observed turbidity emanating from Outfall 3 into the Mystic River attributable to the tree pit drainage system. The installation of the bladder and permanent hydraulic cement seal within the pipe at the manhole has effectively eliminated the turbid discharge at Outfall 3 and the resulting Condition of Substantial Release Migration.

(e) Details and documentation on the management of any Remediation Waste, Remedial Wastewater and/or Remedial Additives managed at the site as part of the Immediate Response Action.

No Remediation Wastes were generated during the implementation of IRA activities.

(f) A description of any ongoing activities related to the Immediate Response Action that will be conducted at the site, including monitoring activities, security measures and the maintenance of fences, caps and other passive systems.

The IRA activities associated with RTN 3-35119 are complete and no ongoing activities are associated with this IRA. Wynn MA is continuing response actions directed at achieving a Permanent Solution for RTN 3-13341. The BWSC-107 Transmittal Form that has been provided with this submittal to link the IRA RTN 3-35119 with the main site RTN (3-313341) will serve as documentation that any future response actions will be reported under the main site RTN.

(g) A description of any ongoing activities related to the Immediate Response Action that will be conducted at the site as part of Comprehensive Response Actions.

As noted above, future response actions in the Study Area will be completed under RTN 3-313341.

PUBLIC INVOLVEMENT

As noted above, local officials and residents on the PIP mailing list have been notified regarding the completion of IRA activities in accordance with 310 CMR 40.01403(11)(e); copies of the letters are included in Appendix E.

Please contact the undersigned at (781) 278-3700 if you have questions concerning this IRA Completion Report.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

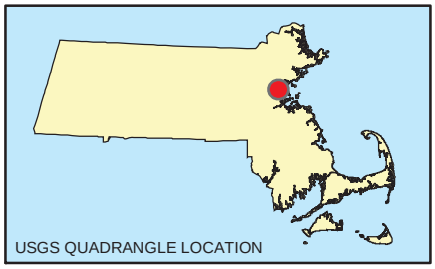
Daniel Scanlon
Assistant Project Manager

Matthew Smith
Consultant/Reviewer

Lawrence Feldman, LSP
Senior Principal

Attachments: Figure 1 - Locus Plan
Figure 2 - Site Plan
Appendix A - Limitations
Appendix B - MassDEP Transmittal Form BWSC-105
Appendix C – MassGIS
Appendix D – Laboratory Analytical Report

Figures



SOURCE : THIS MAP CONTAINS THE ESRI ARCGIS ONLINE USA TOPOGRAPHIC MAP SERVICE, PUBLISHED DECEMBER 12, 2009 BY ESRI ARCIMS SERVICES AND UPDATED AS NEEDED. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.

Data Supplied by : esri

0 1,000 2,000 4,000 6,000

SCALE IN FEET

N W E S

PROJ. MGR.: MMS
DESIGNED BY: MMS
REVIEWED BY: LF
OPERATOR: EMD

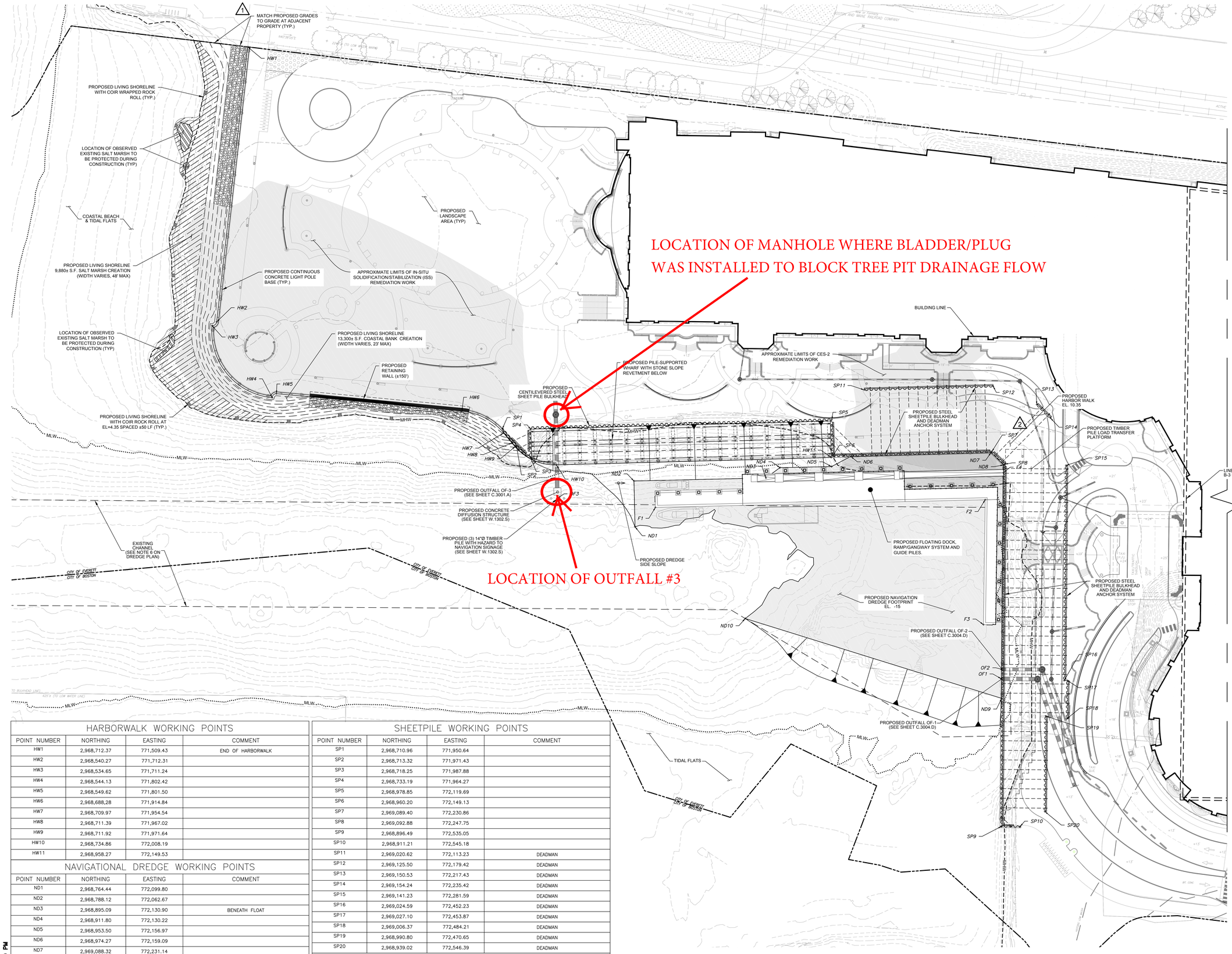
DATE: 3-27-2019

LOCUS PLAN

ONE BROADWAY
EVERETT, MASSACHUSETTS

JOB NO.
01.0171521.52

FIGURE NO.
1



HARBORWALK WORKING POINTS

POINT NUMBER	NORTHING	EASTING	COMMENT
HW1	2,968,712.37	771,509.43	END OF HARBORWALK
HW2	2,968,540.27	771,712.31	
HW3	2,968,534.65	771,711.24	
HW4	2,968,544.13	771,802.42	
HW5	2,968,549.62	771,801.50	
HW6	2,968,688.28	771,914.84	
HW7	2,968,709.97	771,954.54	
HW8	2,968,711.39	771,967.02	
HW9	2,968,711.92	771,971.64	
HW10	2,968,734.86	772,008.19	
HW11	2,968,958.27	772,149.53	

NAVIGATIONAL DREDGE WORKING POINTS

POINT NUMBER	NORTHING	EASTING	COMMENT
ND1	2,968,764.44	772,099.80	
ND2	2,968,788.12	772,062.67	
ND3	2,968,895.09	772,130.90	BENEATH FLOAT
ND4	2,968,911.80	772,130.22	
ND5	2,968,953.50	772,156.97	
ND6	2,968,974.27	772,159.09	
ND7	2,969,088.32	772,231.14	
ND8	2,969,091.76	772,247.82	
ND9	2,968,965.17	772,433.01	
ND10	2,968,803.29	772,232.00	

OUTFALL WORKING POINTS

POINT NUMBER	NORTHING	EASTING	COMMENT
OF1	2,968,975.31	772,417.14	
OF2	2,968,980.56	772,409.61	
OF3	2,968,717.88	772,035.58	CENTER OF TIMBER PILE

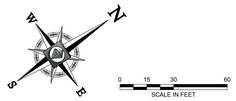
SHEETPILE WORKING POINTS

POINT NUMBER	NORTHING	EASTING	COMMENT
SP1	2,968,710.96	771,950.64	
SP2	2,968,713.32	771,971.43	
SP3	2,968,718.25	771,987.88	
SP4	2,968,733.19	771,964.27	
SP5	2,968,978.85	772,119.69	
SP6	2,968,960.20	772,149.13	
SP7	2,969,089.40	772,230.86	
SP8	2,969,092.88	772,247.75	
SP9	2,968,896.49	772,535.05	
SP10	2,968,911.21	772,545.18	
SP11	2,969,020.62	772,113.23	DEADMAN
SP12	2,969,125.50	772,179.42	DEADMAN
SP13	2,969,150.53	772,217.43	DEADMAN
SP14	2,969,154.24	772,235.42	DEADMAN
SP15	2,969,141.23	772,281.59	DEADMAN
SP16	2,969,024.59	772,452.23	DEADMAN
SP17	2,969,027.10	772,453.87	DEADMAN
SP18	2,969,006.37	772,484.21	DEADMAN
SP19	2,968,990.80	772,470.65	DEADMAN
SP20	2,968,939.02	772,546.39	DEADMAN

FLOATING DOCK WORKING POINTS

POINT NUMBER	NORTHING	EASTING	COMMENT
F1	2,968,781.08	772,095.73	
F2	2,969,058.36	772,265.70	
F3	2,968,990.08	772,364.39	
F4	2,969,087.29	772,253.91	CENTERLINE OF GANGWAY

WORKING POINT NOTES:
1. BASE LANDSCAPE DRAWINGS PROVIDED BY LIFESCAPES INTERNATIONAL, INC. WAS ORIENTED TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM USING THE BOSTON/EVERETT CITY LIMIT AS COMMON LINE. COORDINATES PROVIDED FOR WORKING POINTS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK AND IN THE FIELD. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE NOTICED.



PLOT STAMP: 9/10/2016 10:11:50 PM

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Consultants:

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

Seals:

General Notes:

NOTES:
1. VERTICAL DATUM BASED ON NOAA STATION 8443662, AMELIA EARHART DAM, MYSTIC RIVER, MA AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88): NAVD88 = 0.00, MLLW = -5.54, MLW = -5.21, MHW = +4.35, FEMA 100 YR FLOOD ELEVATION (ZONE AE) = +9.0.
2. EXISTING SURVEY FROM PLAN TITLED "EXISTING CONDITIONS PLAN, BROADWAY (ROUTE 99), EVERETT, MASS." BY FELDMAN LAND SURVEYORS, DATED APRIL 4, 2016.
3. BACKLAND FEATURES AND BUILDING BY OTHERS.
4. SEE C-SERIES FOR UTILITY INFORMATION.

Project Title:

Wynn Boston Harbor
Everett, MA

BOSTON HARBOR

Project Client:

Wynn Design & Development

734 Pilot Road
Las Vegas, Nevada 89119

P 702.770.5000
F 702.770.5003

CONSTRUCTION DOCUMENTS
2016-09-16

Number	Description	Date
1	BULLETIN 001	06-23-2016
2	BULLETIN 003	07-15-2016

Key Plan:

Project No.: L1009100

Drawing Sheet Title:

WATERFRONT WORK PLAN

Figure 2
Site Plan

Appendix A - Limitations

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

SCREENING AND ANALYTICAL TESTING

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

CONCEPTUAL SITE MODEL

14. Our opinions were developed, in part, based upon a comparison of site data to conditions anticipated within our Conceptual Site Model (CSM). The CSM is based on available information, and professional judgment. There are rarely sufficient data to develop a unique CSM. Therefore observations over time, and/or space, may vary from those depicted in the CSM provided in this report. In addition, the CSM should be evaluated and refined (as appropriate) whenever significant new information and/or data is obtained.

RISK CHARACTERIZATION

15. Our risk evaluation was performed in accordance with generally accepted practices of appropriate Federal and/or state regulatory agencies, and of other consultants undertaking similar studies at the same time, for similar purposes, and under similar circumstances. The findings of the risk evaluation are dependent on the numerous assumptions and uncertainties inherent in the risk characterization process. Sources of the uncertainty may include Site conditions; Site use; the nature, extent, concentration and distribution of contaminants; and the available toxicity and/or health/risk based regulatory information. Consequently, the findings of the risk characterization are not an absolute

characterization of actual risks; but rather serve to highlight potential incremental risks associated with activities indicated in the Report. Actual risks may be other than indicated in the Report.

Appendix B – MassDEP Transmittal Form BWSC105

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 105

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number
3 - 35119

A. SITE LOCATION:

1. Release Name/Location Aid: ENCORE BOSTON HARBOR

2. Street Address: 1 BROADWAY

3. City/Town: EVERETT 4. Zip Code: 021490000

☐ 5. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114.

☐ a. CERCLA ☐ b. HSWA Corrective Action ☐ c. Solid Waste Management

☐ d. RCRA State Program (21C Facilities)

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): _____

☐ 2. Submit an **Initial IRA Plan**.

☐ 3. Submit a **Modified IRA Plan** of a previously submitted written IRA Plan.

☐ 4. Submit an **Imminent Hazard Evaluation**. (check one)

☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.

☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.

☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.

☐ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

☐ 5. Submit a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard**.

☐ 6. Submit an **IRA Status Report**

☐ 7. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☐ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with an IRA Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with an IRA Status Report.

c. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☑ 8. Submit an **IRA Completion Statement**.

☑ a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN)

b. Provide Release Tracking Number of Tier Classified Site (Primary RTN): 3 13341

These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.

☐ 9. Submit a **Revised IRA Completion Statement**.

☐ 10. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

1. Media Impacted and Receptors Affected: (check all that apply)
☐ a. Paved Surface ☐ b. Basement ☐ c. School
☐ d. Public Water Supply ☐ e. Surface Water ☐ f. Zone 2 ☐ g. Private Well ☐ h. Residence ☐ i. Soil
☐ j. Groundwater ☐ k. Sediments ☐ l. Wetland ☐ m. Storm Drain ☐ n. Indoor Air ☐ o. Air
☐ p. Soil Gas ☐ q. Sub-Slab Soil Gas ☐ r. Critical Exposure Pathway ☐ s. NAPL ☐ t. Unknown
☑ r. Others Specify: SURFACEWATER

2. Sources of the Release or TOR: (check all that apply)
☐ a. Transformer ☐ b. Fuel Tank ☐ c. Pipe
☐ d. OHM Delivery ☐ e. AST ☐ f. Drums ☐ g. Tanker Truck ☐ h. Hose ☐ i. Line
☐ j. UST Describe: ☐ k. Vehicle ☐ l. Boat/Vessel
☐ m. Unknown ☑ n. Other: HISTORICAL MANUFACTURING

3. Type of Release or TOR: (check all that apply)
☐ a. Dumping ☐ b. Fire ☐ c. AST Removal ☐ d. Overfill
☐ e. Rupture ☐ f. Vehicle Accident ☐ g. Leak ☐ h. Spill ☐ i. Test failure ☐ j. TOR Only
☐ k. UST Removal Describe:
☐ l. Unknown ☑ m. Other: HISTORICAL MANUFACTURING

4. Identify Oils and Hazardous Materials Released: (check all that apply)
☐ a. Oils ☐ b. Chlorinated Solvents
☑ c. Heavy Metals ☐ d. Others Specify:

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

☑ 1. Assessment and/or Monitoring Only
☐ 2. Temporary Covers or Caps
☐ 3. Deployment of Absorbent or Containment Materials
☐ 4. Temporary Water Supplies
☐ 5. Structure Venting System/HVAC Modification System
☐ 6. Temporary Evacuation or Relocation of Residents
☐ 7. Product or NAPL Recovery
☐ 8. Fencing and Sign Posting
☐ 9. Groundwater Treatment Systems
☐ 10. Soil Vapor Extraction
☐ 11. Remedial Additives
☐ 12. Air Sparging
☐ 13. Active Exposure Pathway Mitigation System
☐ 14. Passive Exposure Pathway Mitigation System

D. DESCRIPTION OF RESPONSE ACTIONS: (cont.)

☐ 15. Excavation of Contaminated Soils.

☐ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

iia. Receiving Facility: _____ Town: _____ State: _____

iib. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: _____

☐ b. Store ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

iia. Receiving Facility: _____ Town: _____ State: _____

iib. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill ☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 16. Removal of Drums, Tanks, or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____ Town: _____ State: _____

c. Receiving Facility: _____ Town: _____ State: _____

☐ 17. Removal of Other Contaminated Media:

a. Specify Type and Volume: _____

☐ 18. Other Response Actions:

Describe: _____

☐ 19. Use of Innovative Technologies:

Describe: _____

E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisionsof 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that an **Immediate Response Action Plan** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish thepurposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an **Immediate Response Action Status Report** and/or a **Remedial Monitoring Report** is(are) being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000,(ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Immediate Response Action Completion Statement** or a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 8107

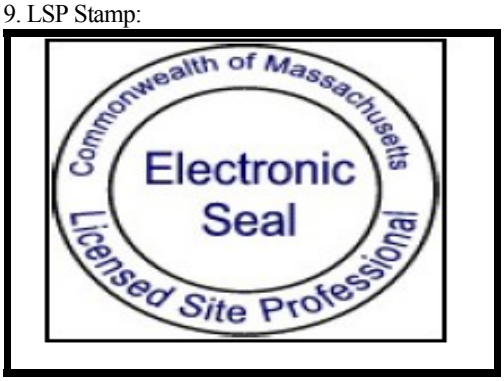
2. First Name: LAWRENCE 3. Last Name: FELDMAN

4. Telephone: 781-278-3700 5. Ext: 6. Email:

7. Signature: LAWRENCE FELDMAN

8. Date: 5/28/2019 *(mm/dd/yyyy)*

9. LSP Stamp:



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

BWSC 105

Release Tracking Number
3 - 35119

F. PERSON UNDERTAKING IRA:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: WYNN MA LLC

3. Contact First Name: ROBERT 4. Last Name: DESALVIO

5. Street: 101 STATION LANDING STE 2200 6. Title: PRESIDENT

7. City/Town: MEDFORD 8. State: MA 9. Zip Code: 021555134

10. Telephone: 857-770-7000 11. Ext: 12. Email: robert.desalvio@encorebostonharbor.com; robert.desa

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:

☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify Relationship: NON-SPECIFIED PRP

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions: Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.

☐ a. A Release Abatement Measure (RAM) Plan (BWSC106) ☐ b. Phase IV Remedy Implementation Plan (BWSC108)

☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by MassDEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Boardof Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Boardof Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.

☐ 5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to BWSC.eDEP@state.ma.us.

☑ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

BWSC 105

Release Tracking Number
3 - 35119

I. CERTIFICATION OF PERSON UNDERTAKING IRA:

1. I, ROBERT DESALVIO, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form; (ii) that, based on my inquiry of the/those individual(s) immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge, information and belief, true, accurate and complete; (iii) that, to the best of my knowledge, information and belief, I/the person(s) or entity(ies) on whose behalf this submittal is made satisfy(ies) the criteria in 310 CMR 40.0183(2); (iv) that I/the person(s) or entity(ies) on whose behalf this submittal is made have provided notice in accordance with 310 CMR 40.0183(5); and (v) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is/are aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: ROBERT DESALVIO
3. Title: PRESIDENT
4. For: WYNN MA LLC
5. Date: 5/28/2019 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street:
8. City/Town:
9. State:
10. Zip Code:
11. Telephone:
12. Ext:
13. Email:

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on
5/28/2019 2:59:20 PM

Appendix C – MassGIS

MassDEP - Bureau of Waste Site Cleanup

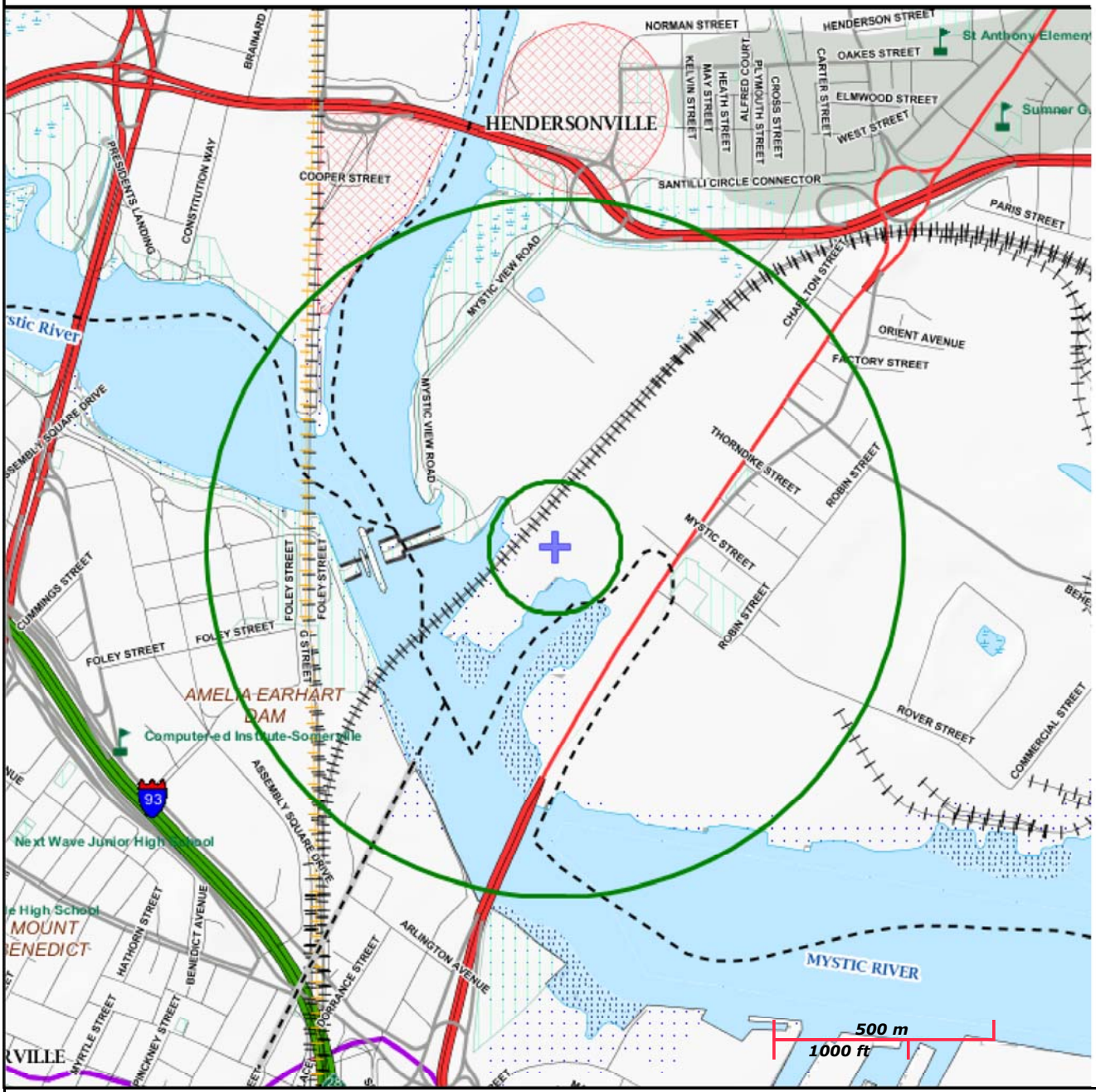
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
FORMER EVERETT STAGING YARD
ONE BROADWAY EVERETT, MA
3-000013341

NAD83 UTM Meters:
4695723mN , 329609mE (Zone: 19)
January 20, 2015

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: http://www.mass.gov/mgis/.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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.

Appendix D – Laboratory Analytical Report

ANALYTICAL REPORT

Lab Number:	L1832434
Client:	GZA GeoEnvironmental, Inc. 249 Vanderbilt Ave Norwood, MA 02062
ATTN:	Matthew Smith
Phone:	(781) 278-5830
Project Name:	WYNN EVERETT
Project Number:	171521.52
Report Date:	08/21/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: WYNN EVERETT
Project Number: 171521.52

Lab Number: L1832434
Report Date: 08/21/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1832434-01	TREE PIT DRAINAGE 8-17-18	WATER	1 HORIZON WAY, EVERETT, MA	08/17/18 10:10	08/17/18

Project Name: WYNN EVERETT **Lab Number:** L1832434

Project Number: 171521.52 **Report Date:** 08/21/18

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?	NO
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: WYNN EVERETT
Project Number: 171521.52

Lab Number: L1832434
Report Date: 08/21/18

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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: WYNN EVERETT
Project Number: 171521.52
Lab Number: L1832434
Report Date: 08/21/18

Case Narrative (continued)

MCP Related Narratives

Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Total Metals.

Total Metals

In reference to question I:

All samples were analyzed for a subset of MCP analytes per client request.

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: 08/21/18

METALS

Project Name: WYNN EVERETT
Lab Number: L1832434
Project Number: 171521.52
Report Date: 08/21/18

SAMPLE RESULTS

Lab ID: L1832434-01
Client ID: TREE PIT DRAINAGE 8-17-18
Sample Location: 1 HORIZON WAY, EVERETT, MA
Date Collected: 08/17/18 10:10
Date Received: 08/17/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	0.0499		mg/l	0.0050	--	1	08/20/18 14:20	08/21/18 09:40	EPA 3005A	97,6010D	LC
Copper, Total	ND		mg/l	0.010	--	1	08/20/18 14:20	08/21/18 09:40	EPA 3005A	97,6010D	LC
Iron, Total	1.94		mg/l	0.050	--	1	08/20/18 14:20	08/21/18 09:40	EPA 3005A	97,6010D	LC
Lead, Total	ND		mg/l	0.010	--	1	08/20/18 14:20	08/21/18 09:40	EPA 3005A	97,6010D	LC
Sulfur, Total	347		mg/l	2.50	--	10	08/21/18 07:45	08/21/18 14:02	EPA 3015A	97,6010D	LC
Vanadium, Total	ND		mg/l	0.010	--	1	08/20/18 14:20	08/21/18 09:40	EPA 3005A	97,6010D	LC
Zinc, Total	0.245		mg/l	0.050	--	1	08/20/18 14:20	08/21/18 09:40	EPA 3005A	97,6010D	LC

Project Name: WYNN EVERETT
Project Number: 171521.52
Lab Number: L1832434
Report Date: 08/21/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1148484-1										
Arsenic, Total	ND		mg/l	0.0050	--	1	08/20/18 14:20	08/21/18 09:23	97,6010D	LC
Copper, Total	ND		mg/l	0.010	--	1	08/20/18 14:20	08/21/18 09:23	97,6010D	LC
Iron, Total	ND		mg/l	0.050	--	1	08/20/18 14:20	08/21/18 09:23	97,6010D	LC
Lead, Total	ND		mg/l	0.010	--	1	08/20/18 14:20	08/21/18 09:23	97,6010D	LC
Vanadium, Total	ND		mg/l	0.010	--	1	08/20/18 14:20	08/21/18 09:23	97,6010D	LC
Zinc, Total	ND		mg/l	0.050	--	1	08/20/18 14:20	08/21/18 09:23	97,6010D	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1148696-1										
Sulfur, Total	ND		mg/l	0.250	--	1	08/21/18 07:45	08/21/18 10:15	97,6010D	LC

Prep Information

Digestion Method: EPA 3015A

Lab Control Sample Analysis

Batch Quality Control

Project Name: WYNN EVERETT

Project Number: 171521.52

Lab Number: L1832434

Report Date: 08/21/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1148484-2 WG1148484-3								
Arsenic, Total	112		112		80-120	0		20
Copper, Total	100		99		80-120	1		20
Iron, Total	106		105		80-120	1		20
Lead, Total	102		102		80-120	0		20
Vanadium, Total	104		102		80-120	2		20
Zinc, Total	105		104		80-120	1		20
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1148696-2 WG1148696-3								
Sulfur, Total	101		105		80-120	4		20

INORGANICS
&
MISCELLANEOUS

Project Name: WYNN EVERETT
Project Number: 171521.52
Lab Number: L1832434
Report Date: 08/21/18

SAMPLE RESULTS

Lab ID: L1832434-01
Client ID: TREE PIT DRAINAGE 8-17-18
Sample Location: 1 HORIZON WAY, EVERETT, MA
Sample Depth:
Matrix: Water

Date Collected: 08/17/18 10:10
Date Received: 08/17/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	400		mg/l	50	NA	10	-	08/18/18 12:10	121,2540D	JT

Project Name: WYNN EVERETT
Project Number: 171521.52
Lab Number: L1832434
Report Date: 08/21/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1148032-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/18/18 12:10	121,2540D	JT

Project Name: WYNN EVERETT
Project Number: 171521.52

Lab Number: L1832434
Report Date: 08/21/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1832434-01A	Plastic 250ml HNO3 preserved	A	<2	<2	3.3	Y	Absent		MCP-FE-6010T-10(180),MCP-AS-6010T-10(180),MCP-S-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-V-6010T-10(180),MCP-PB-6010T-10(180)
L1832434-01B	Plastic 250ml HNO3 preserved	A	<2	<2	3.3	Y	Absent		MCP-FE-6010T-10(180),MCP-AS-6010T-10(180),MCP-S-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-V-6010T-10(180),MCP-PB-6010T-10(180)
L1832434-01C	Amber 1000ml unpreserved	A	7	7	3.3	Y	Absent		TSS-2540(7)

*Values in parentheses indicate holding time in days

Project Name:	WYNN EVERETT	**Lab Number:**	L1832434
Project Number:	171521.52	**Report Date:**	08/21/18

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).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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

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.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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.

Report Format: Data Usability Report

Project Name:	WYNN EVERETT	**Lab Number:**	L1832434
Project Number:	171521.52	**Report Date:**	08/21/18

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.

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:	WYNN EVERETT	**Lab Number:**	L1832434
Project Number:	171521.52	**Report Date:**	08/21/18

REFERENCES

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.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, 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, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, 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, SM9221E, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

Serial_No:08211816:00

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 8/17/18

ALPHA Job #: L1832434

Client Information

Client: GZA
Address: 249 Vanderbilt Ave Norwood, MA
Phone: (781) 278-3700
Email: Neal.Carey@GZA.com

Additional Project Information:

Project Information

Project Name: Wynn Boston Harbor
Project Location: 1 Horizon Way, Everett, MA
Project #: 01.0171521.52
Project Manager: Neal Carey
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)

Date Due: 2-Day

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program ____ Criteria ____

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint

Handwritten analyses: Total Sulfur, Total Arsenic, Total Iron, Total Lead, Total Vanadium, Total Copper, Total Zinc, TSS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Total Sulfur	Total Arsenic	Total Iron	Total Lead	Total Vanadium	Total Copper	Total Zinc	TSS	Sample Comments	Total # Bottles
32434-4	Tree Pit Drainage 8-17-18	8/17/18	10:10	water	LFT	X	X	X	X	X	X	X	X		

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Container Type
Preservative

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
Lucas Taylor	8/17/18 13:05	Wayne [signature] AAL	8/17/18 1305
[signature]	8/17/18 1748	[signature]	8/17/18 1748

FORM NO: 01-01 (rev. 12-Mar-2012)