II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Boston National Historic Park
at the Charlestown Navy Yard</td><td colspan="3">Site address: National Park Service
1 1st Avenue
Street:</td></tr>
<tr><td>City: Charlestown</td><td>State: MA</td><td>Zip: 02129</td></tr>
<tr><td rowspan="4">2. Site owner
Department of the Interior - National Park Service

Owner is (check one): ■ Federal ☐ State/Tribal ☐ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Timothy Croteau, Facilities Manager</td></tr>
<tr><td colspan="2">Telephone: 617.438.4056</td><td>Email: Timothy_Croteau@nps.gov</td></tr>
<tr><td colspan="3">Mailing address: National Park Service
1 1st Avenue
Street:</td></tr>
<tr><td>City: Charlestown</td><td>State: MA</td><td>Zip: 02129</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner</td><td colspan="3">Contact Person:</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:

Street:</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
n/a

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
☐ MA Chapter 21e; list RTN(s):

☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:

☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Boston Inner Harbor	MA70-02	SB

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No

Are sensitive receptors present near the site? (check one): ☐ Yes ■ No
If yes, specify:

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. PCB in fish tissue, enterococcus, fecal coliform, oxygen

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	n/a
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	0

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ☐ Yes ■ No
If yes, indicate date confirmation received:

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ■ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants:	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ■ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ■ Existing discharge ☐ New discharge ☐ New source	
Outfall(s): dry dock sump with direct discharge to Boston Inner Harbor	Outfall location(s): (Latitude, Longitude) 42.372, -71.054
Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): July 2020 - Dec 2020 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
■ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>■ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

■ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	4500NH3-	75	920	920	Report mg/L	---
Chloride		✔	1	4500CL-E	250000	10000000	10000000	Report µg/l	---
Total Residual Chlorine	✔							0.2 mg/L	
Total Suspended Solids		✔	1	2540D	5000	24000	24000	30 mg/L	---
Antimony	✔		1	200.8	4	ND	ND	206 µg/L	
Arsenic	✔		1	200.8	1	ND	ND	104 µg/L	
Cadmium	✔		1	200.8	0.02	ND	ND	10.2 µg/L	
Chromium III	✔		1	200.8	1	ND	ND	323 µg/L	
Chromium VI	✔		1	3500CR-B	10	ND	ND	323 µg/L	
Copper		✔	1	200.8	1	33.14	33.14	242 µg/L	
Iron	✔		1	200.7	50	247	247	5,000 µg/L	
Lead		✔	1	200.8	1	5.44	5.44	160 µg/L	
Mercury	✔		1	245.1	0.2	ND	ND	0.739 µg/L	
Nickel	✔		1	200.8	2	ND	ND	1,450 µg/L	
Selenium	✔		1	200.8	5	ND	ND	235.8 µg/L	
Silver	✔		1	200.8	0.04	ND	ND	35.1 µg/L	
Zinc	✔		1	200.8	10	ND	ND	420 µg/L	
Cyanide	✔							178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔							100 µg/L	---
Benzene	✔							5.0 µg/L	---
1,4 Dioxane	✔							200 µg/L	---
Acetone	✔							7.97 mg/L	---
Phenol	✔							1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔							4.4 µg/L	
1,2 Dichlorobenzene	✔							600 µg/L	---
1,3 Dichlorobenzene	✔							320 µg/L	---
1,4 Dichlorobenzene	✔							5.0 µg/L	---
Total dichlorobenzene	✔							763 µg/L in NH	---
1,1 Dichloroethane	✔							70 µg/L	---
1,2 Dichloroethane	✔							5.0 µg/L	---
1,1 Dichloroethylene	✔							3.2 µg/L	---
Ethylene Dibromide	✔							0.05 µg/L	---
Methylene Chloride	✔							4.6 µg/L	---
1,1,1 Trichloroethane	✔							200 µg/L	---
1,1,2 Trichloroethane	✔							5.0 µg/L	---
Trichloroethylene	✔							5.0 µg/L	---
Tetrachloroethylene	✔							5.0 µg/L	
cis-1,2 Dichloroethylene	✔							70 µg/L	---
Vinyl Chloride	✔							2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔							190 µg/L	
Diethylhexyl phthalate	✔							101 µg/L	
Total Group I PAHs	✔							1.0 µg/L	---
Benzo(a)anthracene	✔							As Total PAHs	
Benzo(a)pyrene	✔								
Benzo(b)fluoranthene	✔								
Benzo(k)fluoranthene	✔								
Chrysene	✔								
Dibenzo(a,h)anthracene	✔								
Indeno(1,2,3-cd)pyrene	✔								

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔							100 µg/L	---
Naphthalene	✔							20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔							0.000064 µg/L	---
Pentachlorophenol	✔							1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔							5.0 mg/L	---
Ethanol	✔							Report mg/L	---
Methyl-tert-Butyl Ether	✔							70 µg/L	
tert-Butyl Alcohol	✔							120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔							90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH		✔	1			6.97	6.97		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☐ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

Identify each major treatment component (check any that apply):
☐ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter
☐ Chemical feed tank ☐ Air stripping unit ☐ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: sump pump capacity Is use of a flow meter feasible? (check one): ☐ Yes ■ No, if so, provide justification: intermittent dewatering discharge required to maintain dry conditions in dry dock	
Provide the proposed maximum effluent flow in gpm.	4.5
Provide the average effluent flow in gpm.	3.3
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:

a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ■ the operator ☐ EPA ☐ Other; if so, specify:

■ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ■ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ■ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

☐ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

■ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ☐ Yes ■ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ■ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

Dry Dock 1 will be flooded to allow the transfer of a caisson scheduled for repair work (replacement of seal) inside the dry dock. The dry dock will be dewatered to allow repairs in the dry. To maintain dry conditions the existing drainage sump will operate as is typical at the facility. The work to the caisson will remove the old seal, wood backing, and mounting studs from the caisson. The seal is made of steel plate that is fully encapsulated in rubber. The area behind the seal will be sand blasted and painted. New studs will be installed along with any required metal or rubber shims. The new seal will then be installed. There will also be various weld repairs to the caisson. There are bid options for replacing valves inside of the caisson, sand blasting and painting the weather deck walkway, and additional weld repairs.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

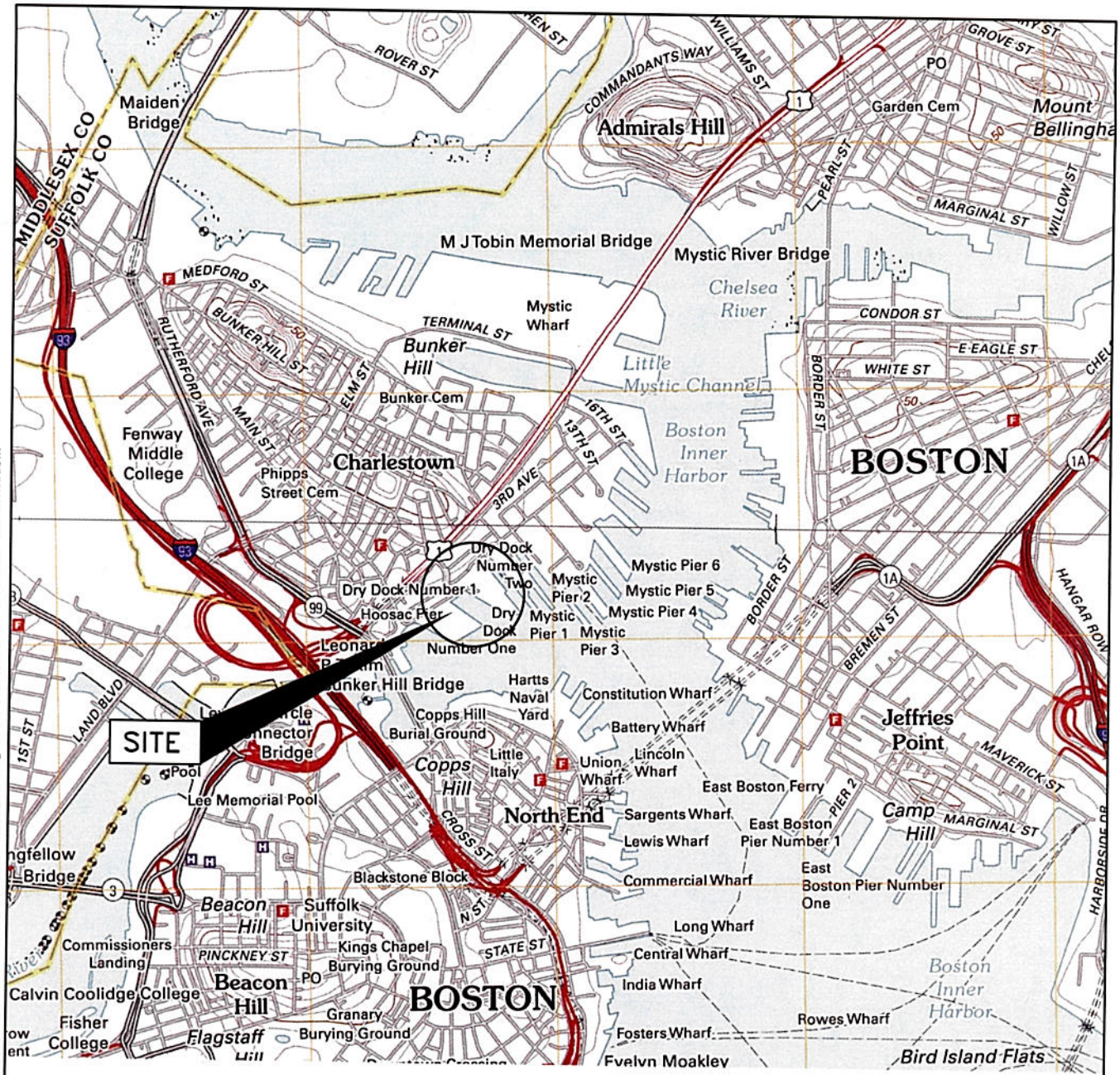
J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented at the site.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature:	Date: JUN 18 2020
Print Name and Title: CDR J.D. Herrin, CEC, USN, Public Works Officer	

NAVFAC PWD - Maine
By Direction of Shipyard Commander

LOCUS PLAN



0 1000' 2000' 4000'

APPROXIMATE SCALE IN FEET: 1" = 2000'

MASSACHUSETTS

QUADRANGLE LOCATION

SOURCE:

BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
BOSTON NORTH, MASSACHUSETTS (2012)
BOSTON SOUTH, MASSACHUSETTS (2012)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.
CONTOUR ELEVATIONS REFERENCE NAVD 88,
CONTOURS ARE SHOWN IN FEET AT 10 INTERVALS

N W E S

DRY DOCK #1 REPAIRS
BOSTON NATIONAL HISTORIC PARK
CHARLESTOWN, MASSACHUSETTS

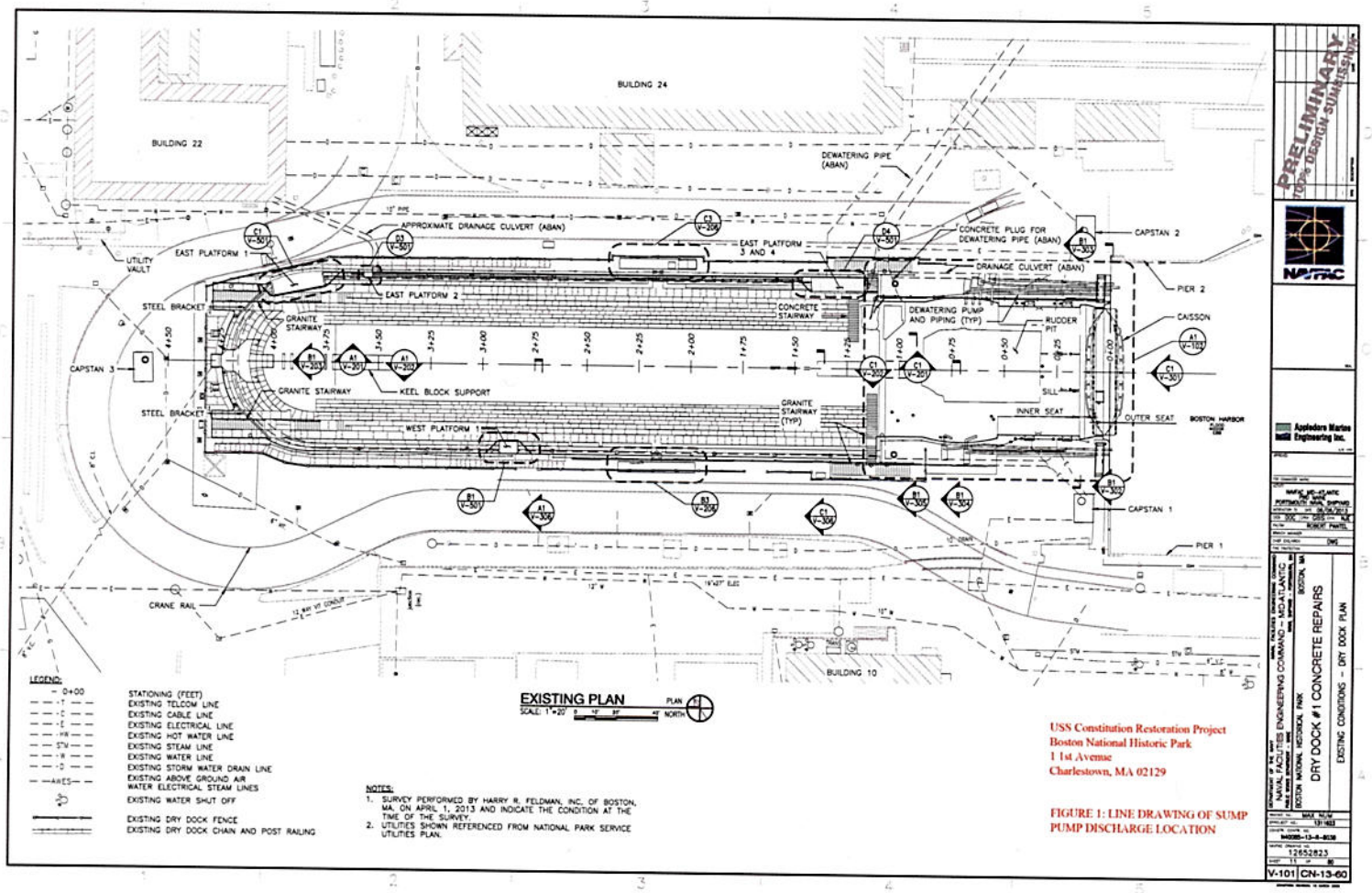
LOCUS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005

PROJ MGR: DYB	REVIEWED BY:	CHECKED BY: CKD	FIG 1
DESIGNED BY: PAS	DRAWN BY: MBL	SCALE: AS SHOWN	
DATE: MAY 2013	PROJECT NO. 33898.00	REVISION NO. 0	SHEET NO. 1 OF 2

OUTFALL LOCATION PLAN



USS Constitution Restoration Project
Boston National Historic Park
1 1st Avenue
Charlestown, MA 02129

FIGURE 1: LINE DRAWING OF SUMP PUMP DISCHARGE LOCATION

IPAC SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: June 16, 2020
Consultation Code: 05E1NE00-2020-SLI-2955
Event Code: 05E1NE00-2020-E-09013
Project Name: Dry Dock 1 Dewatering at USS Constitution

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2020-SLI-2955

Event Code: 05E1NE00-2020-E-09013

Project Name: Dry Dock 1 Dewatering at USS Constitution

Project Type: LAND - DRAINAGE

Project Description: Dewater the dry dock at the National Park Service site.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.37227766514631N71.05544551861823W

Counties: Suffolk, MA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

LABORATORY DATA

ANALYTICAL REPORT

Lab Number:	L2024176
Client:	NAVFAC PWD-Maine Portsmouth Naval Shipyard Bldg 59 Fl 2 Portsmouth, NH 03804-5000
ATTN:	Carol Eaton
Phone:	(207) 438-4546
Project Name:	USS CONSTITUTION-NATIONAL PARK
Project Number:	Not Specified
Report Date:	06/15/20

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: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2024176-01	SUMP GRAB	WATER	CHARLESTOWN, MA	06/10/20 09:10	06/10/20

Project Name:	USS CONSTITUTION-NATIONAL PARK	**Lab Number:**	L2024176
Project Number:	Not Specified	**Report Date:**	06/15/20

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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data 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.

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 Alpha Project Manager 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 Project Management at 800-624-9220 with any questions.

Project Name:	USS CONSTITUTION-NATIONAL PARK	**Lab Number:**	L2024176
Project Number:	Not Specified	**Report Date:**	06/15/20

Case Narrative (continued)

Total Metals

L2024176-01: The sample has elevated detection limits for metals by Method 200.8 due to the dilution required by the sample matrix.

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: Michelle M. Morris

Title: Technical Director/Representative Date: 06/15/20

METALS

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified
Lab Number: L2024176
Report Date: 06/15/20

SAMPLE RESULTS

Lab ID: L2024176-01
Client ID: SUMP GRAB
Sample Location: CHARLESTOWN, MA
Sample Depth:
Matrix: Water

Date Collected: 06/10/20 09:10
Date Received: 06/10/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.04000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Arsenic, Total	ND		mg/l	0.01000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Cadmium, Total	ND		mg/l	0.00200	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Chromium, Total	ND		mg/l	0.01000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Copper, Total	0.03314		mg/l	0.01000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Iron, Total	0.247		mg/l	0.050	--	1	06/12/20 07:35	06/15/20 10:54	EPA 3005A	19,200.7	LC
Lead, Total	0.00544		mg/l	0.00500	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Mercury, Total	ND		mg/l	0.00020	--	1	06/12/20 08:33	06/12/20 13:59	EPA 245.1	3,245.1	GD
Nickel, Total	ND		mg/l	0.02000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Selenium, Total	ND		mg/l	0.05000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Silver, Total	ND		mg/l	0.00400	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD
Zinc, Total	ND		mg/l	0.1000	--	10	06/12/20 07:35	06/15/20 16:49	EPA 3005A	3,200.8	CD

Project Name: USS CONSTITUTION-NATIONAL PARK **Lab Number:** L2024176

Project Number: Not Specified **Report Date:** 06/15/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1380557-1										
Antimony, Total	ND		mg/l	0.00400	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Arsenic, Total	ND		mg/l	0.00100	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Cadmium, Total	ND		mg/l	0.00020	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Chromium, Total	ND		mg/l	0.00100	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Copper, Total	ND		mg/l	0.00100	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Lead, Total	ND		mg/l	0.00100	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Nickel, Total	ND		mg/l	0.00200	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Selenium, Total	ND		mg/l	0.00500	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Silver, Total	ND		mg/l	0.00040	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD
Zinc, Total	ND		mg/l	0.01000	--	1	06/12/20 07:35	06/15/20 16:10	3,200.8	CD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1380618-1										
Mercury, Total	ND		mg/l	0.0002	--	1	06/12/20 08:33	06/12/20 13:23	3,245.1	GD

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1380748-1										
Iron, Total	ND		mg/l	0.050	--	1	06/12/20 07:35	06/15/20 10:45	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: USS CONSTITUTION-NATIONAL PARK

Project Number: Not Specified

Lab Number: L2024176

Report Date: 06/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1380557-2								
Antimony, Total	100		-		85-115	-		
Arsenic, Total	107		-		85-115	-		
Cadmium, Total	110		-		85-115	-		
Chromium, Total	101		-		85-115	-		
Copper, Total	96		-		85-115	-		
Lead, Total	113		-		85-115	-		
Nickel, Total	101		-		85-115	-		
Selenium, Total	105		-		85-115	-		
Silver, Total	105		-		85-115	-		
Zinc, Total	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1380618-2								
Mercury, Total	96		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1380748-2								
Iron, Total	114		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380557-3 QC Sample: L2024176-01 Client ID: SUMP GRAB												
Antimony, Total	ND	0.5	0.5978	120		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1389	116		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.06156	121		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1886	94		-	-		70-130	-		20
Copper, Total	0.03314	0.25	0.2858	101		-	-		70-130	-		20
Lead, Total	0.00544	0.51	0.5185	100		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5125	102		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1428	119		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04920	98		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.6030	121		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380618-3 QC Sample: L2024200-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.0052	104		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380618-5 QC Sample: L2024185-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.0052	104		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380748-3 QC Sample: L2024176-01 Client ID: SUMP GRAB												
Iron, Total	0.247	1	1.31	106		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380557-4 QC Sample: L2024176-01 Client ID: SUMP GRAB						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.03314	0.03389	mg/l	2		20
Lead, Total	0.00544	0.00544	mg/l	0		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380618-4 QC Sample: L2024200-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380618-6 QC Sample: L2024185-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1380748-4 QC Sample: L2024176-01 Client ID: SUMP GRAB						
Iron, Total	0.247	0.242	mg/l	2		20

INORGANICS
&
MISCELLANEOUS

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

SAMPLE RESULTS

Lab ID: L2024176-01
Client ID: SUMP GRAB
Sample Location: CHARLESTOWN, MA

Sample Depth:
Matrix: Water

Date Collected: 06/10/20 09:10
Date Received: 06/10/20
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	24.		mg/l	5.0	NA	1	-	06/12/20 14:16	121,2540D	BA
Chloride	10000		mg/l	250	--	250	-	06/11/20 11:51	121,4500CL-E	MR
Nitrogen, Ammonia	0.920		mg/l	0.075	--	1	06/11/20 11:51	06/12/20 22:16	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/11/20 03:30	06/11/20 04:43	121,3500CR-B	CB

Project Name: USS CONSTITUTION-NATIONAL PAR **Lab Number:** L2024176

Project Number: Not Specified **Report Date:** 06/15/20

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: WG1380232-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/11/20 03:30	06/11/20 04:30	121,3500CR-B	CB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1380297-1										
Chloride	ND		mg/l	1.0	--	1	-	06/11/20 09:39	121,4500CL-E	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1380446-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	06/11/20 11:51	06/12/20 22:10	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1380922-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/12/20 14:16	121,2540D	BA

Lab Control Sample Analysis

Batch Quality Control

Project Name: USS CONSTITUTION-NATIONAL PARK

Project Number: Not Specified

Lab Number: L2024176

Report Date: 06/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1380232-2								
Chromium, Hexavalent	99		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1380297-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1380446-2								
Nitrogen, Ammonia	90		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1380922-2								
Solids, Total Suspended	96		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380232-4 QC Sample: L2024176-01 Client ID: SUMP GRAB												
Chromium, Hexavalent	ND	0.1	0.105	105		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380297-4 QC Sample: L2024165-07 Client ID: MS Sample												
Chloride	31	20	51	100		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380446-4 QC Sample: L2024199-01 Client ID: MS Sample												
Nitrogen, Ammonia	0.090	4	3.69	90		-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380232-3 QC Sample: L2024176-01 Client ID: SUMP GRAB						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380297-3 QC Sample: L2024165-07 Client ID: DUP Sample						
Chloride	31	32	mg/l	3		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380446-3 QC Sample: L2024199-01 Client ID: DUP Sample						
Nitrogen, Ammonia	0.090	0.108	mg/l	18		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1380922-3 QC Sample: L2024492-01 Client ID: DUP Sample						
Solids, Total Suspended	24	22	mg/l	9		29

Project Name: USS CONSTITUTION-NATIONAL PARK
Project Number: Not Specified

Lab Number: L2024176
Report Date: 06/15/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2024176-01A	Plastic 250ml HNO3 preserved	B	<2	<2	4.2	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),CU-2008T(180),HG-U(28),SE-2008T(180),AG-2008T(180),AS-2008T(180),SB-2008T(180),CR-2008T(180),PB-2008T(180)
L2024176-01B	Plastic 250ml unpreserved	B	7	7	4.2	Y	Absent		CL-4500(28),HEXCR-3500(1)
L2024176-01C	Plastic 500ml H2SO4 preserved	B	<2	<2	4.2	Y	Absent		NH3-4500(28)
L2024176-01D	Plastic 950ml unpreserved	B	7	7	4.2	Y	Absent		TSS-2540(7)

*Values in parentheses indicate holding time in days

Project Name:	USS CONSTITUTION-NATIONAL PARK	**Lab Number:**	L2024176
Project Number:	Not Specified	**Report Date:**	06/15/20

GLOSSARY

Acronyms

DL	- 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
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

Report Format: Data Usability Report

Project Name:	USS CONSTITUTION-NATIONAL PARK	**Lab Number:**	L2024176
Project Number:	Not Specified	**Report Date:**	06/15/20

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.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

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.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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.

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

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

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

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

Report Format: Data Usability Report

Project Name:	USS CONSTITUTION-NATIONAL PARK	**Lab Number:**	L2024176
Project Number:	Not Specified	**Report Date:**	06/15/20

Data Qualifiers

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.

Report Format: Data Usability Report

REFERENCES

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

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 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; 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.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-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**, 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 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: 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 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, 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, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

EST Associates, Inc.
51 Fremont Street
Needham, MA 02494
Phone (781) 455-0003
Fax (781) 455-8336
www.estassociates.com

Chain of Custody Record

Container Type
P - Plastic
G - Glass
V - VOA
B - Bacteria

Sample Type
1. Wastewater
2. Groundwater
3. Soil
4. Drinking Water
5. Surface Water
6. Storm Water
7. Other _____

Laboratory: Alpha Analytical Labs (508) 898-9220

Lab Invoice To: USS Const.

Lab Report To:

L2024176

EST Invoice To: Alpha Woods Hole Lab
5137-225-xx NFC

Site: USS Constitution - National Park Service
Address: Corner of 1st Ave. and Baxter Rd.
Charlestown MA 02129-
Contact: Richard Moore
Phone #: (617) 719-5257
Description: *NPDES Permit Sampling*

Client: Alpha Woods Hole Lab
Address: 8 Walkup Drive
Westborough MA 01581-
Contact: Nathalie Lewis
Phone #: (508) 439-5170
Fax #:

☐ **Rush** ____Day Turnaround

LOCATION (Sample Identification)	Sample Type	Container Size	Container Type	Container #	Sampling Date	Sampling Time	Preservative *	Laboratory Analysis	Notes
Sump Grab	1	250 ml	P	1	6/10/20	0940	None	HEXCR, Cl	pH = 6.97
Sump Grab	1	1 L	P	1			None	TSS	
Sump Grab	1	250 ml	P	1			HNO3	Total Metals*	
Sump Grab	1	500 ml	P	1			H2SO4	NH3	

Sampler's Name (Print)	Signature	DATE	TIME
Andrew Hardy	Andrew Hardy	6/10/20	1230

Additional Comments:
*Metals - Sb, As, Cd, Cr, Fe, Cu, Pb, Hg, Ni, Se, Ag, Zn

*All samples chilled to 4 degrees celsius.

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	Andrew Hardy	[signature]	6/10/20	1515
2	[signature] 1630	[signature]	6/10/20	1630
3				
4				
5				