

NOTICE OF INTENT TO DISCHARGE NPDES Remediation General Permit Emergency Discharge Permit #MAG910969

Residence 4 Stoneleigh Lane Cohasset, MA 02025 MassDEP RTN: 4-28208

Prepared For:

Jennifer Zaccara P.O. Box 500 Saxtons River, VT 05154 (Home Owner)

Prepared by:

River Hawk Environmental, LLC 2183 Ocean Street Marshfield, MA 02050

December 14, 2020

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Notice of Intent to Discharge: Emergency Discharge Permit #MAG910969 4 Stoneleigh Lane, Cohasset, MA December 14, 2020

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1.0 INTRODUCTION

On behalf of Jennifer Zaccara (the Home Owner), River Hawk Environmental, LLC (RHE) has prepared this Notice of Intent (NOI) to provide the United States Environmental Protection Agency (US EPA) with information relative to Discharge Permit #MAG910969 associated with the National Pollution Discharge Elimination System Remediation General Permit (NPDES RGP). Discharge Permit #MAG910969 was authorized by the US EPA to support the management of water relative to Immediate Response Action (IRA) activities being conducted in accordance with the Massachusetts Contingency Plan (MCP) to address of a release of No. 2 fuel oil at 4 Stoneleigh Lane in Cohasset, MA (the Subject Property). The MassDEP has issued Release Tracking Number (RTN) 4-28208 to track environmental response actions.

The RGP NOI Form is included in Appendix A. Additional supporting documentation is included in Appendices B through F. A copy of the Remediation General Permit (RGP) MAG910000 is included in Appendix G. A graphical depiction of the Subject Property, and relevant features, is included in Figures 1 through 5. Summarized soil, groundwater, influent, effluent, and receiving surface water data are included in Tables 1 through 6.



2.0 GENERAL SITE INFORMATION

The following subsections provide information regarding the location, setting, and known impacts relative to the release of No. 2 fuel oil in the basement of the Residence at the Subject Property. The Subject Property and resources within the vicinity of the Subject Property are graphically displayed in Figures 1 through 4.

2.1 Location and Description

Location Aid/Site Name: Residence

MassDEP RTN: 4-28208

NPDES RGP No. MAG910969

Estimated Discharge Period: December 4, 2020 to June 4, 2021

Address: 4 Stoneleigh Lane

Cohasset, MA 02025

Assessor's Information: Parcel 1.D. C1-10-066

MassDEP GIS Coordinates: 42.261452N, 70.821390W

(The source of the discharge)

Property Owner: Jennifer Zaccara

P.O. Box 500

Saxtons River, VT 05154

Environmental Consultant: River Hawk Environmental, LLC

2183 Ocean Street Marshfield, MA 02050

LSP of Record: William Kenney, LSP #3798

Phone: (781) 536-4639 | Email: bkenney@riverhawkllc.com

2.2 Description & Current Use of the Subject Property

The Subject Property is an approximately 0.209-acre parcel located in an area of Cohasset, MA used for residential purposes. A two-story wood framed single-family residence (the Residence) is present on the southern portion of the Subject Property.

The Residence is built upon two (2) crawl spaces and a basement, which is comprised of a poured concrete floor and stone/mortar walls. A sump pump, equipped with a PVC discharge line, was formerly present in the western portion of the basement at the time that an apparent release of fuel oil was identified. Fire Department personnel reportedly de-energized (i.e., unplugged) the former sump pump at the time of their response to the apparent release of fuel oil on February 27, 2020.

The Residence is serviced by municipal water and sewer utilities. The Residence is currently heated by a propane-fired high efficiency boiler. At the time the fuel oil release was identified, the Residence was heated by a fuel oil-fired boiler, and No. 2 fuel oil was stored in a 275-gallon capacity AST located in the southeastern portion of the basement. The former AST has since been removed.

2.3 Regulatory Status and Purpose of RGP Coverage

An apparent release of fuel oil was identified in the basement of the Residence at the Subject Property on February 27, 2020. The MassDEP issued RTN 4-28208 to track environmental response actions in accordance with the provisions of the MCP. IRA response actions have included the removal of petroleum impacted soil and the recovery, temporary storage, and recycling of groundwater collected from the basement sump. An evaluation of preliminary excavation endpoint soil data and groundwater data collected from the basement sump has revealed that closure of the MCP disposal site is likely feasible without the need for additional remediation; however, RHE has recommended the collection of confirmatory groundwater samples on a seasonal basis in order to confirm that seasonal variations in groundwater level are not likely to result in the mobility of oil (in accordance with relevant MassDEP Policies and Guidance).

Dewatering activities are required in order to maintain a groundwater level below the basement floor of the Residence. The previously existing temporary water holding tank was found to be undersized to manage water infiltration connected with storm events, and the installation of a larger water holding tank was not feasible due to access issues. Extreme flooding, and overflow of the previously existing water holding tank, may have resulted in imminent hazard to human health (electrocution), impairment of Waters of the United States, and/or potential ecological damage.

The US EPA issued Emergency Discharge Permit #MAG910969 on December 4, 2020. Coverage under the RGP is being requested for a period of six (6)-months (December 4, 2020 through June 4, 2021). Groundwater has been / will be recovered, treated, and discharged in accordance with Emergency Discharge Permit #MAG910969. The following sections provide information supportive of Discharge Permit #MAG910969 and the requirements of NPDES RGP #MAG910000.

2.4 Evaluation of Sensitive Receptors and Endangered Species

The following is an evaluation of sensitive receptors and endangered species in the vicinity of the Subject Property.

Groundwater Use:

Based on a review of the MassGIS Environmental Plan (Figure 3), the Subject Property is not located within a MassDEP-delineated Zone II aquifer recharge area, Interim Wellhead Protection Area (IWPA), or Potentially Productive Aquifer (PPA). Based upon information provided by the Cohasset Board of Health, three (3) residences within 500-feet of the Subject Property (460 Jerusalem Road, 478 Jerusalem Road, and 38 Linden Drive) are, or may be, serviced by private water wells.

Surface Water Bodies & Wetland Resources:

Based on a review of the MassGIS Environmental Plan (Figure 3) and field reconnaissance, an intermittent stream is located immediately north of the Subject Property. The stream discharges to an unnamed surface water body (i.e., drainage area) located northwest of the Subject Property. According to the MassDEP and US EPA, there is a hydraulic connection from the unnamed surface water body to the Atlantic Ocean (a water of the United States).

Areas of Critical Environmental Concern & Open Spaces:

Based on a review of the MassGIS Environmental Plan (Figure 3), the Subject Property and receiving water are not located within a delineated Area of Critical Environmental Concern (ACEC), Threatened or Endangered Species Habitat, or Open Space.

Endangered Species Act Eligibility Documentation:

Based on a review of the MassGIS Environmental Plan (Figure 3), and a list of threatened and endangered species generated by the United States Fish and Wildlife Service, there are no critical habitats at or in the immediate vicinity of the Subject Property. A copy of the species list report is included in Appendix C.

Massachusetts Cultural Resource Information System:

Based on a review of information provided by the Massachusetts Cultural Resource Information System (MACRIS), no culturally significant area, building, burial ground, object, or structure is located on the Subject Property. A copy of the MACRIS report for the Subject Property is included in Appendix D.

3.0 SUMMARY OF ASSESSMENT ACTIVITIES

An apparent release of fuel oil was identified in the basement of the Residence at the Subject Property on February 27, 2020. The following relevant environmental assessment has been conducted since that time:

- Preliminary soil assessment;
- Soil assessment during and after soil remediation activities;
- Groundwater assessment.

The following subsections provide additional details of assessment activities.

3.1 Soil Assessment

The following is a summary of soil assessment activities:

Pre-Remediation Interior Soil Borings (March 11, 2020):

RHE conducted a preliminary subsurface investigation within the footprint of the Residence on March 11, 2020. The subsurface investigation included advancing/attempting to advance five (5) borings (SB-1 through SB-5) within the basement of the Residence. Refer to Figure 4 for the locations of borings. Based on the results of assessment, solid refusal (potential bedrock) was encountered immediately under the concrete basement floor in several locations (SB-2 and SB-4), and oil-contaminated gravel was encountered in several locations (SB-1, SB-3, and SB-5).

Soil Assessment During Soil Removal (July 2020):

RHE personnel were present during excavation activities in July 2020, and collected several soil samples during the process. Soil samples were screened in the field for TOVs using a RAELite OVM equipped with a 10.6 eV lamp and calibrated with 100 ppmv isobutylene span gas. Refer to Figure 4 for the locations of soil samples collected during excavation activities, and Table 1 for the results of field screening conducted on soil samples collected during excavation activities.

Eight (8) excavation endpoint soil samples [EXSS-2 (0'-2'), EXSS-4 (1'-2'), EXSS-4 (3'-4'), EXSS-5 (0'-2'), EXSS-6 (1'-2'), EXSS-7 (2'-3'), and EXSS-8 (0'-2')] were submitted to ESS Laboratory of Cranston, RI for laboratory analysis of extractable petroleum hydrocarbon (EPH) target analytes and fractional range constituents and volatile petroleum hydrocarbon (VPH) target analytes and fractional range constituents in accordance with MassDEP-approved analytical methodology. A summary of laboratory analysis conducted on the excavation endpoint soil samples is presented in Table 2, and the full laboratory analytical reports are included in Appendix B.

Evaluation of Soil Assessment Data:

The results of soil screening and laboratory analytical data collected before and after soil remediation activities are summarized in Tables 1 and 2, respectively. Soil sample locations are displayed on Figure 4. The following is a summary of the findings of soil assessment data:

Soil Classifications:

A sub-slab drain system, which included crushed stone and a clay drainage pipe, was observed under a portion of the basement slab. Soil under and in the vicinity of the drain system included dense sand with lesser amounts of silt, gravel, and cobbles. Crystalline bedrock outcrops are present in the area outside of the Residence; therefore, it is likely that bedrock is present under the Residence.

Laboratory Analytical Data:

An evaluation of laboratory analysis conducted on soil samples collected from excavation endpoints revealed that select EPH and VPH analytes (C_9 - C_{18} Aliphatic Hydrocarbons and/or C_9 - C_{10} Aromatic Hydrocarbons) were detected at concentrations greater than the MCP S-1/GW-1 Soil Standards in soil samples collected under and in the vicinity of the former AST [EXSS-4 (1'-2'), EXSS-4 (3'-4'), and/or EXSS-5 (0-2')].

3.2 Groundwater Assessment

RHE personnel collected samples of groundwater from the sump in the basement of the Residence on November 4, 2020 and December 1, 2020. The groundwater samples were collected using peristaltic pumps, placed in pre-cleaned and pre-preserved laboratory-supplied containers, and were submitted to ESS Laboratory for analysis of EPH petroleum target analytes and fractional range constituents and VPH target analytes and fractional range constituents. Summarized laboratory analytical results associated with groundwater samples are included in Table 3, and the complete laboratory analytical reports are included in Appendix B.

Evaluation of Groundwater Assessment Data:

The following is an evaluation of groundwater monitoring and the results of laboratory analysis conducted on groundwater samples:

Laboratory Data:

EPH and VPH analytes were not detected above the analytical method detection limit (i.e., non-detect) in groundwater samples collected from the sump on November 4, 2020 and December 1, 2020.

3.3 Influent Water Quality Assessment

RHE personnel collected water quality samples from the sump in the basement of the Residence (i.e., source sump) on December 8, 2020 and December 10, 2020. The samples were collected in pre-cleaned and pre-preserved laboratory-supplied containers, and were submitted to ESS Laboratory for analysis of select RGP parameters, as requested by the US EPA [Total Petroleum Hydrocarbons (TPH), tert-Butyl Alcohol (TBA), Ammonia, Chloride, RGP Metals, Non-Halogenated Semi-Volatile Organic Compounds (SVOCs), and/or Hardness]. RHE personnel measured the temperature and pH of groundwater in the sump during both monitoring events. Summarized groundwater monitoring and laboratory analytical results are included in Table 4, and the complete laboratory analytical reports are included in Appendix B.

Evaluation of Influent Water Quality Data:

The following is an evaluation of groundwater monitoring and the results of laboratory analysis conducted on samples representative of treatment system influent conditions:

Groundwater Monitoring:

The influent groundwater pH ranged between 6.8 S.U. and 7.5 S.U. The influent groundwater temperature ranged from 12.1 to 12.3 degrees Celsius.

Laboratory Data:

No tested analytes were detected in the effluent samples at levels greater than the water quality-based effluent limitations (WQBELs) and/or technology-based effluent limitations (TBELs) set forth in Table 2 of NPDES RGP #MAG910000.

3.4 Effluent Water Quality Assessment

RHE personnel collected water quality samples from a sampling port situated after the LGAC vessel (representative of effluent conditions) on December 8, 2020 and December 10, 2020. The samples were collected in pre-cleaned and pre-preserved laboratory-supplied containers, and were submitted to ESS Laboratory for analysis of select RGP parameters, as requested by the US EPA [TPH, TBA, Ammonia, Chloride, RGP Metals, Non-Halogenated SVOCs, and/or Hardness]. RHE personnel measured the temperature and pH of the treatment system effluent during both monitoring events. Summarized groundwater monitoring and laboratory analytical results are included in Table 5, and the complete laboratory analytical reports are included in Appendix B.

Evaluation of Effluent Water Quality Data:

The following is an evaluation of groundwater monitoring and the results of laboratory analysis conducted on samples representative of treatment system effluent conditions:

Groundwater Monitoring:

Effluent groundwater pH ranged between 6.4 S.U. and 7.6 S.U. The effluent groundwater temperature ranged from 10.6 to 16.3 degrees Celsius. The raise in temperature in one of the effluent samples is likely due to the water residing within the LGAC vessel for a period of time.

Laboratory Data:

No tested analytes were detected in the effluent samples at levels greater than the water quality-based effluent limitations (WQBELs) and/or technology-based effluent limitations (TBELs) set forth in Table 2 of NPDES RGP #MAG910000, with the exception of Iron. Total Iron was detected at a concentration of 1,840 micrograms per liter (ug/L), which is greater than the WQBEL of 1,000 ug/L, but lower than the TBEL of 5,000 ug/L, for Iron.

3.5 Surface Water Assessment

The following is a summary of surface water assessment activities:

Surface Water Monitoring & Laboratory Analysis (December 8, 2020):

RHE personnel collected a sample of surface water from the drainage area to the northwest of the Subject Property on December 8, 2020. The sample was collected in pre-cleaned and pre-preserved laboratory-supplied containers, and was submitted to ESS Laboratory for analysis of select RGP parameters as stipulated by the US EPA [Ammonia, RGP Metals, and Hardness]. RHE personnel measured the temperature and pH of surface water within the drainage area during monitoring events conducted on December 8, 2020 and December 10, 2020. Summarized surface water monitoring and laboratory analytical results are included in Table 6, and the complete laboratory analytical reports are included in Appendix B.

Surface Water Monitoring:

The surface water pH ranged between 5.8 S.U. and 7.2 S.U., and the surface water temperature ranged from 2.8 degrees Celsius and 10.8 degrees Celsius, on December 8, 2020 and December 10, 2020, respectively.

Laboratory Data:

No tested analytes were detected in the receiving water samples at levels greater than the water quality-based effluent limitations (WQBELs) and/or technology-based effluent limitations (TBELs) set forth in Table 2 of NPDES RGP #MAG910000, with the exception of Copper. Total Copper was detected at a concentration of 9.7 ug/L, which is greater than the WQBEL of 9 ug/L, but lower than the TBEL of 242 ug/L, for Copper.

4.0 DISCHARGE INFORMATION

The following subsections include a summary of the proposed discharge, receiving water, treatment, and monitoring.

4.1 Source Location and Information

The source of the discharge is the sump in the basement of the Residence (i.e., source sump). The location of the source sump is displayed on Figure 4. Refer to Sections 3.2 and 3.3 for the results of monitoring and laboratory analysis conducted on groundwater samples collected from the source sump.

4.2 Receiving Water Information

After being treated, groundwater will be indirectly discharged to an intermittent stream and an apparently isolated drainage area northwest of the Subject Property (i.e, South Coastal watershed). The location of the discharge to the drainage area is displayed on Figure 2A. The coordinates of the drainage area are 42.261769 North, 70.821561 West.

4.3 Treatment System Information

The following is a summary of the rationale for treatment system component selection, treatment system details, and provisions for operation, monitoring, and maintenance (OM&M).

Treatment System Component Rationale:

Based on an evaluation of groundwater monitoring and laboratory analytical results associated with groundwater samples collected from the sump in the basement on December 8, 2020, untreated groundwater (i.e., influent) associated with Emergency Discharge Permit #MAG910969 does not exceed the water quality-based effluent limitations (WQBELs) and/or technology-based effluent limitations (TBELs) set forth in Table 2 of NPDES RGP #MAG910000. Based on an evaluation of influent and effluent data, treatment may be required to lower the concentration of Total Iron in effluent groundwater. A small treatment system has been implemented as a Best Management Practice to avoid the chance of an inadvertent discharge of oily water.

Treatment System Components:

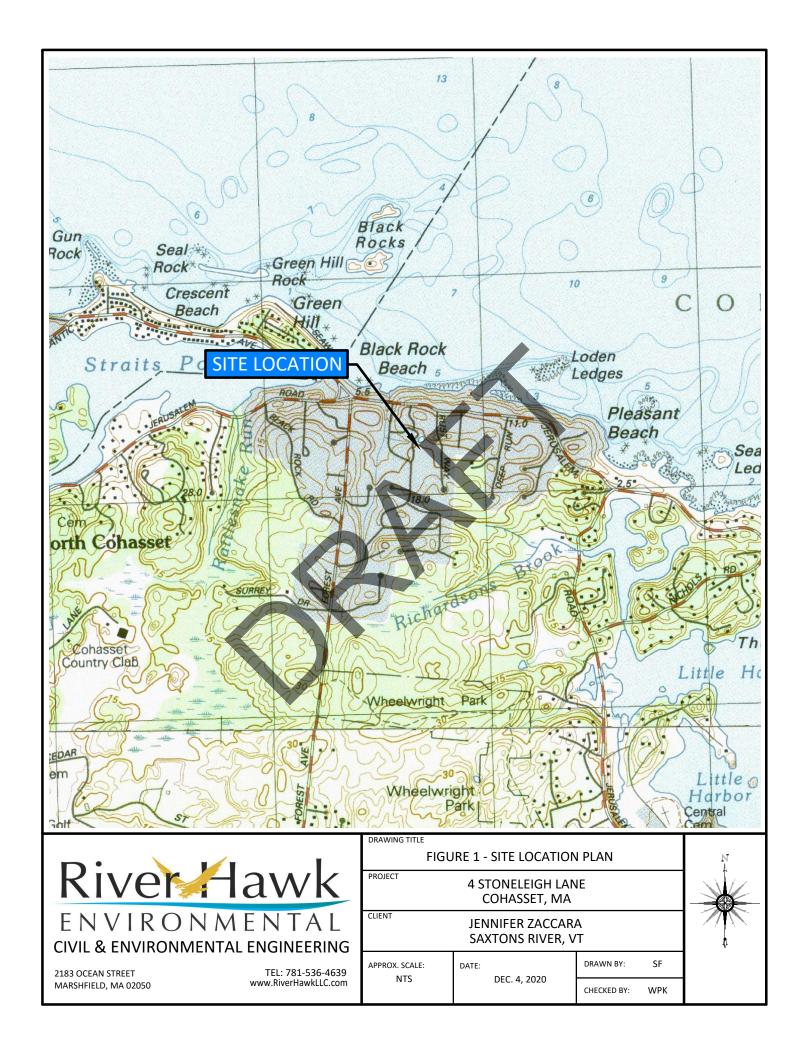
The treatment system includes a sump pump, totalizer, sediment filter, and 55-gallon drum containing liquid granular activated carbon (LGAC) which were installed to treat water prior to being discharged. The treatment system schematic is displayed on Figure 5.

Treatment System Operation, Monitoring, & Maintenance:

The treatment system will be operated, monitored, and maintained in accordance with the Best Management Practices Plan (BMPP) included in Appendix F. Monitoring of the groundwater entering and discharging the treatment system will be conducted in accordance with Part 4 of NPDES RGP #MAG910000. This NOI includes a summary of one (1) monitoring and sampling event conducted within the first week of discharge associated with Emergency Discharge Permit #MAG910969. Subsequent influent and effluent monitoring and sampling events will be conducted on a second non-consecutive day within the first week, and weekly for the first month, and monthly thereafter, until the discharge is terminated following the submittal of a Notice of Termination (NOT) to the US EPA.





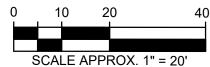




NOTE: ALL DETAILS ARE APPROXIMATE AND ARE NOT THE RESULT OF A FIELD SURVEY.

LEGEND

PROPERTY LIMITS (APPROX)



WPK

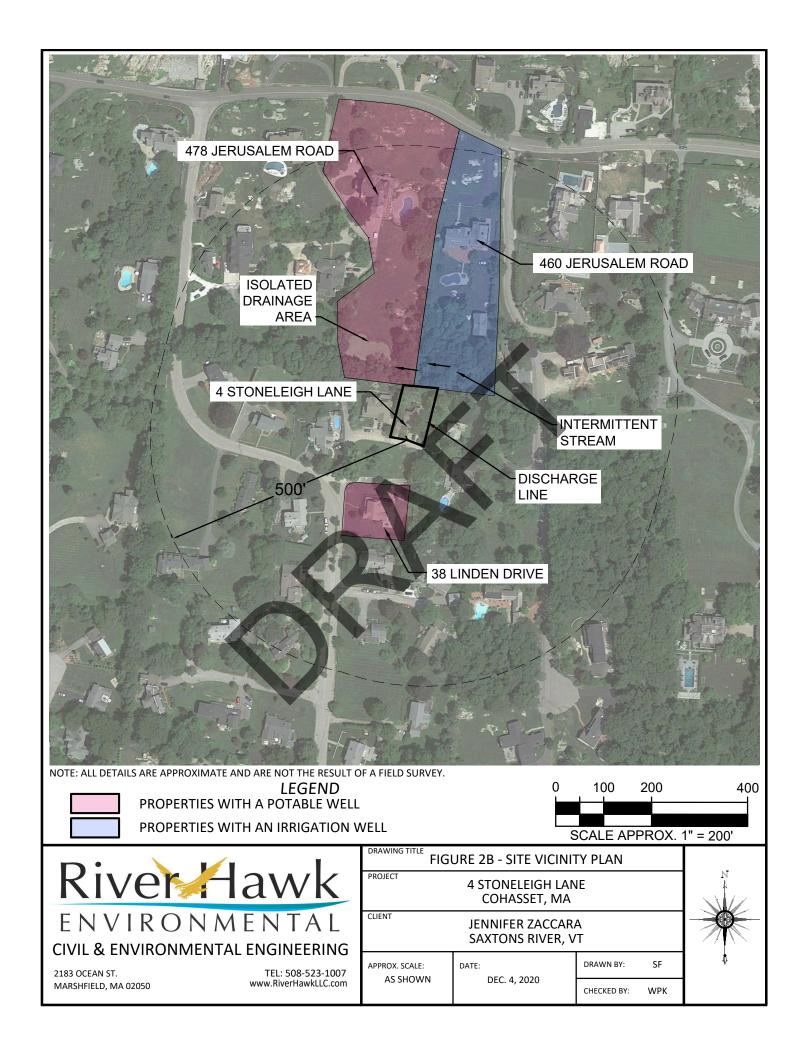
CHECKED BY:



2183 OCEAN ST. MARSHFIELD, MA 02050

TEL: 508-523-1007 www.RiverHawkLLC.com

	,	SCALE APPROX.		
DRAWING TITLE	FIGURE 2A - SITE PL	.AN		
PROJECT	4 STONELEIGH LAN COHASSET, MA	NE		
JENNIFER ZACCARA SAXTONS RIVER, VT				
APPROX. SCALE:	DATE:	DRAWN BY: SF		
AS SHOWN	DEC. 4, 2020			



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: 4 STONELEIGH LANE COHASSET, MA NAD83 UTM Meters: 4680414mN , 349773mE (Zone: 19) February 28, 2020 GREEN HILL ROCK GREEN HILL BLACK ROCK BEACH PLEASAN1 1000 fi Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail PWS Protection Areas: Zone II, IWPA, Zone A Hydrography: Open Water, PWS Reservoir, Tidal Flat Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct ---Wetlands: Freshwater, Saltwater, Cranberry Bog Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam FEMA 100yr Floodplain; Protected Open Space; ACEC Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential 🛂 Aquifers: Medium Yield, High Yield, EPA Sole Source..... Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com. 🏻 😂 Non Potential Drinking Water Source Area: Medium, High (Yield).

MassDEP - Bureau of Waste Site Cleanup Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii



Site Information:

2183 OCEAN ST. MARSHFIELD, MA 02050

TEL: 508-523-1007 www.RiverHawkLLC.com

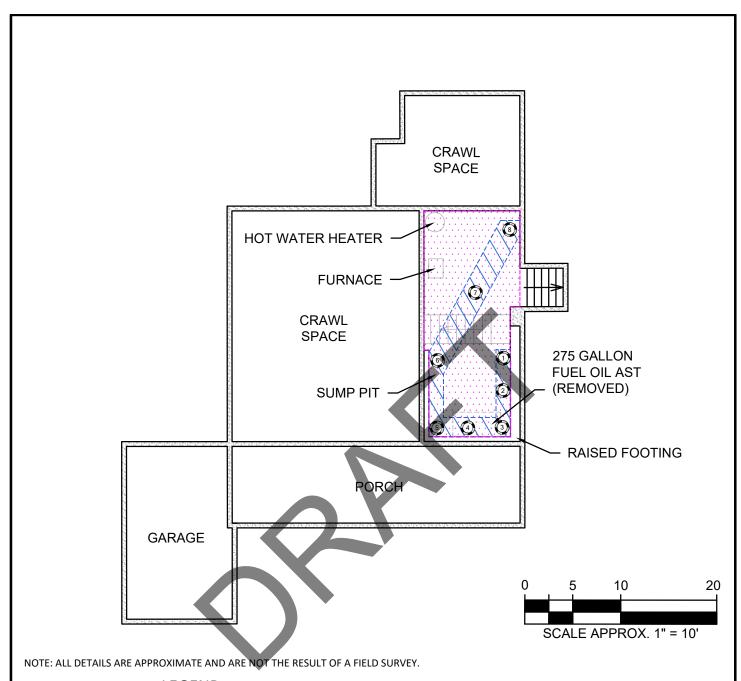
FIGURE 3 - MASS GIS ENVIRONMENTAL PLAN

PROJECT **4 STONELEIGH LANE** COHASSET, MA CLIENT

JENNIFER ZACCARA SAXTONS RIVER, VT

APPROX. SCALE: DATE: NTS DEC. 4, 2020 DRAWN BY: CHECKED BY: WPK





LEGEND



SURFACE RELEASE AREA



EXCAVATION AREA



SOIL SAMPLE LOCATION (DURING EXCAVATION)



MARSHFIELD, MA 02050

TEL: 508-523-1007 www.RiverHawkLLC.com

FIGURE 4 EXCAVATION & SOIL SAMPLE LOCATION PLAN						
PROJECT	4 STONELEIGH LANE COHASSET, MA					
CLIENT	JENNIFER ZACCARA SAXTONS RIVER, VT					
APPROX. SCALE:	DATE:	DRAWN BY: PJK				
AS SHOWN	DEC. 4, 2020	CHECKED BY: WPK				

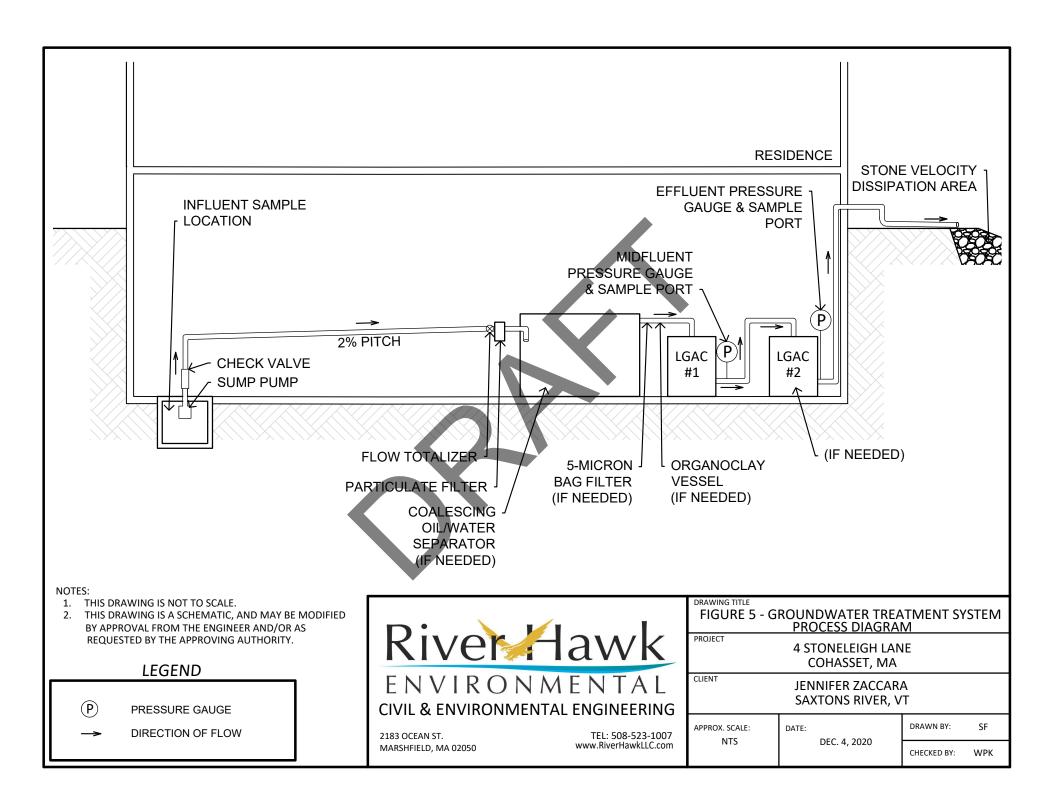




TABLE 1 Soil Sample Screening Summary (March 11, 2020 and July 23, 2020)

4 Stoneleigh Lane Cohasset, MA

Sample Location	Date	Feet Below Grade	TOVs (ppmv)
SB-1	3/11/2020	0-1'	NS
SB-2	3/11/2020	0-1'	NS
SB-3	3/11/2020	0-1'	NS
SB-4	3/11/2020	0-1'	NS
SB-5	3/11/2020	0-1'	NS
FXSS-1	7/23/2020	0-1'	1.3
EX22-1	//23/2020	1'-2'	3.7
FXSS-2	7/23/2020	0-1	142.0
EA33-2	7/23/2020	1'-2'	104.1
		0-1'	48.0
EXSS-3	7/23/2020	1'-2'	118.4
		2'-3'	116.2
		0-1'	717.8
FXSS-4	7/23/2020	1'-2'	1,025
EA33-4		2'-3'	760.2
		3'-4'	117.0
EXSS-5	7/23/2020	0-1'	616.8
EA33-3	7/23/2020	1'-2'	241.7
EXSS-6	7/23/2020	0-1'	66.6
LA33-0	1/23/2020	1'-2'	12.9
		0-1'	39.2
EXSS-7	7/23/2020	1'-2'	100.2
		2'-3'	0.1
EXSS-8	7/23/2020	0-1'	24.8
LX33-6	7/23/2020	1'-2'	8.3

- 1: TOVs Total Organic Volatiles.

 Notes: 2: ppmv Parts per million by volume.

 3: Grey highlighted cells indicate that soil is no longer representative of in situ conditions.

 4: Yellow highlighted cells indicate that soil sample was submitted for laboratory analysis.

 5: NS Not screened for TOVs.

TABLE 2 Soil Sample Analytical Summary

(July 23, 2020)

4 Stoneleigh Lane Cohasset, MA

MCP Method 1 Soil				SAMPLE IDENTIFICATION / RESULTS							
		Stand	dards	MCP Upper	7/23/2020	7/23/2020	7/23/2020	7/23/2020	7/23/2020	7/23/2020	7/23/2020
Analyte	Units	S-1/GW-1	S-3/GW-1	Conc. Limits	EXSS-2 (0-2')	EXSS-4 (1'-2')	EXSS-4 (3'-4')	EXSS-5 (0-2')	EXSS-6 (1'-2')	EXSS-7 (2'-3')	EXSS-8 (0-2')
Extractable Petroleum Hydroca	rbons (Mas	sDEP EPH Me	thod)								
C ₉ -C ₁₈ Aliphatic Hydrocarbons	mg/kg	1,000	5,000	20,000	96.4	3,260	1,040	1,400	<17.2	<35.4	23.8
C ₁₉ -C ₃₆ Aliphatic Hydrocarbons	mg/kg	3,000	5,000	20,000	87.5	1,600	567	764	<17.2	39.8	27.7
C ₁₁ -C ₂₂ Aromatic Hydrocarbons	mg/kg	1,000	1,000	10,000	36.9	682	346	458	<17.2	56.6	17.9
2-Methylnaphthalene	mg/kg	0.7	1	5,000	<0.22	0.29	<0.22	<0.23	<0.23	< 0.47	<0.22
Acenaphthene	mg/kg	4	4	10,000	<0.44	<0.45	<0.45	< 0.47	<0.46	<0.94	<0.44
Acenaphthylene	mg/kg	1	1	10,000	<0.22	<0.23	<0.22	<0.23	<0.23	<0.47	<0.22
Anthracene	mg/kg	1,000	5,000	10,000	< 0.44	<0.45	<0.45	<0.47	<0.46	<0.94	<0.44
Benzo(a)anthracene	mg/kg	7	300	3,000	< 0.44	< 0.45	<0.45	<0.47	<0.46	<0.94	<0.44
Benzo(a)pyrene	mg/kg	2	30	300	< 0.44	<0.45	< 0.45	<0.47	<0.46	< 0.94	< 0.44
Benzo(b)fluoranthene	mg/kg	7	300	3,000	< 0.44	<0.45	< 0.45	< 0.47	<0.46	< 0.94	< 0.44
Benzo(g,h,i)perylene	mg/kg	1,000	5,000	10,000	<0.44	<0.45	<0.45	<0.47	<0.46	< 0.94	< 0.44
Benzo(k)fluoranthene	mg/kg	70	3,000	10,000	<0.44	<0.45	<0.45	< 0.47	<0.46	< 0.94	<0.44
Chrysene	mg/kg	70	3,000	10,000	<0.44	<0.45	<0.45	< 0.47	<0.46	< 0.94	< 0.44
Dibenzo(a,h)Anthracene	mg/kg	0.7	30	300	<0.22	<0.23	<0.22	<0.23	<0.23	< 0.47	<0.22
Fluoranthene	mg/kg	1,000	5,000	10,000	< 0.44	<0.45	< 0.45	<0.47	<0.46	< 0.94	<0.44
Fluorene	mg/kg	1,000	5,000	10,000	<0.44	<0.45	<0.45	< 0.47	<0.46	< 0.94	<0.44
Indeno(1,2,3-cd)Pyrene	mg/kg	7	300	3,000	<0.44	<0.45	< 0.45	< 0.47	< 0.46	< 0.94	< 0.44
Naphthalene	mg/kg	4	4	10,000	<0.44	<0.45	< 0.45	< 0.47	<0.46	<0.94	<0.44
Phenanthrene	mg/kg	10	20	10,000	<0.44	<0.45	<0.45	< 0.47	< 0.46	< 0.94	< 0.44
Pyrene	mg/kg	1,000	5,000	10,000	<0.44	<0.45	<0.45	<0.47	<0.46	< 0.94	<0.44
Volatile Petroleum Hydrocarbo	ns (MassDE	P VPH Metho	d)								
C ₅ -C ₈ Aliphatic Hydrocarbons	mg/kg	100	500	5,000	<10.7	15.1	22.2	<12.4	<10.5	<13.4	<10.7
C ₉ -C ₁₂ Aliphatic Hydrocarbons	mg/kg	1,000	5,000	20,000	<21.2	72.2	72.7	46.3	<20.8	<26.6	<21.2
C ₉ -C ₁₀ Aromatic Hydrocarbons	mg/kg	100	300	5,000	<10.2	103	85.8	59.7	<10	<12.8	<10.2
Benzene	mg/kg	2	2	10,000	<0.2	<0.25	<0.22	<0.24	<0.2	<0.26	<0.2
Ethylbenzene	mg/kg	40	40	10,000	<0.2	<0.25	<0.22	<0.24	<0.2	<0.26	<0.2
Methyl tert-Butyl Ether	mg/kg	0.1	0.1	5,000	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05
Naphthalene	mg/kg	4	4	10,000	<0.2	3.55	1.96	1.44	<0.2	<0.26	<0.2
Toluene	mg/kg	30	30	10,000	<0.2	<0.25	<0.22	<0.24	<0.2	<0.26	<0.2
Total Xylenes	mg/kg	400	400	10,000	<0.61	<0.74	<0.67	<0.71	<0.6	<0.77	<0.61

Notes:

MCP: Massachusetts Contingency Plan. N/A: Not applicable to this Disposal Site.

ND: Not detected at a concentration greater than the analytical method detection limit (i.e., non-detect).

Yellow Highlight: Values shaded in yellow were detected above the MCP Method 1 S-1/GW-1 Soil Standard.

TABLE 3 Groundwater Sample Analytical Summary (November 4, 2020 through December 1, 2020)

4 Stoneleigh Lane Cohasset, MA

		MCP ¹ Metho	d 1 Groundwa	ter Standards	SAMPLE I.D. / DATE COLLECTED / RESULTS		
Analyte	Units	GW-1	GW-2	GW-3	Sump Sample No. 1	Sump Sample No. 2	
		2,7. 2			11/4/2020	12/1/2020	
Extractable Petroleum Hydrocarbon	s (EPH) - Massi	DEP EPH Metho	d				
C ₉ -C ₁₈ Aliphatic Hydrocarbons	ug/L	700	5,000	50,000	<95	<93	
C ₁₉ -C ₃₆ Aliphatic Hydrocarbons	ug/L	14,000	N/A	50,000	<95	<93	
C ₁₁ -C ₂₂ Aromatic Hydrocarbons	ug/L	200	50,000	5,000	<95.2	<93.5	
2-Methylnaphthalene	ug/L	10	2,000	20,000	<4.8	<4.7	
Acenaphthene	ug/L	20	N/A	10,000	<4.8	<4.7	
Naphthalene	ug/L	140	700	20,000	<9.5	<9.3	
Phenanthrene	ug/L	40	N/A	10,000	<4.8	<4.7	
Volatile Petroleum Hydrocarbons (V	PH) - MassDEP	VPH Method					
C ₅ -C ₈ Aliphatic Hydrocarbons	ug/L	300	3,000	50,000	<158	<158	
C ₉ -C ₁₂ Aliphatic Hydrocarbons	ug/L	700	5,000	50,000	<270	<270	
C ₉ -C ₁₀ Aromatic Hydrocarbons	ug/L	200	400	50,000	<100	<100	
Benzene	ug/L	5	1,000	10,000	<1.5	<1.5	
Ethylbenzene	ug/L	70	20,000	5,000	<5	<5	
Methyl tert Butyl Ether	ug/L	70.0	50,000	50,000	<1.5	<1.5	
Naphthalene	ug/L	140	700	20,000	<5	<5	
Toluene	ug/L	1,000	50,000	40,000	<5	<5	
Xylenes (mixed isomers)	ug/L	10,000	3,000	5,000	<15	<15	
Total BTEX ⁵	ug/L	NS	NS	NS	-		
In-Situ Monitoring Parameters							
Sheen	N/A	NS	NS	NS	None observed	None observed	
Petroleum odor	N/A	NS	NS	NS A	None observed	None observed	
Color	N/A	NS	NS	NS	Transparent	Transparent	
						·	

Notes:

1.) MCP: Massachusetts Contingency Plan, promulgated 6/20/2014.
2.) BTEX: Benzene, Toluene, Ethylbenzene, Xylene.

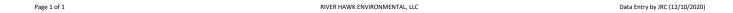


TABLE 4 Influent Groundwater Sample Analytical Summary (December 8, 2020)

4 Stoneleigh Lane Cohasset, MA

		PGP ² Effluer	t Limitations	SAMPLE I.D. / DATE	
Analyte	Units	KGF EIIIdei	t Limitations	COLLECTED / RESULTS	
Analyte	Units	TBEL ³	WQBEL ⁴	Influent	
	24 11 1466			12/8/2020	
Total Petroleum Hydrocarbons (TPH) Total Petroleum Hydrocarbons			F 000		
Total Petroleum Hydrocarbons	ug/L	5,000	5,000	<5	
Volatile Organic Compounds (VOCs) -	Method 524	2			
Tert-Butyl Alcohol	ug/L	120	120	<25	
	-8/-				
Inorganics (Total Metals) - 200 and 30	000 Series Met	hods			
Antimony	ug/L	206	640	<5	
Arsenic	ug/L	104	10	<2.5	
Cadmium	ug/L	10	0.25	<1	
Chromium	ug/L	323	74	<2	
Chromium III	ug/L	323	74	<10	
Chromium VI	ug/L	323	11	<10	
Copper Iron	ug/L ug/L	242 5,000	9 1,000	7.6 196	
Lead	ug/L	160	2.5	<u>196</u> <2	
Mercury	ug/L	0.739	0.77	<0.2	
Nickel	ug/L	1,450	52	<5	
Selenium	ug/L	235.8	5	<5	
Silver	ug/L	35.1	3.2	<1	
Zinc	ug/L	420	120	69.7	
Non-Halogenated Semi-Volatile Orga					
Acenaphthene	ug/L	NS	NS	<0.2	
Acenaphthylene	ug/L	NS	NS	<0.2	
Anthracene	ug/L	NS NS	NS	<0.2	
Benzo(a)anthracene Benzo(a)pyrene	ug/L	NS NS	0.0038	<0.05 <0.05	
Benzo(b)fluoranthene	ug/L ug/L	NS NS	0.0038	<0.05	
Benzo(g,h,i)perylene	ug/L ug/L	NS NS	0.0038	<0.2	
Benzo(k)fluoranthene	ug/L	NS	0.0038	<0.05	
bis(2-Ethylhexyl)phthalate	ug/L	NS	NS	<2.53	
Butylbenzylphthalate	ug/L	NS	NS	<2.53	
Chrysene	ug/L	NS	0.0038	<0.05	
Dibenzo(a,h)Anthracene	ug/L	NS	0.0038	<0.05	
Diethylphthalate	ug/L	NS	NS	<2.53	
Dimethylphthalate	ug/L	NS	NS NS	<2.53	
Di-n-butylphthalate Di-n-octylphthalate	ug/L ug/L	NS NS	NS NS	<2.53 <2.53	
Fluoranthene	ug/L	NS	NS NS	<0.2	
Fluorene	ug/L	NS	NS	<0.2	
Indeno(1,2,3-cd)Pyrene	ug/L	NS	NS	<0.05	
Naphthalene	ug/L	20	20	<0.2	
Pentachlorophenol	ug/L	NS	NS	<0.91	
Phenanthrene	ug/L	NS	NS	<0.2	
Pyrene	ug/L	NS .	NS NS	<0.2	
Total Group I PAHs	ug/L	1	NS 100	<2.53	
Total Group II PAHs	ug/L	100	100	<0.2	
Inorganics (Miscellaneous)	-				
Ammonia	mg/L	Report mg/L	Report mg/L	0.21	
Chloride	ug/L	Report ug/L	Report ug/L	40,000	
Hardness	ug/L	Report ug/L	Report ug/L		
Total Suspended Solids	mg/L	30	30	8	
In-Situ Monitoring Parameters					
Temperature	°C	20	20	12.1	
pH	S.U.	6.5 - 8.3	6.5 - 8.3	7.5	
Sheen Botroloum odor	N/A	NS NC	NS NC	None observed None observed	
Petroleum odor	N/A	NS NS	NS NS	None observed Transparent	
Color	N/A	CNI	INO	mansparent	
	II	11		1	

Notes:

- 1.) MCP: Massachusetts Contingency Plan, promulgated 6/20/2014.
 2.) RGP: National Pollutant Discharge Elimination System (NPDES) General Permit for Remediation Activity Discharges the Remediation General Permit (RGP) MAG910000, effective April 8, 2017.
 3.) TBEL: Technology Based Effluent Limitation, Massachusetts Remediation General Permit MAG910000.
- 4.) WQBEL: Water Quality Based Effluent Limitation, Massachusetts Remediation General Permit MAG910000.

 5.) BTEX: Benzene, Toluene, Ethylbenzene, Xylene.

TABLE 5 Effluent Groundwater Sample Analytical Summary (December 8, 2020)

4 Stoneleigh Lane Cohasset, MA

		RGP ² Effluer	SAMPLE I.D. / DATE COLLECTED / RESULTS	
Analyte	Units	TBEL ³	WQBEL⁴	Effluent
			-	12/8/2020
Total Petroleum Hydrocarbons (TP				
Total Petroleum Hydrocarbons	ug/L	5,000	5,000	<5
Volatile Organic Compounds (VOCs				
Tert-Butyl Alcohol	ug/L	120	120	<25
		<u> </u>		
Inorganics (Total Metals) - 200 and			640	-
Antimony Arsenic	ug/L ug/L	206 104	640 10	<5 <2.5
Cadmium	ug/L ug/L	104	0.25	<1
Chromium	ug/L	323	74	<2
Chromium III	ug/L	323	74	<10
Chromium VI	ug/L	323	11	<10
Copper	ug/L	242	9	3.9
Iron	ug/L	5,000	1,000	1,840
Lead	ug/L	160	2.5	<2
Mercury	ug/L	0.739	0.77	<0.2
Nickel	ug/L	1,450	52	10.3
Selenium	ug/L	235.8	5	<5
Silver	ug/L	35.1	3.2	<1
Zinc	ug/L	420	120	112
		. /2		
Non-Halogenated Semi-Volatile Or				.010
Acenaphthene	ug/L	NS NS	NS NS	<0.19
Acenaphthylene Anthracene	ug/L ug/L	NS NS	NS NS	<0.19 <0.19
Benzo(a)anthracene	ug/L ug/L	NS NS	0.0038	<0.19
Benzo(a)pyrene	ug/L ug/L	NS NS	0.0038	<0.05
Benzo(b)fluoranthene	ug/L	NS NS	0.0038	<0.05
Benzo(g,h,i)perylene	ug/L	NS	0.0038	<0.19
Benzo(k)fluoranthene	ug/L	NS	0.0038	<0.05
bis(2-Ethylhexyl)phthalate	ug/L	NS	NS	<2.34
Butylbenzylphthalate	ug/L	NS	NS	<2.34
Chrysene	ug/L	NS	0.0038	<0.05
Dibenzo(a,h)Anthracene	ug/L	NS	0.0038	<0.05
Diethylphthalate	ug/L	NS	NS	<2.34
Dimethylphthalate	ug/L	NS	NS	<2.34
Di-n-butylphthalate	ug/L	NS	NS	<2.34
Di-n-octylphthalate	ug/L	NS	NS	<2.34
Fluoranthene Fluorene	ug/L	NS NS	NS NS	<0.19
	ug/L	NS NS	NS NS	<0.19 <0.05
Indeno(1,2,3-cd)Pyrene Naphthalene	ug/L ug/L	20	NS 20	<0.05
Pentachlorophenol	ug/L	NS NS	NS NS	<0.13
Phenanthrene	ug/L	NS NS	NS	<0.19
Pyrene	ug/L	NS	NS	<0.19
Total Group I PAHs	ug/L	1	NS	<2.34
Total Group II PAHs	ug/L	100	100	<0.19
Inorganics (Miscellaneous)				
Ammonia	mg/L	Report mg/L	Report mg/L	<0.1
Chloride	ug/L	Report ug/L	Report ug/L	38,600
Hardness	ug/L	Report ug/L	Report ug/L	48,300
Total Suspended Solids	mg/L	30	30	24
In-Situ Monitoring Parameters				
Temperature	°C	20	20	10.6
рН	S.U.	6.5 - 8.3	6.5 - 8.3	6.4
Sheen	N/A	NS	NS	None observed
Petroleum odor	N/A	NS	NS	None observed
Color	N/A	NS	NS	Transparent

Notes:

- 1.) MCP: Massachusetts Contingency Plan, promulgated 6/20/2014.
 2.) RGP: National Pollutant Discharge Elimination
 System (NPDES) General Permit for Remediation
 Activity Discharges the Remediation General Permit
 3.) TBEL: Technology Based Effluent Limitation,
 Massachusetts Remediation General Permit

4.) WQBEL: Water Quality Based Effluent Limitation,

Massachusetts Remediation General Permit
5.) BTEX: Benzene, Toluene, Ethylbenzene, Xylene.

6.) Values shaded in yellow exceed the TBEL and/or WQBEL.

TABLE 6 **Receiving Water Body Analytical Summary**

(December 8, 2020)

4 Stoneleigh Lane Cohasset, MA

		RGP ² Effluent Limitations		SAMPLE I.D. / DATE COLLECTED / RESULTS	
Analyte	Units	TBEL ³	WQBEL ⁴	Receiving Water	
		1522		12/8/2020	
Total Petroleum Hydrocarbons (TPH)	- Method 1664	IA.			
Total Petroleum Hydrocarbons	ug/L	5,000	5,000		
Volatile Organic Compounds (VOCs) -	Method 524.				
Tert-Butyl Alcohol	ug/L	120	120		
Inorganics (Total Metals) - 200 and 30					
Antimony	ug/L	206	640	<5	
Arsenic	ug/L	104	10	<2.5	
Cadmium Chromium	ug/L	10 323	0.25	<1	
Chromium III	ug/L	323	74 74	<2	
Chromium VI	ug/L ug/L	323	11		
Copper	ug/L ug/L	242	9	9.7	
Iron	ug/L	5,000	1,000	694	
Lead	ug/L	160	2.5	6.3	
Mercury	ug/L ug/L	0.739	0.77	<0.2	
Nickel	ug/L	1,450	52	<5	
Selenium	ug/L	235.8	5	<5	
Silver	ug/L	35.1	3.2	<1	
Zinc	ug/L	420	120	64.1	
	-8/-			3.112	
Non-Halogenated Semi-Volatile Orga	nic Compound	s (SVOCs) - Method	625.1/625.1-SIM		
Acenaphthene	ug/L	NS	NS NS		
Acenaphthylene	ug/L	NS	NS		
Anthracene	ug/L	NS	NS	-	
Benzo(a)anthracene	ug/L	NS	0.0038		
Benzo(a)pyrene	ug/L	NS	0.0038		
Benzo(b)fluoranthene	ug/L	NS	0.0038		
Benzo(g,h,i)perylene	ug/L	NS	0.0038		
Benzo(k)fluoranthene	ug/L	NS	0.0038		
bis(2-Ethylhexyl)phthalate	ug/L	NS	NS		
Butylbenzylphthalate	ug/L	NS	NS		
Chrysene	ug/L	NS	0.0038		
Dibenzo(a,h)Anthracene	ug/L	NS	0.0038		
Diethylphthalate	ug/L	NS	NS		
Dimethylphthalate	ug/L	NŠ	NS		
Di-n-butylphthalate	ug/L	NS	NS		
Di-n-octylphthalate	ug/L	NS	NS		
Fluoranthene	ug/L	NS	NS		
Fluorene	ug/L	NS	NS NE		
Indeno(1,2,3-cd)Pyrene	ug/L	NS 20	NS 20	****	
Naphthalene	ug/L	20 NS	20 NS	****	
Pentachlorophenol Phenanthrene	ug/L	NS NS	NS NS		
Pyrene	ug/L ug/L	NS NS	NS NS		
Total Group I PAHs	ug/L v	1	NS NS		
Total Group II PAHs	ug/L ug/L	100	100		
i star si sup ii i raiis	UB/ L	100	100		
Inorganics (Miscellaneous)	7				
Ammonia	mg/L	Report mg/L	Report mg/L	0.16	
Chloride	ug/L	Report ug/L	Report ug/L		
Hardness	ug/L	Report ug/L	Report ug/L	61,300	
Total Suspended Solids	mg/L	30	30		
In-Situ Monitoring Parameters					
Temperature	°C	20	20	2.8	
remperature		65.00	6.5 - 8.3	6.8	
рН	S.U.	6.5 - 8.3			
pH Sheen	N/A	NS	NS	None observed	
рН					

- Notes: 1.) MCP: Massachusetts Contingency Plan, promulgated 6/20/2014.
 2.) RGP: National Pollutant Discharge Elimination System (NPDES) General Permit for Remediation Activity Discharges the Remediation General Permit (RGP) MAG910000, effective April 8, 2017.
 - 3.) TBEL: Technology Based Effluent Limitation, Massachusetts Remediation General Permit
 - MAG910000.

 4.) WQBEL: Water Quality Based Effluent Limitation, Massachusetts Remediation General Permit MAG910000.
 - 5.) BTEX: Benzene, Toluene, Ethylbenzene, Xylene.

NOI Form



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

A. General site information:

1. Name of site: Site address: 4 Stoneleigh Lane				
Residence	Street: 4 Stoneleigh Lane	neleigh Lane		
	City: Cohasset		State: MA	Zip: 02025
2. Site owner	Contact Person: Jennifer Zaccara			
Jennifer Zaccara	Telephone: (802) 869-6221	Email: jza	ccara@verr	montacademy.org
	Mailing address: P.O. Box 500	I.		
	Street:			
Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private ☐ Other; if so, specify:	City: Saxtons River		State: VT	Zip: 05154
3. Site operator, if different than owner	Contact Person William Kenney			
River Hawk Environmental, LLC	Telephone: (781) 536-4639	Email: bke	enney@rive	rhawkllc.com
	Mailing address:			
	Street: 2183 Ocean Street, Suite 2			
	City: Marshfield		State: MA	Zip: 02050
4. NPDES permit number assigned by EPA:	5. Other regulatory program(s) that apply to the site	(check all th	at apply):	
MAG910969 (assigned December 4, 2020)	■ MA Chapter 21e; list RTN(s):	□ CERCI	₋ A	
	4-28208	□ UIC Pro	ogram	
NPDES permit is (check all that apply: ■ RGP □ DGP □ CGP	□ NH Groundwater Management Permit or	□ POTW	Pretreatment	t
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Groundwater Release Detection Permit:	□ CWA S	Section 404	

B. Receiving water information:					
1. Name of receiving water(s): Classification of receiving water(s): Classification of receiving water(s):					
Drainage area to unnamed stream to South Coastal watershed.	Unnamed stream: N/A, South Coastal: N/A				
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): If yes, specify:	□ Yes ■ No				
3. Indicate if the receiving water(s) is listed in the State's I pollutants indicated. Also, indicate if a final TMDL is avail 4.6 of the RGP. There are no approved TMDLs for the unit	lable for any of the indicated pollutants. For more inform	nation, contact the appropriate State as noted in Part			
4. Indicate the seven day-ten-year low flow (7Q10) of the Appendix V for sites located in Massachusetts and Appendix		N/A (intermittent flow)			
5. Indicate the requested dilution factor for the calculation accordance with the instructions in Appendix V for sites in					
6. Has the operator received confirmation from the approp If yes, indicate date confirmation received: March 30, 2020					
7. Has the operator attached a summary of receiving water	sampling results as required in Part 4.2 of the RGP in ac	cordance 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	☐ Contaminated surface water	☐ The receiving water	☐ Potable water; if so, indicate municipality or origin:
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	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	☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ 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	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
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.	with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains resid	dual chlorine? (check one): □ Yes ■ No
D. Discharge information	
1. The discharge(s) is a(n) (check any that apply): ■ Existing discharge □ New	w discharge New source
Outfall(s):	Outfall location(s): (Latitude, Longitude)
Private sump discharge pipe.	42.261680 North, 70.821294 West
Discharges enter the receiving water(s) via (check any that apply): Direct discharges enter the receiving water(s) is check any that apply is the control of the control	ischarge to the receiving water Indirect discharge, if so, specify:
The sump discharge pipe discharges to an unnamed intermittent stream	m prior to entering the drainage area.
☐ A private storm sewer system ☐ A municipal storm sewer system	
If the discharge enters the receiving water via a private or municipal storm sew	•
Has notification been provided to the owner of this system? (check one): \Box Ye	
Has the operator has received permission from the owner to use such system for obtaining permission: N/A	or discharges? (check one): □ Yes ■ No, if so, explain, with an estimated timeframe for
Has the operator attached a summary of any additional requirements the owner	r of this system has specified? (check one): \square Yes \square No
Provide the expected start and end dates of discharge(s) (month/year): Decem	nber 5, 2020 to May 5, 2020
Indicate if the discharge is expected to occur over a duration of: ■ less than 1	2 months □ 12 months or more ■ is an emergency discharge
Has the operator attached a site plan in accordance with the instructions in D, a	above? (check one): ■ Yes □ No

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)					
	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 					
■ I – Petroleum-Related Site Remediation □ II – Non-Petroleum-Related Site Remediation	b. If Activity Category III, IV	V, V, VI, VII or VIII: (check either G or H)				
□ III – Contaminated Site Dewatering□ IV – Dewatering of Pipelines and Tanks	☐ G. Sites with Known Contamination	☐ H. Sites with Unknown Contamination				
 □ V – Aquifer Pump Testing □ VI – Well Development/Rehabilitation □ VII – Collection Structure Dewatering/Remediation 	c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)					
□ VIII – Dredge-Related Dewatering	 □ A. Inorganics □ B. Non-Halogenated Volatile Organic Compounds □ C. Halogenated Volatile Organic Compounds 	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply				
	☐ D. Non-Halogenated Semi-Volatile Organic Compounds					
	□ E. Halogenated Semi-VolatileOrganic Compounds□ F. Fuels Parameters					

4. Influent and Effluent Characteristics

Parameter	Known	Known	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
	or believed absent	or believed present				Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	2	350.1	0.10	0.21	0.21	Report mg/L	
Chloride		✓	2	300.0	5.0	40	40	Report μg/l	
Total Residual Chlorine	✓		0	N/A	N/A	N/A	N/A	0.2 mg/L	N/A
Total Suspended Solids		✓	2	2540D	5	8	8	30 mg/L	
Antimony	✓		2	200.7	5	<5	<5	206 μg/L	640
Arsenic	✓		2	3113B	2.5	<2.5	<2.5	104 μg/L	10
Cadmium	✓		2	200.8	1.0	<1.0	<1.0	10.2 μg/L	0.25
Chromium III	✓		2	200.7	10.0	<10.0	<10.0	323 μg/L	74
Chromium VI	✓		2	3500	10.0	<10.0	<10.0	323 μg/L	11
Copper		✓	2	200.7	2.0	7.6	7.6	242 μg/L	9
Iron		✓	2	200.7	10.0	196	196	5,000 μg/L	1,000
Lead	✓		2	200.7	2.0	<2.0	<2.0	160 μg/L	2.5
Mercury	✓		2	245.1	0.2	< 0.2	<0.2	0.739 μg/L	0.77
Nickel	✓		2	200.7	5.0	< 5.0	<5.0	1,450 μg/L	52
Selenium	✓		2	3113B	5.0	< 5.0	<5.0	235.8 μg/L	5
Silver	✓		2	200.7	1.0	<1.0	<1.0	35.1 μg/L	3.2
Zinc		1	2	200.7	5.0	69.7	69.7	420 μg/L	120
Cyanide	✓		0	N/A	N/A	N/A	N/A	178 mg/L	N/A
B. Non-Halogenated VOC				N/A	N/A	N/A	N/A	100 7	
Total BTEX	√		0					100 μg/L	
Benzene	✓		0	N/A	N/A	N/A	N/A	5.0 μg/L	
1,4 Dioxane	✓		0	N/A	N/A	N/A	N/A	200 μg/L	
Acetone	✓		0	N/A	N/A	N/A	N/A	7.97 mg/L	
Phenol	✓		0	N/A	N/A	N/A	N/A	1,080 μg/L	N/A

Parameter	Known	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
	or believed absent					Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✓		0	N/A	N/A	N/A	N/A	4.4 μg/L	N/A
1,2 Dichlorobenzene	✓		0	N/A	N/A	N/A	N/A	600 μg/L	
1,3 Dichlorobenzene	✓		0	N/A	N/A	N/A	N/A	320 μg/L	
1,4 Dichlorobenzene	✓		0	N/A	N/A	N/A	N/A	5.0 μg/L	
Total dichlorobenzene	✓		0	N/A	N/A	N/A	N/A	763 μg/L in NH	
1,1 Dichloroethane	✓		0	N/A	N/A	NA	N/A	70 μg/L	
1,2 Dichloroethane	✓		0	N/A	N/A	N/A	N/A	5.0 μg/L	
1,1 Dichloroethylene	✓		0	N/A	N/A	N/A	N/A	3.2 μg/L	
Ethylene Dibromide	✓		0	N/A	N/A	N/A	N/A	0.05 μg/L	
Methylene Chloride	✓		0	N/A	N/A	N/A	N/A	4.6 μg/L	
1,1,1 Trichloroethane	✓		0	N/A	N/A	N/A	N/A	200 μg/L	
1,1,2 Trichloroethane	✓		0	N/A	N/A	N/A	N/A	5.0 μg/L	
Trichloroethylene	✓		0	N/A	N/A	N/A	N/A	5.0 μg/L	
Tetrachloroethylene	✓		0	N/A	N/A	N/A	N/A	5.0 μg/L	N/A
cis-1,2 Dichloroethylene	✓		0	N/A	N/A	N/A	N/A	70 μg/L	
Vinyl Chloride	✓		0	N/A	N/A	N/A	N/A	2.0 μg/L	
D. Non-Halogenated SVOC	Cs								
Total Phthalates	✓		2	625.1-SIM	2.53	<2.53	<2.53	190 μg/L	N/A
Diethylhexyl phthalate	✓		2	625.1-SIM	2.53	<2.53	<2.53	101 μg/L	2.2
Total Group I PAHs	✓		2	625.1-SIM	2.53	<2.53	<2.53	1.0 μg/L	
Benzo(a)anthracene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05		0.0038
Benzo(a)pyrene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05	1	0.0038
Benzo(b)fluoranthene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05	As Total PAHs	0.0038
Benzo(k)fluoranthene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05		0.0038
Chrysene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05		0.0038
Dibenzo(a,h)anthracene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05		0.0038
Indeno(1,2,3-cd)pyrene	✓		2	625.1-SIM	0.05	< 0.05	< 0.05	7	N/A

	Known	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
Parameter	or believed absent					Daily maximum (µg/l)	Daily average (μg/l)	TBEL	WQBEL
Total Group II PAHs	✓		2	625.1-SIM	0.2	< 0.2	< 0.2	100 μg/L	
Naphthalene	✓		2	625.1-SIM	0.2	<0.2	<0.2	20 μg/L	
E. Halogenated SVOCs									
Total PCBs	✓		0	N/A	N/A	N/A	N/A	0.000064 μg/L	
Pentachlorophenol	✓		0	N/A	N/A	N/A	N/A	1.0 μg/L	
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✓		2	1664A	5	< 5	<5	5.0 mg/L	
Ethanol	✓		0	N/A	N/A	N/A	N/A	Report mg/L	
Methyl-tert-Butyl Ether	✓		0	N/A	N/A	N/A	N/A	70 μg/L	N/A
tert-Butyl Alcohol	✓		2	524.2	25.0	<25.0	<25.0	120 μg/L in MA 40 μg/L in NH	
tert-Amyl Methyl Ether	✓		0	N/A	N/A	N/A	N/A	90 μg/L in MA 140 μg/L in NH	
Other (i.e., pH, temperatur	e, hardness,	salinity, LC	50, addition	al pollutan	ats present);	if so, specify:			
рН		1	2	Field +		7.5	7.5		
Temperature		1	2	Field		12.1	12.1		
Hardness		~	1	CALC	82.3	48300	48300		
			•						
									<u> </u>

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:	
Sediment filter, oil/water separator (if required), and/or additional filtration (if required).	
2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.	
Raw influent groundwater will be run through a particulate filter and 55-gallon drum containing granulated activated carbon (GAC), prior to discharge. In the event that perhydrocarbons are observed (i.e., sheen) or detected by the laboratory, an oil/water separator will be added to the treatment system prior to the GAC treatment stage. In the suspended solids are contributing to elevated levels of source water contaminants to levels above the TBELs, bag filtration will be added to the treatment system prior to the separator and/or GAC treatment stage.	event that total
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: GAC Adsorption.	
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.	15
Indicate the most limiting component: Piping from and between treatment system components. Is use of a flow meter feasible? (check one): ■ Yes □ No, if so, provide justification:	13
Provide the proposed maximum effluent flow in gpm.	15
Provide the average effluent flow in gpm.	<12
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	N/A
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 \square pH conditioners \square Bioremedial agents, including microbes \square Chlorine or chemicals containing chlorine \square 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): \square Yes \square 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) \square the operator \square EPA \square 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.
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 a that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and b no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are information, including the possibility of fine and imprisonment for knowing violations.	persons who manage the system, or those elief, true, accurate, and complete. I have
A BMPP has been prepared in accordance with Section 2.5 of the Research BMPP certification statement: BMPP has been implemented since the start of discharge activities.	emediation General Permit. The
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. Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site	Check one: Yes □ No □ NA ■
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): \square RGP \square DGP \square CGP \square MSGP \square Individual NPDES permit \square Other; if so, specify:	Check one: Yes □ No □ NA ■
□ Other, it so, specify.	
Signature: Date	te:
Print Name and Title: Jennifer Zaccara, property owner	

Laboratory Analytical Data





The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

William Kenney River Hawk Environmental, LLC 3 Surrey Dr Lakeville, MA 02050

RE: 4 Stoneleigh Lane Cohasset MA - RGP (004010101) ESS Laboratory Work Order Number: 20L0295

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard Laboratory Director REVIEWED

By ESS Laboratory at 4:44 pm, Dec 14, 2020

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

SAMPLE RECEIPT

The following samples were received on December 08, 2020 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2017 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

ESS Laboratory is unable to achieve the required detection limit of 0.4 mg/L for Ethanol for the RGP permit. We have also been unable to procure a subcontract laboatory that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.

Lab Number	Sample Name	Matrix	Analysis
20L0295-01	Influent	Aqueous	1664A, 200.7, 200.8, 245.1, 2540D, 300.0, 3113B,
			350.1, 3500Cr B-2009, 524.2, 625.1 SIM
20L0295-02	Effluent	Aqueous	1664A, 200.7, 200.8, 245.1, 2540D, 300.0, 3113B,
			350.1, 3500Cr B-2009, 524.2, 625.1 SIM, CALC

Fax: 401-461-4486

Service



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

PROJECT NARRATIVE

625.1(SIM) Semi-Volatile Organic Compounds

D0L0257-CCV1 Continuing Calibration %Diff/Drift is below control limit (CD-).

2,4,6-Tribromophenol (22% @ 20%), Diethylphthalate (34% @ 20%), Nitrobenzene-d5 (23% @ 20%)

Total Metals

20L0295-01 Elevated Method Reporting Limits due to sample matrix (EL).

Cadmium

20L0295-02 Elevated Method Reporting Limits due to sample matrix (EL).

Cadmium

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint

6010C - ICP

6020A - ICP MS

7010 - Graphite Furnace

7196A - Hexavalent Chromium

7470A - Aqueous Mercury

7471B - Solid Mercury

8011 - EDB/DBCP/TCP

8015C - GRO/DRO

8081B - Pesticides

8082A - PCB

8100M - TPH

8151A - Herbicides

8260B - VOA

8270D - SVOA

8270D SIM - SVOA Low Level

9014 - Cyanide

9038 - Sulfate

9040C - Aqueous pH

9045D - Solid pH (Corrosivity)

9050A - Specific Conductance

9056A - Anions (IC)

9060A - TOC

9095B - Paint Filter

MADEP 04-1.1 - EPH

MADEP 18-2.1 - VPH

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

Prep Methods

3005A - Aqueous ICP Digestion

3020A - Aqueous Graphite Furnace / ICP MS Digestion

3050B - Solid ICP / Graphite Furnace / ICP MS Digestion

3060A - Solid Hexavalent Chromium Digestion

3510C - Separatory Funnel Extraction

3520C - Liquid / Liquid Extraction

3540C - Manual Soxhlet Extraction

3541 - Automated Soxhlet Extraction

3546 - Microwave Extraction

3580A - Waste Dilution

5030B - Aqueous Purge and Trap

5030C - Aqueous Purge and Trap

5035A - Solid Purge and Trap

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Influent Date Sampled: 12/08/20 13:00

Percent Solids: N/A

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-01

Sample Matrix: Aqueous

Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	<u>Method</u> 200.7	<u>Limit</u>	<u>DF</u>	Analyst KJK	Analyzed 12/10/20 15:45	<u>I/V</u> 100	<u>F/V</u>	Batch DL00952
Antimony	ND (5.0)				1					
Arsenic	ND (2.5)		3113B		5	KJK	12/11/20 16:06	100	10	DL00952
Cadmium	EL ND (1.0)		200.8		50	BJV	12/10/20 13:26	100	10	DL00952
Chromium	ND (2.0)		200.7		1	KJK	12/10/20 15:45	100	10	DL00952
Chromium III	ND (10.0)		200.7		1	CCP	12/10/20 15:45	1	1	[CALC]
Copper	7.6 (2.0)		200.7		1	KJK	12/10/20 15:45	100	10	DL00952
Iron	196 (10.0)		200.7		1	KJK	12/10/20 15:45	100	10	DL00952
Lead	ND (2.0)		200.7		1	KJK	12/10/20 15:45	100	10	DL00952
Mercury	ND (0.2)		245.1		1	MKS	12/10/20 12:08	20	40	DL00951
Nickel	ND (5.0)		200.7		1	KJK	12/10/20 15:45	100	10	DL00952
Selenium	ND (5.0)		3113B		5	KJK	12/12/20 12:51	100	10	DL00952
Silver	ND (1.0)	X	200.7		1	KJK	12/10/20 15:45	100	10	DL00952
Zinc	69.7 (5.0)		200.7		1	KJK	12/10/20 15:45	100	10	DL00952



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Influent Date Sampled: 12/08/20 13:00

Percent Solids: N/A Initial Volume: 25 Final Volume: 25

Extraction Method: 524.2

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-01

Sample Matrix: Aqueous

Units: ug/L Analyst: MD

524.2 Volatile Organic Compounds

Analyte Tertiary-butyl Alcohol	Results (MRL) ND (25.0)	MDL	<u>Method</u> 524.2	Limit DF	<u>Analyzed</u> 12/09/20 14:48	Sequence D0L0195	Batch DL00936
	9	%Recovery	Qualifier	Limíts			
Surrogate: 1,2-Dichlorobenzene-d4		91 %		80-120			
Surrogate: 4-Bromofluorobenzene		92 %		80-120			
		>					



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Influent Date Sampled: 12/08/20 13:00

Percent Solids: N/A Initial Volume: 990 Final Volume: 0.25

Surrogate: p-Terphenyl-d14

Extraction Method: 3510C

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-01

Sample Matrix: Aqueous

Units: ug/L Analyst: TAJ

Prepared: 12/9/20 14:00

625.1(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence	Batch
Acenaphthene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Acenaphthylene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Anthracene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Benzo(a)anthracene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Benzo(a)pyrene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Benzo(b)fluoranthene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Benzo(g,h,i)perylene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Benzo(k)fluoranthene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
bis(2-Ethylhexyl)phthalate	ND (2.53)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Butylbenzylphthalate	ND (2.53)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Chrysene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Dibenzo(a,h)Anthracene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Diethylphthalate	ND (2.53)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Dimethylphthalate	ND (2.53)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Di-n-butylphthalate	ND (2.53)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Di-n-octylphthalate	ND (2.53)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Fluoranthene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Fluorene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Indeno(1,2,3-cd)Pyrene	ND (0.05)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Naphthalene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Pentachlorophenol	ND (0.91)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Phenanthrene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
Pyrene	ND (0.20)		625.1 SIM		1	12/12/20 1:45	D0L0257	DL00901
		%Recovery	Qualifier	Limits				
Surrogate: 1,2-Dichlorobenzene-d4		52 %		30-130				
Surrogate: 2,4,6-Tribromophenol		57 %		15-110				
Surrogate: 2-Fluorobiphenyl		62 %		30-130				
Surrogate: Nitrobenzene-d5		52 %		30-130				

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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Influent Date Sampled: 12/08/20 13:00

Percent Solids: N/A

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-01

Sample Matrix: Aqueous

Classical Chemistry

Analyte Ammonia as N	Results (MRL) 0.21 (0.10)	MDL.	Method 350.1	<u>Limit</u>	DF 1	Analyst JLK	Analyzed 12/10/20 16:50	Units mg/L	Batch DL00938
Chloride	40.0 (5.0)		300.0		10	EEM	12/10/20 18:05	mg/L	DL01023
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	CCP	12/08/20 20:00	ug/L	DL00854
Total Petroleum Hydrocarbon	ND (5)		1664A		1	LAB	12/10/20 14:38	mg/L	DL01022
Total Suspended Solids	8 (5)		2540D		1	CCP	12/09/20 15:37	mg/L	DL00926





The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Effluent Date Sampled: 12/08/20 13:30

Percent Solids: N/A

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-02

Sample Matrix: Aqueous

Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte Antimony	Results (MRL) ND (5.0)	<u>MDL</u>	<u>Method</u> 200.7	<u>Limit</u> <u>I</u>	<u>)F</u>	Analyst KJK	Analyzed 12/10/20 15:50	<u>I/V</u> 100	<u>F/V</u>	Batch DL00952
Arsenic	ND (2.5)		3113B		5	KJK	12/11/20 16:11	100	10	DL00952
Cadmium	EL ND (1.0)		200.8		50	KJK	12/10/20 13:42	100	10	DL00952
Chromium	ND (2.0)		200.7		1	KJK	12/10/20 15:50	100	10	DL00952
Chromium III	ND (10.0)		200.7		1	CCP	12/10/20 15:50	1	1	[CALC]
Copper	3.9 (2.0)		200.7		1	KJK	12/10/20 15:50	100	10	DL00952
Iron	1840 (10.0)		200.7		1	KJK	12/10/20 15:50	100	10	DL00952
Lead	ND (2.0)		200.7		1	KJK	12/10/20 15:50	100	10	DL00952
Mercury	ND (0.2)		245.1		1	MKS	12/10/20 12:10	20	40	DL00951
Nickel	10.3 (5.0)		200.7		1	KJK	12/10/20 15:50	100	10	DL00952
Selenium	ND (5.0)		3113B		5	KJK	12/12/20 12:57	100	10	DL00952
Silver	ND (1.0)	X	200.7		1	KJK	12/10/20 15:50	100	10	DL00952
Total Hardness	48300 (82.3)		CALC		1	KJK	12/10/20 15:50	1	1	[CALC]
Zinc	112 (5.0)		200.7		1	KJK	12/10/20 15:50	100	10	DL00952



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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Effluent Date Sampled: 12/08/20 13:30

Percent Solids: N/A Initial Volume: 25 Final Volume: 25

Extraction Method: 524.2

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-02

Sample Matrix: Aqueous

Units: ug/L Analyst: MD

524.2 Volatile Organic Compounds

Analyte Tertiary-butyl Alcohol	Results (MRL) ND (25.0)	MDL	<u>Method</u> 524.2	Limit DF	<u>Analyzed</u> 12/09/20 14:18	Sequence D0L0195	Batch DL00936
	9	6Recovery	Qualifier	Limits			
Surrogate: 1,2-Dichlorobenzene-d4		86 %		80-120			
Surrogate: 4-Bromofluorobenzene		92 %		80-120			



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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Effluent Date Sampled: 12/08/20 13:30

Percent Solids: N/A Initial Volume: 1070 Final Volume: 0.25

Surrogate: p-Terphenyl-d14

Extraction Method: 3510C

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-02

Sample Matrix: Aqueous

Units: ug/L Analyst: TAJ

Prepared: 12/9/20 14:00

625.1(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analvzed	Sequence	Batch
Acenaphthene	ND (0.19)	<u>MDL</u>	625.1 SIM	Limit	1	12/12/20 2:33	D0L0257	DL00901
Acenaphthylene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Anthracene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Benzo(a)anthracene	ND (0.05)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Benzo(a)pyrene	ND (0.05)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Benzo(b)fluoranthene	ND (0.05)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Benzo(g,h,i)perylene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Benzo(k)fluoranthene	ND (0.05)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
bis(2-Ethylhexyl)phthalate	ND (2.34)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Butylbenzylphthalate	ND (2.34)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Chrysene	ND (0.05)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Dibenzo(a,h)Anthracene	ND (0.05)	X	625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Diethylphthalate	ND (2.34)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Dimethylphthalate	ND (2.34)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Di-n-butylphthalate	ND (2.34)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Di-n-octylphthalate	ND (2.34)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Fluoranthene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Fluorene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Indeno(1,2,3-cd)Pyrene	ND (0.05)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Naphthalene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Pentachlorophenol	ND (0.84)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Phenanthrene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
Pyrene	ND (0.19)		625.1 SIM		1	12/12/20 2:33	D0L0257	DL00901
	9/	6Recovery	Qualifier	Limits				
Surrogate: 1,2-Dichlorobenzene-d4		45 %		30-130				
Surrogate: 2,4,6-Tribromophenol		50 %		15-110				
Surrogate: 2-Fluorobiphenyl		52 %		30-130				
Surrogate: Nitrobenzene-d5		47 %		30-130				

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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Effluent Date Sampled: 12/08/20 13:30

Percent Solids: N/A

ESS Laboratory Work Order: 20L0295 ESS Laboratory Sample ID: 20L0295-02

Sample Matrix: Aqueous

Classical Chemistry

Analyte Ammonia as N	Results (MRL) ND (0.10)	<u>MDL</u>	Method 350.1	<u>Limit</u>	<u>DF</u>	Analyst JLK	Analyzed 12/10/20 16:51	Units mg/L	Batch DL00938
Chloride	38.6 (5.0)		300.0		10	EEM	12/10/20 18:22	mg/L	DL01023
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	CCP	12/08/20 20:00	ug/L	DL00854
Total Petroleum Hydrocarbon	ND (5)		1664A		1	LAB	12/10/20 14:38	mg/L	DL01022
Total Suspended Solids	24 (5)		2540D		1	CCP	12/09/20 15:37	mg/L	DL00926





The Microbiology Division of Thielsch Engineering, Inc.

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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

Quality Control Data

Spike

Source

				Spike	Source		%KEC		KPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier
			Total Meta	als						
atch DL00951 - 245.1/7470A										
lank										
1ercury	ND	0.2	ug/L							
cs										
1ercury	5.1	0.2	ug/L	6.042		85	85-115			
CS Dup										
lercury	5.6	0.2	ug/L	6.042		93	85-115	9	20	
atch DL00952 - 3005A/200.7										
lank ntimony	ND	5.0	ug/L	-						
alcium	ND ND	0.020	mg/L							
hromium	ND	2.0	ug/L							
opper	ND	2.0	ug/L							
ron	ND	20.0	ug/L							
ead	ND	2.0	ug/L							
agnesium	ND	0.020	mg/L							
ickel	ND	5.0	ug/L							
ilver	ND	1.0	ug/L							
inc	ND	5.0	ug/L							
lank										
admium	ND	0,1	ug/L							
lank			*							
rsenic	ND	0.5	ug/L							
elenium	ND	1.0	ug/L							
cs										
ntimony	50.8	5.0	ug/L	50.00		102	85-115			
alcium	0.512	0.020	mg/L	0.5000		102	85-115			
hromium	48.7	2.0	ug/L	50.00		97	85-115			
opper	51.0	2.0	ug/L	50.00		102	85-115			
ron	244	10.0	ug/L	250.0		97	85-115			
ead	51.5	2.0	ug/L	50.00		103	85-115			
lagnesium	0.501	0.020	mg/L	0.5000		100	85-115			
ickel	50.9	5.0	ug/L	50.00		102	85-115			
elenium	114	25.0	ug/L	100.0		114	85-115			
ilver inc	25.0 52.7	1.0 5.0	ug/L ug/L	25.00 50.00		100 105	85-115 85-115			
	52.7	J.U	uy/L	50.00		103	03-113			
CS	20.0	0.5	n	25.00		100	05.115			
Cadmium	26.9	0.5	ug/L	25.00		108	85-115			
cs		45 -								
arsenic	46.8	12.5	ug/L	50.00		94	85-115			
CS Dup										
admium	27.0	0.5	ug/L	25.00		108	85-115	0.3	20	



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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

Quality Control Data

				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier

524.2 Volatile Organic Compounds

Batch DL00936 - 524.2									
Blank									
Tertiary-butyl Alcohol	ND	25.0	ug/L						
Surrogate: 1,2-Dichlorobenzene-d4	4.41		ug/L	5.000	88	80-120			
Surrogate: 4-Bromofluorobenzene	4.77		ug/L	5.000	95	80-120			
ıcs									
Tertiary-butyl Alcohol	46.9	25.0	ug/L	50.00	94	70-130			
Surrogate: 1,2-Dichlorobenzene-d4	4.82		ug/L	5.000	96	80-120			
Surrogate: 4-Bromofluorobenzene	4.80		ug/L	5.000	96	80-120			
LCS Dup									
Tertiary-butyl Alcohol	46.3	25.0	ug/L	50.00	93	70-130	1	25	
Surrogate: 1,2-Dichlorobenzene-d4	5.08		ug/L	5.000	102	80-120			
Surrogate: 4-Bromofluorobenzene	5.04		ug/L	5.000	101	80-120			

625.1(SIM) Semi-Volatile Organic Compounds

Batch DL00901 - 3510C							
Blank							
Acenaphthene	ND	0.20	ug/L				
Acenaphthylene	ND	0.20	ug/L				
Anthracene	ND	0.20	ug/L				
Benzo(a)anthracene	ND	0.05	ug/L				
enzo(a)pyrene	ND	0.05	ug/L				
enzo(b)fluoranthene	ND	0.05	ug/L				
enzo(g,h,i)perylene	ND	0.20	ug/L				
enzo(k)fluoranthene	ND	0.05	ug/L				
s(2-Ethylhexyl)phthalate	ND	2.50	ug/L				
utylbenzylphthalate	ND	2.50	ug/L				
rysene	ND	0.05	ug/L				
enzo(a,h)Anthracene	ND	0.05	ug/L				
ethylphthalate	ND	2.50	ug/L				
methylphthalate	ND	2.50	ug/L				
n-butylphthalate	ND	2.50	ug/L				
n-octylphthalate	ND	2.50	ug/L				
oranthene	ND	0.20	ug/L				
orene	ND	0.20	ug/L				
leno(1,2,3-cd)Pyrene	ND	0.05	ug/L				
phthalene	ND	0.20	ug/L				
ntachlorophenol	ND	0.90	ug/L				
enanthrene	ND	0.20	ug/L				
rene	ND	0.20	ug/L				
rrogate: 1,2-Dichlorobenzene-d4	1.30		ug/L	2.500	52	30-130	
rrogate: 2,4,6-Tribromophenol	1.61		ug/L	3.750	43	15-110	
rrogate: 2-Fluorobiphenyl	1.48		ug/L	2.500	59	30-130	
urrogate: Nitrobenzene-d5	1.37		ug/L	2.500	55	30-130	

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ESS Laboratory Work Order: 20L0295



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Batch DL00901 - 3510C

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Quality Control Data

				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier

625.1(SIM) Semi-Volatile Organic Compounds

Batch DL00901 - 3510C									
Surrogate: p-Terphenyl-d14	2.00		ug/L	2.500	80	30-130			
LCS									
Acenaphthene	2.41	0.20	ug/L	4.000	60	40-140			
Acenaphthylene	2.16	0.20	ug/L	4.000	54	40-140			
Anthracene	2.56	0.20	ug/L	4.000	64	40-140			
Benzo(a)anthracene	2.75	0.05	ug/L	4.000	69	40-140			
Benzo(a)pyrene	2.88	0.05	ug/L	4.000	72	40-140			
Benzo(b)fluoranthene	2.71	0.05	ug/L	4.000	68	40-140			
Benzo(g,h,i)perylene	3.02	0.20	ug/L	4.000	76	40-140			
Benzo(k)fluoranthene	2.94	0.05	ug/L	4.000	74	40-140			
bis(2-Ethylhexyl)phthalate	2.72	2.50	ug/L	4.000	68	40-140			
Butylbenzylphthalate	3.07	2.50	ug/L	4.000	77	40-140			
Chrysene	2.64	0.05	ug/L	4.000	66	40-140			
Dibenzo(a,h)Anthracene	2.96	0.05	ug/L	4.000	74	40-140			
Diethylphthalate	2.03	2.50	ug/L	4.000	51	40-140			
Dimethylphthalate	2.86	2.50	ug/L	4.000	71	40-140			
Di-n-butylphthalate	2.53	2.50	ug/L	4.000	63	40-140			
Di-n-octylphthalate	2.91	2.50	ug/L	4.000	73	40-140			
Fluoranthene	2.51	0.20	ug/L	4.000	63	40-140			
Fluorene	2.37	0.20	ug/L	4.000	59	40-140			
Indeno(1,2,3-cd)Pyrene	2.83	0.05	ug/L	4.000	71	40-140			
Naphthalene	1.94	0.20	ug/L	4.000	48	40-140			
Pentachlorophenol	1.77	0.90	ug/L	4.000	44	30-130			
Phenanthrene	2.63	0.20	ug/L	4.000	66	40-140			
Pyrene	3.19	0.20	ug/L	4.000	80	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	1.37	•	ug/L	2.500	55	30-130			
Surrogate: 2,4,6-Tribromophenol	2.15		ug/L	3.750	57	15-110			
Surrogate: 2-Fluorobiphenyl	1.58		ug/L	2.500	63	30-130			
Surrogate: Nitrobenzene-d5	1.36		ug/L	2.500	54	30-130			
Surrogate: p-Terphenyl-d14	1.86		ug/L	2.500	<i>75</i>	30-130			
LCS Dup									
Acenaphthene	2.17	0.20	ug/L	4.000	54	40-140	10	20	
Acenaphthylene	1.95	0.20	ug/L	4.000	49	40-140	10	20	
Anthracene	2.22	0.20	ug/L	4.000	56	40-140	14	20	
Benzo(a)anthracene	2.79	0.05	ug/L	4.000	70	40-140	2	20	
Benzo(a)pyrene	2.89	0.05	ug/L	4.000	72	40-140	0.3	20	
Benzo(b)fluoranthene	2.91	0.05	ug/L	4.000	73	40-140	7	20	
Benzo(g,h,i)perylene	3.01	0.20	ug/L	4.000	75	40-140	0.4	20	
Benzo(k)fluoranthene	2.65	0.05	ug/L	4.000	66	40-140	10	20	
bis(2-Ethylhexyl)phthalate	2.64	2.50	ug/L	4.000	66	40-140	3	20	
Butylbenzylphthalate	3.09	2.50	ug/L	4.000	77	40-140	0.7	20	
Chrysene	2.65	0.05	ug/L	4.000	66	40-140	0.6	20	
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CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

ESS Laboratory Work Order: 20L0295 Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Quality Control Data

Spike

Source

				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifie
	625	5.1(SIM) Ser	ni-Volatile C	Organic Co	ompounds	3				
atch DL00901 - 3510C										
Diethylphthalate	1.81	2.50	ug/L	4.000		45	40-140	11	20	
Dimethylphthalate	2.54	2.50	ug/L	4.000		63	40-140	12	20	
Di-n-butylphthalate	2.39	2.50	ug/L	4.000		60	40-140	6	20	
Di-n-octylphthalate	2.89	2.50	ug/L	4.000		72	40-140	0.8	20	
Fluoranthene	2.33	0.20	ug/L	4.000		58	40-140	7	20	
Fluorene	2.13	0.20	ug/L	4.000		53	40-140	11	20	
indeno(1,2,3-cd)Pyrene	2.94	0.05	ug/L	4.000		74	40-140	4	20	
Naphthalene	1.79	0.20	ug/L	4.000		45	40-140	8	20	
Pentachlorophenol	1.74	0.90	ug/L	4.000		44	30-130	2	20	
Phenanthrene	2.33	0.20	ug/L	4.000		58	40-140	12	20	
Pyrene	3.04	0.20	ug/L	4.000		76	40-140	5	20	
Surrogate: 1,2-Dichlorobenzene-d4	1.16		ug/L	2.500		46	30-130			
Surrogate: 2,4,6-Tribromophenol	1.72		ug/L	3.750		46	<i>15-110</i>			
Surrogate: 2-Fluorobiphenyl	1.32		ug/L	2.500	•	53	30-130			
Surrogate: Nitrobenzene-d5	1.16		ug/L	2.500		47	30-130			
Surrogate: p-Terphenyl-d14	1.75		ug/L	2.500		70	30-130			
		CI	assical Che	mistry						
Batch DL00854 - General Preparation										
Blank										
Hexavalent Chromium	ND	10.0	ug/L							
LCS			*							
Hexavalent Chromium	522	10.0	ug/L	499.8		105	90-110			
LCS Dup										
Hexavalent Chromium	521	10.0	ug/L	499.8		104	90-110	0.2	20	
Batch DL00926 - General Preparation		*								
Blank										
Total Suspended Solids	ND	5	mg/L							
	ND	5	mg/L							
LCS	ND 86	5	mg/L	88.00		98	80-120			
LCS Fotal Suspended Solids		5	-	88.00		98	80-120			
Total Suspended Solids LCS Total Suspended Solids Batch DL00938 - NH4 Prep Blank		5	-	88.00		98	80-120			
Total Suspended Solids Batch DL00938 - NH4 Prep Blank		0.10	-	88.00		98	80-120			
Total Suspended Solids Batch DL00938 - NH4 Prep	86		mg/L	88.00		98	80-120			
Total Suspended Solids Batch DL00938 - NH4 Prep Blank Ammonia as N LCS	86		mg/L	88.00 0.9994		98	80-120 80-120			
Total Suspended Solids Batch DL00938 - NH4 Prep Blank Ammonia as N	86 ND	0.10	mg/L							
LCS Total Suspended Solids Batch DL00938 - NH4 Prep Blank Ammonia as N LCS Ammonia as N Batch DL01022 - General Preparation	86 ND	0.10	mg/L							
LCS Total Suspended Solids Batch DL00938 - NH4 Prep Blank Ammonia as N LCS Ammonia as N Batch DL01022 - General Preparation	86 ND	0.10	mg/L							
LCS Fotal Suspended Solids Batch DL00938 - NH4 Prep Blank Ammonia as N LCS Ammonia as N Batch DL01022 - General Preparation Blank Total Petroleum Hydrocarbon	ND 0.95	0.10	mg/L mg/L							
Total Suspended Solids Batch DL00938 - NH4 Prep Blank Ammonia as N LCS Ammonia as N	ND 0.95	0.10	mg/L mg/L							



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

Quality Control Data

				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier

Classical Chemistry

Batch DL01023 - General Prepa	Batch DL01023 - General Preparation										
Blank											
Chloride	ND	0.5	mg/L								
LCS											
Chloride	9.8		mg/L	10.00		98	90-110				



185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0295

Notes and Definitions

U	Analyte included in the analysis, but not detected
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
1.00	Timit of Occupation

MRL Method Reporting Limit LOD Limit of Detection LOQ Limit of Quantitation DL Detection Limit I/V Initial Volume F/V Final Volume

§ Subcontracted analysis; see attached report

1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.

2 Range result excludes concentrations of target analytes eluting in that range.

Range result excludes the concentration of the C9-C10 aromatic range.

Avg Results reported as a mathematical average.

NR No Recovery

[CALC] Calculated Analyte

SUB Subcontracted analysis; see attached report

RL Reporting Limit

EDL Estimated Detection Limit
MF Membrane Filtration
MPN Most Probably Number
TNTC Too numerous to Count
CFU Colony Forming Units

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Service



The Microbiology Division of Thielsch Engineering, Inc.

ESS Laboratory Work Order: 20L0295



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179 http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750 http://www.ct.gov/dph/lib/dph/environmental health/environmental laboratories/pdf/QutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002 http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002 http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424 http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313 http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006 http://datamine2.state.m.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

 $\underline{http://www.dep.pa.gov/Business/Other Programs/Labs/Pages/Laboratory-Accreditation-Program.aspx}$

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486

ESS Laboratory Sample and Cooler Receipt Checklist

Client: River Hawk Environmental, LLC - TB	ESS Project ID: 20L0295 Date Received: 12/8/2020	
Shipped/Delivered Via: Client	Project Due Date: 12/11/2020	 .
Shipped/Delivered via.	Days for Project: 3 Day	
	Days for Frojest.	
1. Air bill manifest present? No NA NA	6. Does COC match bottles?	Yes
	7. Is COC complete and correct?	Yes
Were custody seals present? No		
	Were samples received intact?	Yes
3. Is radiation count <100 CPM? YesYes		(A)
t by Overlan Danasanto	Were labs informed about <u>short holds & rushes</u>?	Yes) No / NA
4. Is a Cooler Present? Yes Temp: 8.3 Iced with: Ice	10. Were any analyses received outside of hold time?	Yes (Nd
5. Was COC signed and dated by client? Yes	· · · · · · · · · · · · · · · · · · ·	
11. Any Subcontracting needed? ESS Sample IDs: Yes No	12. Were VOAs received? a. Air bubbles in aqueous VOAs?	Yes No
Analysis:	b. Does methanol cover soil completely?	Yes / No / NA
TAT:		
13. Are the samples properly preserved? Yes // No	Times.	
a. If metals preserved upon receipt: Date: b. Low Level VOA vials frozen: Date:	Time: By: By: By:	
b. Low Level VOA viais irozeii.	By.	
Sample Receiving Notes:		
Chloride TSS, C+6 provided in	aloss coffee then obstr	
750000	O Passing	
, , , , , , , , , , , , , , , , , , , ,	No \	
a. Was there a need to contact the client?		
Who was contacted?	Time: By:	
	· · · · · · · · · · · · · · · · · · ·	
		

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 606 Pesticides)
1	117435	Yes	N/A	Yes	1L Amber	NP	
1	117436	Yes	N/A	Yes	1L Amber	NP	
1	117437	Yes	N/A	Yes	1L Amber	NP	
1	117438	Yes	N/A	Yes	1L Amber	NP	
1	117439	Yes	N/A	Yes	1L Amber	NP	
1	117445	Yes	N/A	Yes	1L Amber	HCI	
1	117446	Yes	N/A	Yes	1L Amber	HCI	•
1	117449	Yes	N/A	Yes	250 mL Poly	H2SO4	
1	117451	Yes	N/A	Yes	250 mL Poly	HNO3	
1	117454	Yes	N/A	Yes	VOA Vial	Ascorbic Acid	, 4
1	117455	Yes	N/A	Yes	VOA Vial	Ascorbic Acid	
2	117440	Yes	N/A	Yes	1L Amber	NP	*
2	117441	Yes	N/A	Yes	1L Amber	NP 😅	
2	117442	Yes	N/A	Yes	1L Amber	NP	
2	117443	Yes	N/A	Yes	1L Amber	NP	
2	117444	Yes	N/A	Yes	1L Amber	NP	
2	117447	Yes	N/A	Yes	1L Amber	HCI	

ESS Laboratory Sample and Cooler Receipt Checklist

Client:	t: River Hawk Environmental, LLC - TB					ESS Project ID:	20L0295
•						Date Received:	12/8/2020
2	117448	Yes	N/A	Yes	1L Amber	HCI	
2	117450	Yes	N/A	Yes	250 mL Poly	H2SO4	
2	117452	Yes	N/A	Yes	250 mL Poly	HNO3	The second secon
2	117453	Yes	N/A	Yes	250 mL Poly	HNO3	•
2	117456	Yes	N/A	Yes	VOA Vial	Ascorbic Acid	
2	117457	Yes	N/A	Yes	VOA Vial	Ascorbic Acid	**

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials Yes/N

Yes / No / NA Yes / No / NA

Yes / No / NA

Yes / No NA

Completed

By: Reviewed By: Delivered

Ву:

Date & Time:

Date & Time:

12/8/20 19

1938

			4																		
ESS L	ESS Laboratory CHAIN OF CUSTODY							ESS Lab# 2010295													
	f Thielsch Engi			Turn Time	Reporting NRDES RCP Permit No. MAGG10000																
	es Avenue, Cr			Regulatory State	Limits																
	461-7181 Fax	x (401) 461-44	86	Is th	Electon			ata Che						√ (Excel						
www.esslaboratory.com					RGP		Deliveral	oles	☑ 0	ther (P	lease S	pecify	→)					PDF			
		npany Name : Environmenta	111C	Project # 004010101	Project Na		1			€	Ş		<u></u> 6								
		tact Person	ai, LLO	004010101	4 Stoneleigh Lane, C	Jonassei, MA	<u>ر</u>	ا ۾ ا		(25	iSe/	4 2	¥		İ			- 1	ĺ		
		liam Kenney		<u> </u>	2183 Ocean Street, Suite 2		ysi	[22]		gg	Ę.	(52	1-5							- [ļ
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_ · · · · · · · · · · · · · · · · · · ·				NA .	bkenney@riverhawkllc.com			ig	<u>e</u>	spe	i gg	} <u>}</u>	\$ 62	86	SSS						-
ESS Lab	Collection Date	Collection Time	Sample Type	Sample Matrix	San		Ammonia (NH3-4500)	Chloride (CL-300)	Total Suspended Solids (2540)	Total SbAsCdCrCuFePbHgNiSeAgZn	hert-Butyl Alcohol (524.2)	**SVOCs 625.1/625.1-SIM-RGP	TPH-1664	Hardness				Ī		ĺ	
													$\overline{}$	 =	┈	\dashv	- - -	+	-	+-	
1	12/08/20	13:00	Grab	Aqueous	Înf		Х	X	X	× 2	x x	X	_ X	_		\dashv	ightharpoonup			ļ	
2	12/08/20	13:30	Grab	Aqueous	Efi		X	Х	Х	x ;	x x	X	×	Х							
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Co	ntainer Type:	AC-Air Casset	tte AG-Amber Gla	ass B-BOD Bottle	C-Cubitainer J-Jar O-Oth	her P-Poly S-Steri	ile V-Vial	P	AG	ΔG	P A		Δ	AG	P		 -	+			+
	iner Volume:				mL 6-1L 7-VOA 8-2 oz		11-Other*	3	6		3 6		_	6	3		\dashv	+		-	+
				4-HNO3 5-NaOH 6-M				3	1		4	-	_	2	4		\dashv		+		╁╌
						r of Containers per S		1	:	—ŀ	1 /			_	1		+	+		-	+
		Laborator	y Use Only		Sampled by: Jarod Co			' 1	<u>-</u> 1	<u>.</u>	<u>' </u>	<u> </u>	-	1 -	1					l	
Cooler	Present:		O Drop Off		Comments:	Please spe	cify "Othe	r" pre	ser	/ative	and	conta	iner	s typ	es in	this	spac	e		-	
	s Intact:		O Pickup		**Note: Non-Phthalate SVOCs	s only.															
	emperature:	<u> </u>	°C ICE																		
Re	linquished by:	(Signature, Da	ite & Time)	Received By: ((Signature, Date & Time)	Relinquished By:	(Signature,	Date	& T	ime)			Rec	eived	Ву: (Signa	iture,	Date	& Tir	ne)	
<u>/</u> 2/	Klas.	12/08/20	:18:16	amber it	Faria 12/8/20 18:16																
Re	linquished by:	(Signature, Da	ite & Time)	Received By: (Signature, Date & Time)	Relinquished By:	(Signature,	Date	& T	ime)	\top		Rec	eived	Ву: (Signa	ture,	Date	& Tir	ne)	



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

William Kenney River Hawk Environmental, LLC 3 Surrey Dr Lakeville, MA 02050

RE: 4 Stoneleigh Lane Cohasset MA - RGP (004010101) ESS Laboratory Work Order Number: 20L0296

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard Laboratory Director REVIEWED

By ESS Laboratory at 2:01 pm, Dec 14, 2020

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0296

SAMPLE RECEIPT

The following samples were received on December 08, 2020 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2017 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

ESS Laboratory is unable to achieve the required detection limit of 0.4 mg/L for Ethanol for the RGP permit. We have also been unable to procure a subcontract laboratory that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

The cooler temperature was not within the acceptance criteria of ≤6°C

Lab Number 20L0296-01 Sample Name Receiving Water Matrix Aqueous

Analysis 200.7, 200.8, 245.1, 3113B, 350.1, CALC

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The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0296

PROJECT NARRATIVE

Total Metals

20L0296-01 Elevated Method Reporting Limits due to sample matrix (EL).

Cadmium

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists



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The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0296

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint

6010C - ICP

6020A - ICP MS

7010 - Graphite Furnace

7196A - Hexavalent Chromium

7471B - Solid Mercury

8011 - EDB/DBCP/TCP

8015C - GRO/DRO

8081B - Pesticides

8082A - PCB

8100M - TPH

8151A - Herbicides

8260B - VOA

8270D - SVOA

8270D SIM - SVOA Low Level

9014 - Cyanide

9038 - Sulfate

9040C - Aqueous pH

9045D - Solid pH (Corrosivity)

9050A - Specific Conductance

9056A - Anions (IC)

9060A - TOC

9095B - Paint Filter

MADEP 04-1.1 - EPH

MADEP 18-2.1 - VPH

7470A - Aqueous Mercury

3540C - Manual Soxhlet Extraction

3541 - Automated Soxhlet Extraction

5030C - Aqueous Purge and Trap

5035A - Solid Purge and Trap

Prep Methods

3005A - Aqueous ICP Digestion

3020A - Aqueous Graphite Furnace / ICP MS Digestion

3050B - Solid ICP / Graphite Furnace / ICP MS Digestion

3060A - Solid Hexavalent Chromium Digestion

3510C - Separatory Funnel Extraction

3520C - Liquid / Liquid Extraction

3546 - Microwave Extraction

3580A - Waste Dilution

5030B - Aqueous Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

Page 4 of 12



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Receiving Water Date Sampled: 12/08/20 12:30

Percent Solids: N/A

Extraction Method: 3005A/200.7

ESS Laboratory Work Order: 20L0296 ESS Laboratory Sample ID: 20L0296-01

Sample Matrix: Aqueous

Units: ug/L

Total Metals

Analyte	Results (MRL)	<u>MDL</u>	Method	<u>Limit</u>	<u>DF</u>	Analyst	Analyzed	<u>I/V</u>	F/V	Batch
Antimony	ND (5.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Arsenic	ND (2.5)		3113B		5	KJK	12/11/20 16:17	100	10	DL00952
Cadmium	EL ND (1.0)		200.8		50	KJK	12/10/20 13:48	100	10	DL00952
Chromium	ND (2.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Copper	9.7 (2.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Iron	694 (10.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Lead	6.3 (2.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Mercury	ND (0.2)		245.1		1	MKS	12/10/20 12:13	20	40	DL00951
Nickel	ND (5.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Selenium	ND (5.0)		3113B		5	KJK	12/12/20 13:12	100	10	DL00952
Silver	ND (1.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952
Total Hardness	61300 (82.3)	X	CALC		1	KJK	12/10/20 15:55	1	1	[CALC]
Zinc	64.1 (5.0)		200.7		1	KJK	12/10/20 15:55	100	10	DL00952



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Client Sample ID: Receiving Water Date Sampled: 12/08/20 12:30

Percent Solids: N/A ESS Laboratory Work Order: 20L0296 ESS Laboratory Sample ID: 20L0296-01

Sample Matrix: Aqueous

Classical Chemistry

MDL Analyte Results (MRL) Method Limit **Analyst Analyzed** Units Batch 350.1 Ammonia as N JLK 12/10/20 16:58 mg/LDL00938 **0.16** (0.10)



The Microbiology Division of Thielsch Engineering, Inc.

ESS Laboratory Work Order: 20L0296



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

Quality Control Data

				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier
			Total Met	als						
Batch DL00951 - 245.1/7470A										
Blank										
Mercury	ND	0.2	ug/L							
LCS										
Mercury	5.1	0.2	ug/L	6.042		85	85-115			
LCS Dup										
Mercury	5.6	0.2	ug/L	6.042		93	85-115	9	20	
Batch DL00952 - 3005A/200.7										
Blank										
Antimony	ND	5.0	ug/L							
Calcium	ND	0.020	mg/L							
Chromium	ND	2.0	ug/L							
Copper	ND	2.0	ug/L							
Iron	ND	20.0	ug/L							
Lead	ND	2.0	ug/L							
Magnesium	ND	0.020	mg/L							
Nickel	ND	5.0	ug/L							
Silver	ND	1.0	ug/L							
Zinc	ND	5.0	ug/L							
Blank										
Cadmium	ND	0.1	ug/L							
Blank										
Arsenic	ND	0.5	ug/L							
Selenium	ND	1.0	ug/L							
LCS										
Antimony	50.8	5.0	ug/L	50.00		102	85-115			
Calcium	0.512	0.020	mg/L	0.5000		102	85-115			
Chromium	48.7	2.0	ug/L	50.00		97	85-115			
Copper	51.0	2.0	ug/L	50.00		102	85-115			
Iron	244	10.0	ug/L	250.0		97	85-115			
Lead	51.5	2.0	ug/L	50.00		103	85-115			
Magnesium	0.501	0.020	mg/L	0.5000		100	85-115			
Nickel	50.9	5.0	ug/L	50.00		102	85-115			
Selenium	114	25.0	ug/L	100.0		114	85-115			
Silver	25.0	1.0	ug/L	25.00		100	85-115			
Zinc	52.7	5.0	ug/L	50.00		105	85-115			
ıcs										
Cadmium	26.9	0.5	ug/L	25.00		108	85-115			
LCS										
Arsenic	46.8	12.5	ug/L	50.00		94	85-115			
LCS Dup										
Cadmium	27.0	0.5	ug/L	25.00		108	85-115	0.3	20	

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC

Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0296

Quality Control Data

				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier

Classical Chemistry

Batch DL00938 - NH4 Prep							
Blank							
Ammonia as N	ND	0.10	mg/L				
LCS							
Ammonia as N	0.95	0.10	ma/L	0.9994	95	80-120	



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Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP ESS Laboratory Work Order: 20L0296

Notes and Definitions

Analyte included in the analysis, but not detected
Elevated Method Reporting Limits due to sample matrix (EL).
Diluted.
Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
Sample results reported on a dry weight basis
Relative Percent Difference
Method Detection Limit
Method Reporting Limit
Limit of Detection
Limit of Quantitation
Detection Limit
Initial Volume
Final Volume

Subcontracted analysis; see attached report

Range result excludes concentrations of surrogates and/or internal standards eluting in that range. 1

2 Range result excludes concentrations of target analytes eluting in that range.

3 Range result excludes the concentration of the C9-C10 aromatic range.

Avg Results reported as a mathematical average.

NR No Recovery

[CALC] Calculated Analyte

SUB Subcontracted analysis; see attached report

RLReporting Limit

Estimated Detection Limit EDL MF Membrane Filtration MPN Most Probably Number **TNTC** Too numerous to Count CFU Colony Forming Units

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486



The Microbiology Division of Thielsch Engineering, Inc.

ESS Laboratory Work Order: 20L0296



CERTIFICATE OF ANALYSIS

Client Name: River Hawk Environmental, LLC Client Project ID: 4 Stoneleigh Lane Cohasset MA - RGP

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179 http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750 http://www.ct.gov/dph/lib/dph/environmental health/environmental laboratories/pdf/QutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002 http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002 http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424 http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313 http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006 http://datamine2.state.m.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

 $\underline{http://www.dep.pa.gov/Business/Other Programs/Labs/Pages/Laboratory-Accreditation-Program.aspx}$

185 Frances Avenue, Cranston, RI 02910-2211

Tel: 401-461-7181

Fax: 401-461-4486

ESS Laboratory Sample and Cooler Receipt Checklist

Client: River Hawk Environmental, LLC - TB	ESS PI	roject ID: 20L0296 Received: 12/8/2020	
Shipped/Delivered Via: Client	Project D	tue Date: 12/11/2020 r Project: 3 Day	
1. Air bill manifest present? . No Air No.: NA	6. Does COC n		Yes
2. Were custody seals present? No 3. Is radiation count <100 CPM? Yes 4. Is a Cooler Present? Yes	8. Were sample	plete and correct? es received intact? nformed about <u>short holds & rushes</u>	Yes
Temp: 8.3 Iced with: Ice 5. Was COC signed and dated by client? Yes	10. Were any	analyses received outside of hold time	? Yes(No)
11. Any Subcontracting needed? ESS Sample IDs: Analysis: TAT:		s received? in aqueous VOAs? anol cover soil completely?	Yes (No Yes ANo Yes / No / NA
an in motern production open company	No Time: Time:	By:	
Sample Receiving Notes:	X		
		15475	
14. Was there a need to contact Project Manager? a. Was there a need to contact the client? Who was contacted? D	Yes No Yes No Time:	By:	
Sample Container Proper Air Bubbles Sufficie Number ID Container Present Volum		Preservative Record p	oH (Cyanide and 608 Pesticides)
1 117458 Yes N/A Yes	250 mL Poly	HNO3	
1 117459 Yes N/A Yes	•	HNO3	
1 117460 Yes N/A Yes	250 mL Poly	H2SO4	
2nd Review Were all containers scanned into storage/lab? Are barcode labels on correct containers? Are all Flashpoint stickers attached/container ID # circled? Are all Hex Chrome stickers attached? Are all QC stickers attached? Are VOA stickers attached if bubbles noted?	Initials Yes / No Yes / No / NA Yes / No / NA Yes / No / NA Yes / No / NA		
Completed By: Reviewed By: Delivered By:	Date & Time:	11	

ESS L	aboratory	/		C	HAIN OF	CUSTOE	Υ	ESS La	b#	7	OL	029	76							
Division of	f Thielsch Engi	ineering, Inc.		Turn Time	3	Days		Reporti	ng				rmit No	MAAC	01000					
185 Franc	es Avenue, Cr	anston RI 029	10	Regulatory State		MA		Limits		NPL)E3 K	GP Per	IIIIL INO	. IVIAG	91000	·				
Tel. (401)	461-7181 Fa	x (401) 461-44	86	ls thi	s project for a	ny of the follov	ving?:	Elector		_	ata Chec				7	Excel				
www.essla	aboratory.com				R	GP		Deliveral	bles	☑ 0	ther (Ple	ase Speci	y →)			<u> </u>	PDF			
		npany Name Environmenta	ill C	Project # 004010101	4 Ston	Project Na neleigh Lane, C				AgZn										
		ntact Person	u, LLO	004010101		ress	Ondood, ivii t	<u>.v</u>	6	SiS										
		lliam Kenney	·	<u></u>		Street, Suite 2		lys.	450	휲						1				
	City Marshfield	•		tate MA	Zip C 020		PO#	Analysis	불	별										
	relephone Nu			Number	020	Email Addr	004010101 ess		Z	မ္မ						1 1				
	(781) 536-46			NA .	<u>bke</u>	enney@riverha] ia	Asc	Ses					1 1				Ι.
ESS Lab	Collection Date	Collection Time	Sample Type	Sample Matrix		Sam	ple ID		Ammonia (NH3-4500)	Total SbAsCdCrCuFePbHgNiSeAgZn	Hardness									
1	12 08 30	12:30	Grab	Aqueous		Receivi	ng Water		Х	х	Х									
	1 1 1																			
			,																	
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																Ш	\perp		\bot	
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-			tte AG-Amber Gla		C-Cubitainer	J-Jar O-Oth	···-		-	Р	Р	4				 				
			-2.5 gal 3-250 ml					11-Other*	-	3	3	\perp			_	\sqcup	\dashv	—		
Prese	rvation Code:	1-Non Preserved	1 2-HCI 3-H2SO4	4-HNO3 5-NaOH 6-M	ethanol 7-Na2S2C				3	4	4	\perp		ļl.	_ _	\sqcup	—	—		
						Numbe	r of Containers per	Sample:	1	1	1							ᆚ		
		Laborator	y Use Only		Sampled by	: Jarod Co	urnoyer													
Coole	r Present:		O Drop Off		Comments	:	Please spo	ecify "Othe	er" pr	eser	vative	and co	ntainers	s types	in this	spac	e			
Seal	s Intact:		O Pickup																	
	emperature:	8.3	°c Ice																	
Re	elinquished by:	(Signature, Da	ate & Time)	Received By: ((Signature, Date	e & Time)	Relinquished By:	(Signature	, Dat	e & T	ime)		Rece	ived B	y: (Sign	ature,	, Date	e & T	ime)	
	KCm;	12/08/21	0;18:16	ambu Jas	ie 12/8/2	20 18:16														
Re	elinquished by:	(Signature, Da	ate & Time)	Received By: ((Signature, Date	e & Time)	Relinquished By:	(Signature	e, Dat	e & T	ime)		Rece	ived B	y: (Sign	ature,	, Dat	e & T	ime)	

Sensitive Receptors and Endangered Species Act Eligibility Determination Documentation





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: December 10, 2020

Consultation Code: 05E1NE00-2021-SLI-0691

Event Code: 05E1NE00-2021-E-02092 Project Name: 4 Stoneleigh Lane

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.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: 05E1NE00-2021-SLI-0691

Event Code: 05E1NE00-2021-E-02092

Project Name: 4 Stoneleigh Lane

Project Type: ** OTHER **

Project Description: Dewatering under the Remediation General Permit.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.261526569714015N70.82132371688786W



Counties: Norfolk, MA

Endangered Species Act Species

There is a total of 1 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 Fisheries¹, 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. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME

Northern Long-eared Bat Myotis septentrionalis

Threatened

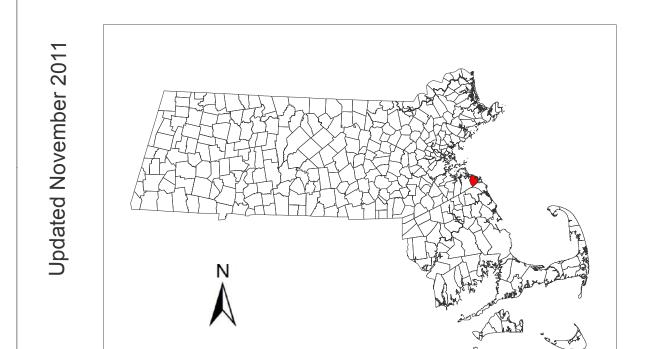
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045

Critical habitats

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

Habitat of Potential Regional or Statewide Importance Town of COHASSET, MA





The MassDEPs Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands, June 2006 adopted a new approach for assessing wildlife habitat impacts associated with work in wetlands. This approach utilizes maps developed at the University of Massachusetts Amherst using the Conservation Assessment and Prioritization System (CAPS). The maps depict Habitat of Potential Regional or Statewide Importance that may trigger more intensive levels of review. For more information on how to assess wildlife habitat impacts, see Section III of the Guidance document: http://www.mass.gov/dep/water/laws/wldhab.pdf.

Miles

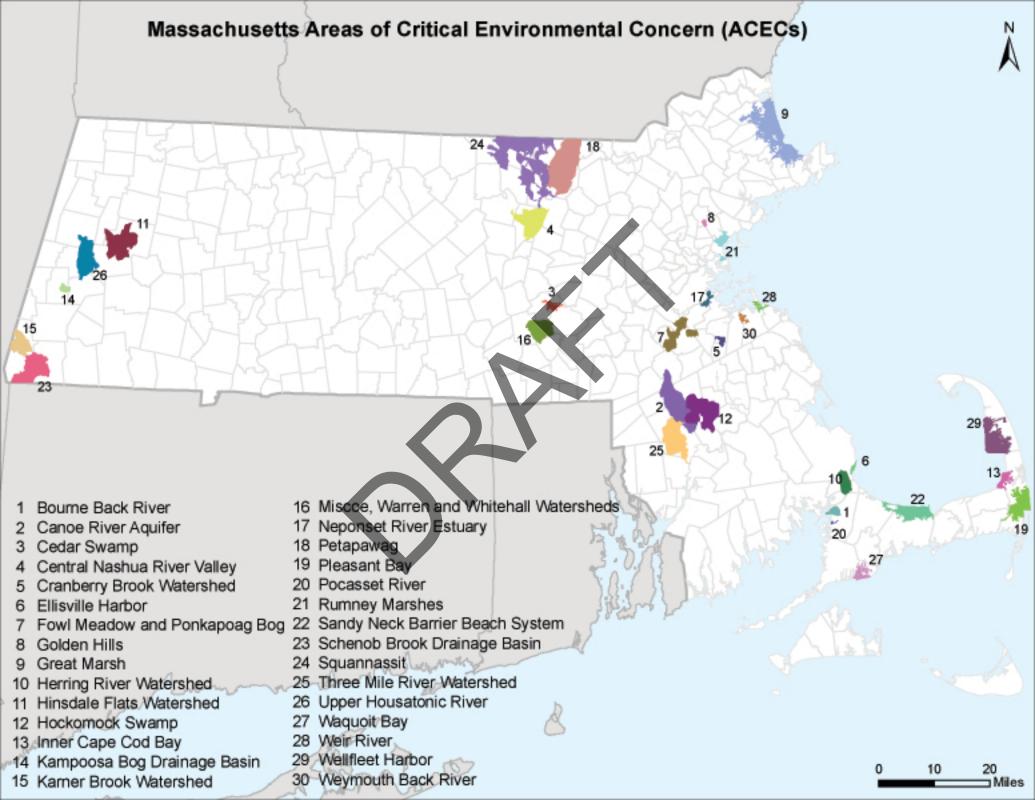
The CAPS model assesses the ecological integrity of Massachusetts landscape features as influenced by environmental stressor metrics (e.g. pollution, fragmentation). CAPS relies on data that are broadly available across Massachusetts. Ecological features which are not consistently surveyed or uniformly available, such as certified vernal pools, rare species, and contamination sites are not included in CAPS. When available, this more specific ecological information may be used in conjunction with the CAPS outputs to better understand particular sites in Massachusetts and support informed conservation decision-making. For more information on the statewide maps produced by the CAPS model, see: http://www.masscaps.org.

These maps are funded in part by the Massachusetts Executive Office of Energy and Environmental Affairs, the Massachusetts Department of Environmental Protection and the U.S. Environmental Protection Agency under section 104 (b)(3) of the U.S. Clean Water Act. Environmental data sources include the Office of Geographic and Environmental Information (MassGIS).



Important Wildlife Habitat





MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN November 2010

Total Approximate Acreage: 268,000 acres

Approximate acreage and designation date follow ACEC names below.

Bourne Back River

(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp

(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley

(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed

(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor

(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog

(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills

(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)

(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed

(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed

(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp

(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay

(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin

(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed

(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds

(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary

(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag

(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay

(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River

(160 acres, 1980) Bourne

Rumney Marshes

(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System

(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin

(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit

(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed

(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River

(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay

(2,580 acres, 1979) Falmouth and Mashpee

Weir River

(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor

(12,480 acres, 1989) Eastham, Truro, and Wellfleet

Weymouth Back River

(800 acres, 1982) Hingham and Weymouth

ACEC acreages above are based on MassGIS calculations and may differ from numbers originally presented in designation documents and other ACEC publications due to improvements in accuracy of GIS data and boundary clarifications. Listed acreages have been rounded to the nearest 50 or 10 depending on whether boundary clarification has occurred. For more information please see, http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm.

Towns with ACECs within their Boundaries

November 2010

TOWN	ACEC	TOWN	ACEC
Ashby	Squannassit	Mt. Washington	Karner Brook Watershed
Ayer	Petapawag		Schenob Brook
	Squannassit	Newbury	Great Marsh
Barnstable	Sandy Neck Barrier Beach System	Norton	Hockomock Swamp
Bolton	Central Nashua River Valley		Canoe River Aquifer
Boston	Rumney Marshes		Three Mile River Watershed
	Fowl Meadow and Ponkapoag Bog	Norwood	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary	Orleans	Inner Cape Cod Bay
Bourne	Pocasset River		Pleasant Bay
	Bourne Back River	Pepperell	Petapawag
	Herring River Watershed		Squannassit
Braintree	Cranberry Brook Watershed	Peru	Hinsdale Flats Watershed
Brewster	Pleasant Bay	Pittsfield	Upper Housatonic River
	Inner Cape Cod Bay	Plymouth	Herring River Watershed
Bridgewater	Hockomock Swamp		Ellisville Harbor
Canton	Fowl Meadow and Ponkapoag Bog	Quincy	Neponset River Estuary
Chatham	Pleasant Bay	Randolph	Fowl Meadow and Ponkapoag Bog
Cohasset	Weir River	Raynham	Hockomock Swamp
Dalton	Hinsdale Flats Watershed	Revere	Rumney Marshes
Dedham	Fowl Meadow and Ponkapoag Bog	Rowley	Great Marsh
Dighton	Three Mile River Watershed	Sandwich	Sandy Neck Barrier Beach System
Dunstable	Petapawag	Saugus	Rumney Marshes
Eastham	Inner Cape Cod Bay		Golden Hills
	Wellfleet Harbor	Sharon	Canoe River Aquifer
Easton	Canoe River Aquifer		Fowl Meadow and Ponkapoag Bog
	Hockomock Swamp	Sheffield	Schenob Brook
Egremont	Karner Brook Watershed	Shirley	Squannassit
Essex	Great Marsh	Stockbridge	Kampoosa Bog Drainage Basin
Falmouth	Waquoit Bay	Taunton	Hockomock Swamp
Foxborough	Canoe River Aquifer		Canoe River Aquifer
Gloucester	Great Marsh		Three Mile River Watershed
Grafton	Miscoe-Warren-Whitehall	Truro	Wellfleet Harbor
	Watersheds	Townsend	Squannassit
Groton	Petapawag	Tyngsborough	Petapawag
	Squannassit	Upton	Miscoe-Warren-Whitehall
Harvard	Central Nashua River Valley		Watersheds
	Squannassit	Wakefield	Golden Hills
Harwich	Pleasant Bay	Washington	Hinsdale Flats Watershed
Hingham	Weir River		Upper Housatonic River
	Weymouth Back River	Wellfleet	Wellfleet Harbor
Hinsdale	Hinsdale Flats Watershed	W Bridgewater	Hockomock Swamp
Holbrook	Cranberry Brook Watershed	Westborough	Cedar Swamp
Hopkinton	Miscoe-Warren-Whitehall	Westwood	Fowl Meadow and Ponkapoag Bog
	Watersheds	Weymouth	Weymouth Back River
	Cedar Swamp	Winthrop	Rumney Marshes
Hull	Weir River		
Ipswich	Great Marsh		
Lancaster	Central Nashua River Valley		
	Squannassit		
Lee	Kampoosa Bog Drainage Basin		
	Upper Housatonic River		
Lenox	Upper Housatonic River		
Leominster	Central Nashua River Valley		
Lunenburg	Squannassit		
Lynn	Rumney Marshes		
Mansfield	Canoe River Aquifer		
Mashpee	Waquoit Bay		
Melrose	Golden Hills		
Milton	Fowl Meadow and Ponkapoag Bog		
	Neponset River Estuary		

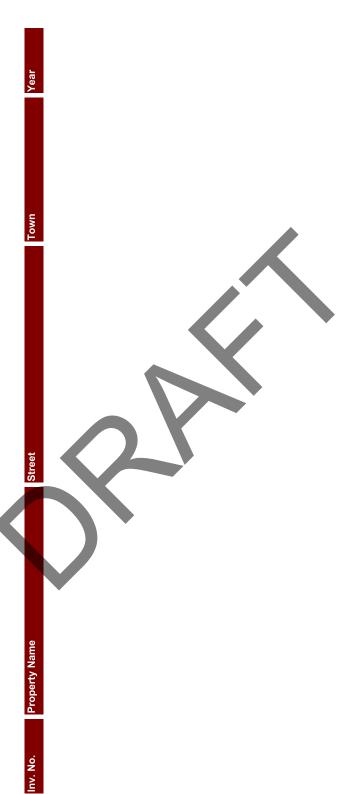
Neponset River Estuary

MACRIS Report



MACRIS Search Results

Search Criteria: Town(s): Cohasset; Street Name: Stoneleigh; Resource Type(s): Area;



Page 1 of 1 Wednesday, December 9, 2020

Municipal Office Notification Documentation





December 14, 2020

Cohasset Town Manager's Office 41 Highland Avenue Cohasset, MA 02025

Attn: Christopher Senior (Town Manager)

RE: NOTIFICATION OF DISCHARGE UNDER NPDES REMEDIATION GENERAL PERMIT

4 Stoneleigh Lane, Cohasset MassDEP RTN 4-28208

Dear Mr. Senior:

On behalf of Jennifer Zaccara (the Home Owner), River Hawk Environmental, LLC (RHE) is providing notification in accordance with the National Pollution Discharge Elimination System Remediation General Permit (NPDES RGP) that a Notice of Intent (NOI) to discharge water under the NPDES RGP has been submitted to the United States Environmental Protection Agency (US EPA) and the Massachusetts Department of Environmental Protection (MassDEP). This notice is being provided to you in accordance with Part 3.4(a) of the 2017 RGP. An electronic version of the 2017 RGP is available at the following URL:

https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.

In compliance with these requirements, RHE, on behalf of Jennifer Zaccara, is notifying the Town of Cohasset of the discharge of treated water from the dewatering of the basement of the Residence at 4 Stoneleigh Lane in Cohasset, MA. A copy of the NOI submitted to the US EPA can be provided to you upon request.

If you have any questions, please feel free to contact the undersigned at (781) 536-4639.

Sincerely,

River Hawk Environmental, LLC

William Kenney, LSP

Manager, Senior Geologist

Best Management Practices Plan





BEST MANAGEMENT PRACTICES PLAN (BMPP)

On behalf of Jennifer Zaccara (owner of the Subject Property), River Hawk Environmental, LLC (RHE) has prepared a Notice of Intent (NOI) for coverage under the NPDES Remediation General Permit (RGP) for 4 Stoneleigh Lane in Cohasset, MA (the Subject Property). Temporary dewatering is scheduled to occur as-needed for six-months starting from December 4, 2020. The operator of the system is Jennifer Zaccara, (802) 869-6221.

System Schematics:

The location of treatment system components are shown on Figures 2A, 4, and 5.

Potential Sources of Pollution:

Potential sources of pollution include residual petroleum impact to soil under and in the vicinity of the basement of the Residence at the Subject Property. No visual or olfactory evidence of petroleum impact has been observed in groundwater within the source sump since the installation of the new drainage trench. The particulate filter and Liquid Granular Activated Carbon (LGAC) are anticipated to treat petroleum impact to groundwater (if any) which may result from seasonal fluctuation of the groundwater table.

Control Measures to Reduce Pollutants:

Treatment system components/media must be handled by operators using gloves and in accordance with manufacturers' specifications and/or Safety Data Sheets (SDSs). The treatment system is currently under surveillance by a camera which may be viewed remotely by RHE personnel daily to ensure treatment system components are working properly (i.e., not overflowing). In the event that the treatment system shuts down, RHE personnel will know within at most one-day. In circumstances where corrective actions must be taken to re-activate the treatment system (i.e., supplying a generator during power outages), the basement of the Residence shall act as a secondary containment structure until the corrective action has been completed. Storage and handling areas are currently and must continually be kept separate from the treatment system components. Material storage and handling areas are currently inside the basement of the Residence; therefore, will have no direct effect on drainage at the Subject Property. Runoff at the Subject Property is not considered to be a contributor to pollution associated with the fuel oil release given that the release area and source sump are located in the basement of the Residence.

All used LGAC will be containerized in DOT-approved drums and containers and handled by personnel trained in the use and transfer of LGAC and other treatment system components.

The treatment system influent and effluent will be monitored in accordance with Part 4 of the RGP and in accordance with the required sampling for specific analytes as may be required by the US EPA. Monitoring and sampling events shall be conducted in accordance with the required sampling method, with the requisite sampling jars and preservative(s) used, and the samples relinquished to the laboratory within the required holding times for the acceptable analytical method. All samples are scheduled to be analyzed by ESS Laboratory of Cranston, RI.

Treatment System Maintenance:

The treatment system shall be inspected and regular maintenance performed in order to ensure that all components are operating properly. Qualified personnel must perform all operation and maintenance. The operator should be familiar with process piping, electrical controls and components, and filtration components and filtration replacement, and all other components. Regular maintenance will include checking the condition of the treatment system equipment such as the pumps, sediment filter, totalizer, LGAC vessel and hoses. Equipment shall be routinely monitored for potential issues and unscheduled maintenance requirements. In-person inspections of the sump, treatment system components, treatment system discharge location, and the Subject Property must be conducted at least once per week.

Management of Treatment System Waste:

Raw groundwater shall be pumped directly into the treatment system from the sump using hoses and a sump to minimize direct handling of raw groundwater. The contractor supplying the treatment system will establish staging areas for equipment or material storage that may be possible sources of pollution away from dewatering activities, to the extent possible. Waste materials generated from the dewatering treatment system must be characterized and removed from the Subject Property for disposal at an approved licensed receiving facility. Filtration units shall be replaced/disposed of as necessary.

Remediation General Permit



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR REMEDIATION ACTIVITY DISCHARGES

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NOTE: The Remediation General Permits for the Commonwealth of Massachusetts and the State of New Hampshire are combined. Parts 1 through 6 contain general permit provisions applicable to both General Permits; and Parts 2 and 7 contain permit provisions for remediation activity discharges specific to the Commonwealth of Massachusetts or the State of New Hampshire.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR REMEDIATION ACTIVITY DISCHARGES

Massachusetts General Permit, Permit No. MAG910000

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53), the following permit authorizes discharges from eight general remediation activity categories, including:

- I. Petroleum-related site remediation;¹
- II. Non-petroleum-related site remediation;1
- III. Contaminated site dewatering;
- IV. Pipeline and tank dewatering;
- V. Aquifer pump testing;
- VI. Well development/rehabilitation;
- VII. Collection structure remediation/dewatering; and
- VIII. Dredge-related dewatering.

Such discharges are authorized at sites located in Massachusetts to all classes of waters designated in the Massachusetts Water Quality Standards, 314 CMR 4.00 et seq., unless otherwise restricted, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This Remediation General Permit (RGP) shall become effective thirty (30) days from the date of signature.

This general permit and the authorization to discharge supersede the previous Remediation General Permit which expired on September 9, 2015. This general permit will expire at midnight, 5 years from the effective date.

Signed this gray of March 2017.

Ken Moraff, Director

Lynne a. Ha

Office of Ecosystem Protection

Environmental Protection Agency

Region 1

Boston, MA

Douglas E. Fine, Assistant Commissioner

Bureau of Water Resources

Department of Environmental Protection

Commonwealth of Massachusetts

Boston, MA

¹ For discharges that are subject to the Massachusetts Contingency Plan (310 CMR 40.0000), this general permit applies as a matter of federal, but not state, law. For all other discharges, this general permit applies as a matter of both.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR REMEDIATION ACTIVITY DISCHARGES

New Hampshire General Permit, Permit No. NHG910000

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), the following permit authorizes discharges from eight general remediation activity categories, including:

- I. Petroleum-related site remediation;
- II. Non-petroleum-related site remediation;
- III. Contaminated site dewatering;
- IV. Pipeline and tank dewatering;
- V. Aquifer pump testing;
- VI. Well development/rehabilitation;
- VII. Collection structure remediation/dewatering, and
- VIII. Dredge-related dewatering.

Such discharges are authorized to all waters located in New Hampshire, unless otherwise restricted by the New Hampshire Water Quality Standards,² in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This Remediation General Permit (RGP) shall become effective thirty (30) days from the date of signature.

This general permit and the authorization to discharge supersede the previous Remediation General Permit which expired on September 9, 2015. This general permit will expire at midnight, 5 years from the effective date.

Signed this quay of March 2017

Ken Moraff, Director

Office of Ecosystem Protection

Environmental Protection Agency

Region 1

Boston, MA

² 50 RSA §485-A:8 and the N.H. Code of Administrative Rules, Chapter Env-Wq 1700 Surface Water Quality Regulations.

PART 1 APPLICABILITY AND COVERAGE OF THE RGP

For purposes of this general permit, the owner or operator (hereinafter referred to as the "operator"), as defined by 40 CFR §122.2, of any "facility or activity" (hereinafter referred to as "site") subject to regulation under the NPDES program is responsible for applying for coverage under this general permit. As required by 40 CFR §122.21(b), "[w]hen a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit." For the purposes of this general permit, this can include residential owners treating contaminated groundwater released from heating oil tanks.

1.1 Subject Discharges

Existing, emergency, and new discharges from the following remediation, dewatering and dewatering/remediation-related activities are eligible for coverage under this general permit:

- 1. Petroleum-related site remediation includes remediation of groundwater contaminated by petroleum products (e.g., gasoline, fuel oil, jet fuel, fuel additives and oxygenates, waste oil) and related activities.
- 2. Non-petroleum-related site remediation includes remediation of groundwater contaminated by volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), or inorganics (e.g., metals) and related activities.
- 3. Contaminated site dewatering includes dewatering conducted at former remediation sites, sites with no known source of contamination, or sites where pollutants are naturally occurring and related activities.
- 4. Pipeline and tank dewatering includes dewatering of pipelines, tanks, and similar structures and appurtenances that store or convey petroleum products, non-petroleum products, potable water, groundwater, and certain surface waters during construction of new structures or repair or maintenance of existing structures.
- 5. Aquifer pump testing includes short or long-term testing of a distinct contaminated or formerly contaminated aquifer(s), including when contamination is naturally occurring.
- 6. Well development/rehabilitation includes the development or rehabilitation of groundwater monitoring, groundwater extraction, and water supply wells at contaminated or formerly contaminated sites, including when contamination is naturally occurring.
- 7. Collection structure dewatering/remediation includes dewatering/remediation of structures utilized for collecting miscellaneous sources of water from contaminated or formerly contaminated sites or sources (e.g., sumps and dikes), including when contamination is naturally occurring or a result of the infiltration of contaminated groundwater or storm water.

8. Dredge-related dewatering includes certain short-term dredging-related activities such as a short-term pilot study or similar activity associated with dredging, dredge material dewatering, including drain back waters and dewatering of contaminated solids.

Table 1: Activities Covered by the Remediation General Permit

Activity Category	Contamination Type
I. Petroleum-Related Site Remediation II. Non-Petroleum-Related Site Remediation	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
Activity Category	Contamination Type
III. Contaminated Site Dewatering IV. Pipeline and Tank Dewatering V. Aquifer Pump Testing VI. Well Development/Rehabilitation VII. Collection Structure Dewatering/Remediation VIII. Dredge-Related Dewatering	G. Sites with Known Contamination H. Sites with Unknown Contamination 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

For the purposes of this general permit, remediation and dewatering discharges are those that contain only the pollutants included in the Contamination Type Categories in this general permit at levels that do not exceed the effluent limitations in this general permit (see Part 2), unless otherwise authorized on a case-by-case basis. Minimum treatment requirements, including Best Management Practices (BMPs), are found in Part 2.5 of this general permit. The term "existing discharge" refers to a discharge in accordance with the Remediation General Permit that expired on September 9, 2015. The term "emergency discharge" refers to a discharge that is a result of remediation or dewatering activities conducted in response to a public emergency and the discharge requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services. The term "new discharge" refers to any discharge that is not an existing or emergency discharge. The term "known" used in Contamination Type G, above, refers to sites with fully characterized and/or specific contamination type categories, where pollutants have been quantified in environmental samples, and such data meet minimum data validation requirements.³ Activity Categories III-G through VIII-G must select all Contamination Type Categories A through F, that are present. The term "unknown" used in Contamination Type H, above, refers to sites broadly associated with

³ For sites located in Massachusetts, operators may refer to Massachusetts Policy #WSC-07-350, *MCP Representativeness Evaluations and Data Usability Assessments* for guidance on data usability assessments. For sites located in New Hampshire, operators may refer to EPA Region 1 guidance for data validation.

contamination that may or may not be fully characterized, including, but not limited to sites where pollutants may be present, but all potential pollutants have not been quantified, or pollutants have been quantified, but such data do not meet minimum data validation requirements. For Activity Categories III-H through VIII-H, Contamination Type Categories A through F apply. For the purposes of this general permit, a pollutant is "known present" if measured above the analytical detection limit using a sufficiently sensitive test method in an environmental sample, and "believed present" if a pollutant has not been measured in an environmental sample but will be added or generated prior to discharge, such as through a treatment process. Consequently, a pollutant is "known absent" if measured as non-detect relative to the analytical detection limit using a sufficiently sensitive test method in an environmental sample, and "believed absent" if a pollutant has not been measured in an environmental sample but will not be added or generated prior to discharge and is not a parameter that applies to the applicable activity category for a site. See Part 2.1.1 for parameter applicability and Part 4.1.4 for additional definitions.

1.2 Geographic Coverage Area

1. Sites located in Massachusetts

All of the discharges to be authorized by this general NPDES permit in the Commonwealth of Massachusetts are into all waters of the Commonwealth unless otherwise restricted by the Massachusetts Surface Water Quality Standards, 314 CMR 4.00 (or as revised), including 314 CMR 4.04(3), Protection of Outstanding Resource Waters.

2. Sites located in New Hampshire

All of the discharges to be authorized by this general NPDES permit in the State of New Hampshire are into all waters of the State of New Hampshire unless otherwise restricted by the New Hampshire Surface Water Quality Regulations, New Hampshire Code of Administrative Rules, Chapter Env-Wq 1700 (or as revised), including 50 RSA §485-A:8-11, Classification of Waters.

1.3 Limitations on Coverage

The following discharges are ineligible for coverage under this general permit:

- 1. Discharges to Outstanding Resource Waters in Massachusetts and New Hampshire:
 - a. as defined in Massachusetts by 314 CMR 4.06, including Public Water Supplies (314 CMR 4.06(1)(d)1) which have been designated by the State as Class A waters, unless an authorization is granted by the Massachusetts Department of Environmental Protection (MassDEP) by 314 CMR 4.04(3)(b); or
 - b. as defined in New Hampshire under Env-Wq 1708.05(a), unless allowed by the New Hampshire Department of Environmental Services (NHDES) under Env-Wq 1708.05(b).
- 2. Discharges to Class A waters in New Hampshire, in accordance with RSA 485A:8, I. and Env-Wq 1708.06. To determine if the proposed receiving water is a Class A waterbody, contact NHDES as listed in Part 4.6 of this general permit.

- 3. Discharges that are likely to adversely affect any species listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of critical habitat under ESA. See Appendix I of this general permit for additional ESA requirements, and Appendix II of this general permit for additional ESA information.
- 4. Discharges whose direct or indirect impacts do not prevent or minimize adverse effects on any designated Essential Fish Habitat (EFH). See Appendix II of this general permit for additional EFH information.
- 5. Discharges of pollutants identified as the cause of an impairment to receiving water segments identified on the Commonwealth of Massachusetts or the State of New Hampshire approved 303(d) lists, unless the pollutant concentration is at or below a concentration that meets water quality standards.⁴
- 6. Discharges to Ocean Sanctuaries in Massachusetts, as defined at 302 CMR 5.00.
- 7. Discharges to territorial seas, as defined by Section 502 of the CWA.
- 8. Discharges to a river designated as a Wild and Scenic River, except in accordance with 16 U.S.C. 1271 et seq. See http://www.rivers.gov/for.additional.information.
- 9. Discharges which adversely affect properties listed or eligible for listing in the National Registry of Historic Places under the National Historic Preservation Act of 1966 (NHPA), 16 USC §470 et seq. See Appendix III of this general permit for additional NHPA requirements.
- 10. Remediation or dewatering discharges resulting from on-site response action conducted pursuant to §§104, 106, 120, 121 or 122 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
- 11. Discharges of uncontaminated effluent authorized or allowable under other United States Environmental Protection Agency (EPA) permits.
- 12. Discharges to a Publicly Owned Treatment Works (POTW) which is permitted under Section 402 of the CWA.

⁴ The discharge would be eligible if a segment is impaired due to a pollutant which is not expected in the discharge covered by this general permit. Similarly, the discharge would be eligible if the discharge contains the pollutants for which a segment is impaired (e.g., metals) but meets the limitations in this general permit for those pollutants, as these limitations are equal to the water quality standards with no allowable dilution. See Massachusetts' integrated list of waters (CWA 303(d) and 305(b)) at http://www.mass.gov and New Hampshire's integrated list of waters (CWA 303(d) and 305(b)) at http://des.nh.gov.

- 13. Discharges directly or indirectly to the ground subject to other program authority, including the Underground Injection Control (UIC) Program under authority of the Safe Drinking Water Act, a State groundwater discharge permit program, or a similar program authority.
- 14. Discharge of dredge-related waters where the United States Army Corps of Engineers (ACE) intends to authorize the discharge under a CWA §404 permit.⁵
- 15. New Sources, as defined in 40 CFR §122.2.
- 16. Discharges covered by an individual NPDES permit unless:
 - a. The discharges are separate from the currently permitted discharges; or
 - b. The discharges covered by an individual NPDES permit are eligible for this general permit.
- 17. Discharges for which the Director makes a determination that an individual permit is required. See Part 3 of this general permit.

1.4 Special Eligibility Determinations

Sites located in Massachusetts and New Hampshire that are seeking coverage under this general permit must certify compliance with the requirements of this permit related to threatened and endangered species and critical habitat under the Endangered Species Act (i.e., ESA and EFH) and to historic properties under the National Historical Preservation Act, where applicable (i.e., NHPA).

1. Endangered and Threatened Species and/or Critical Habitat⁶ Sites that are located in areas in which listed species may be present are not automatically covered under this general permit. Operators must demonstrate permit eligibility following the eligibility requirements in Appendix I and include this determination in the Notice of Intent (NOI). See Appendix II of this general permit for additional information.

2. National Historic Preservation Act

Sites that are located on or near properties listed or eligible for listing in the National Registry of Historic Places under the National Historic Preservation Act of 1966, 16 USC §470 et seq. are not automatically covered under this permit. Prior to submitting a NOI, operators must meet the requirements of Appendix III pertaining to historic places, which requires *the operator* to determine whether discharges have the potential to affect a property that is listed or eligible for

⁵ Dredge-related discharges may be covered under the RGP provided the ACE does not intend to issue a general or individual permit under 33 USC §1344 for the activities. If authorized to discharge under the RGP, this general permit does not authorize dredging or disposal of dredge material. This general permit also does not constitute authorization under §404 of any dredging or filling operations. See 33 CFR §330.5 and §§401 and 404 of the CWA. ⁶ Several listed species may apply to operators under this general permit, including, but not limited to: the shortnose sturgeon, Atlantic sturgeon, dwarf wedge mussel, bog turtle, northern redbelly cooter, and northern long-eared bat. The shortnose sturgeon and Atlantic sturgeon are listed under the jurisdiction of the National Marine Fisheries Service (NMFS) and the dwarf wedgemussel, bog turtle, northern redbelly cooter, and northern long-eared bat are listed under the jurisdiction of the United States Fish and Wildlife Service (FWS).

listing on the National Register of Historic Places. If the potential exists, the operator must consult with the appropriate agencies. Operators must submit the results of any consultations with the NOI.

Operators must also comply with applicable State and local laws concerning the protection of historic properties and places. Where a discharge(s) has the potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places, an operator must coordinate with the appropriate State Historic Preservation Officer (SHPO) regarding effects of their discharges. In the event there is an inadvertent discovery of a historic property on the site, the operator must immediately stop the remediation activity, contact EPA, and coordinate with the appropriate official(s) consistent with the steps outlined in 36 CFR §800.13 of the NHPA regulations.

1.5 Coverage under the RGP

Under this general permit, operators in Massachusetts and New Hampshire may request authorization to discharge into waters of the respective States. To obtain authorization to discharge under this general permit, an operator must:

- 1. Have a discharge type described in Part 1.1 of this general permit;
- 2. Have a discharge located in the areas listed in Part 1.2 of this general permit;
- 3. Meet the eligibility requirements in Part 1.3 and Part 1.4 of this general permit;
- 4. Submit a complete and accurate Notice of Intent in accordance with the requirements of Part 3 of this general permit; and
- 5. Receive a written authorization to discharge from EPA.8

To maintain coverage under this general permit, the discharge must meet applicable water quality standards and all effluent limitations and requirements included in Part 2 and Part 6, and, if applicable, Part 7 of this general permit. The operator must also meet the requirements included in Part 4 and 5 of this general permit.

PART 2 GENERAL PERMIT FOR REMEDIATION ACTIVITY DISCHARGES

2.1 Effluent Limitations and Monitor-Only Requirements

⁷ For sites located in Massachusetts, the SHPO is currently within the Massachusetts Historical Commission. For sites located in New Hampshire, the SHPO is currently the Director of Cultural Resources within the Department of Cultural Resources.

⁸ Where the RGP refers to correspondence in writing from EPA, such correspondence may be by mail, email and/or facsimile transmittal. An emergency discharge is considered provisionally covered under the RGP immediately upon the initiation of discharges on the condition that: 1) A complete and accurate NOI is submitted in accordance with Part 3.3 within fourteen (14) days after the emergency discharges commence; 2) Notification is provided to EPA in accordance with Part 4.6.3.b and c prior to commencing an emergency discharge when feasible, but no later than twenty-four (24) hours after such discharges commence; and 3) Monitoring proceeds in accordance with the monitoring requirements specified in Part 4.4. as for short-term discharges for the duration of provisional coverage. Provisional coverage is authorized for up to fourteen (14) days, after which the operator must either: 1) Received written authorization to discharge from EPA, unless EPA notifies the operator that their authorization has been delayed or denied; or 2) Submitted a NOT to EPA.

1. Chemical-Specific Effluent Limitations in Massachusetts and New Hampshire During the period beginning on the effective date and lasting through the expiration date, EPA will authorize the discharges under Part 1.1 of this general permit to receiving waters in Massachusetts and New Hampshire. The effective date of authorization for each discharge covered under this general permit is the date indicated in EPA's written authorization to discharge, lasting through the expiration date of this general permit or written termination of coverage, whichever occurs first. Each discharge shall be limited and monitored as specified in Table 2, below. The applicability of effluent limitations for each Activity Category listed in Table 1 is included in footnote 2, below. Additional limitations and monitoring requirements are specified in Parts 2.2 through 2.5 and Part 4, below.

Table 2: Chemical-Specific Effluent Limitations and Monitor-Only Requirements¹

Table 2: Chemical-specific Efficient Limitations and	Effluent Limitation ^{3,4}					
Parameter ²	TBEL ⁵	WQBEL ⁶				
A. Inorganics						
Ammonia ⁷	Rep	oort mg/L				
Chloride ⁸	Report µg/L					
Total Residual Chlorine ⁹	0.2 mg/L	FW= 11 μg/L SW= 7.5 μg/L				
Total Suspended Solids	3	0 mg/L				
Antimony ¹⁰	206 μg/L	640 μg/L in MA 4.3 mg/L in NH				
Arsenic ¹⁰	104 μg/L	FW= 10 μg/L SW= 36 μg/L				
Cadmium ^{11,12}	10.2 μg/L	FW= 0.25 μg/L SW= 8.8 μg/L in MA SW= 9.3 μg/L in NH				
Chromium III ^{11,12}	323 μg/L	FW= 74 μg/L SW= 100 μg/L				
Chromium VI ^{11,13}	323 μg/L	FW= 11 μg/L SW= 50 μg/L				
Copper ^{11,12}	242 μg/L	FW= 9 μg/L SW= 3.1 μg/L				
Iron ¹⁰	5,000 μg/L	$FW = 1,000 \mu g/L$				
Lead ^{11,12}	160 μg/L	FW= 2.5 μg/L SW= 8.1 μg/L				
Mercury ¹¹	0.739 μg/L	FW= 0.77 μg/L SW= 0.94 μg/L				
Nickel ^{11,12}	1,450 µg/L	FW= 52 μg/L SW= 8.2 μg/L				
Selenium	235.8 μg/L	FW= $5.0 \mu g/L^{10}$ SW= $71 \mu g/L^{11}$				
Silver ^{11,12}	35.1 µg/L	FW= 3.2 μg/L SW= 1.9 μg/L				
Zinc ^{11,12}	420 μg/L	FW= 120 μg/L SW= 81 μg/L				

D	Effluent Limitation ^{3,4}						
Parameter ²	TBEL ⁵	WQBEL ⁶					
Cyanide ¹⁴	178 mg/L	$FW = 5.2 \mu g/L$ $SW = 1.0 \mu g/L$					
B. Non-Halogenated Volatile Organic Compounds		3 W = 1.0 μg/L					
Total BTEX ¹⁵	1(00 μg/L					
Benzene ¹⁵	5.0 μg/L						
1,4 Dioxane ¹⁶		00 μg/L					
Acetone		97 mg/L					
Phenol	1,080 μg/L 300 μ						
C. Halogenated Volatile Organic Compounds	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1 233 148 -					
Carbon Tetrachloride	4.4 μg/L	1.6 μg/L in MA					
1,2 Dichlorobenzene		00 μg/L					
1,3 Dichlorobenzene		20 μg/L					
1,4 Dichlorobenzene		.0 μg/L					
Total dichlorobenzene		ıg/L in NH					
1,1 Dichloroethane		<u>0</u> μg/L					
1,2 Dichloroethane		.0 μg/L					
1,1 Dichloroethylene		.2 μg/L					
Ethylene Dibromide ¹⁷		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 3.3 μg/L in MA						
cis-1,2 Dichloroethylene	70 μg/L						
Vinyl Chloride	2.0 μg/L						
D. Non-Halogenated Semi-Volatile Organic Compounds							
Total Phthalates ¹⁸	190 μg/L	$FW = 3.0 \ \mu g/L \ in \ NH$ $SW = 3.4 \ \mu g/L \ in \ NH$					
Diethylhexyl phthalate ¹⁸	101 μg/L	2.2 µg/L in MA 5.9 µg/L in NH					
Total Group I Polycyclic Aromatic Hydrocarbons ¹⁹	1.0 μg/L	As Individual PAHs					
Benzo(a)anthracene ¹⁹		$0.0038~\mu g/L$					
Benzo(a)pyrene ¹⁹		$0.0038~\mu g/L$					
Benzo(b)fluoranthene ¹⁹	As Total Group I	$0.0038~\mu g/L$					
Benzo(k)fluoranthene ¹⁹	PAHs	0.0038 µg/L					
Chrysene ¹⁹	1 7115	0.0038 µg/L					
Dibenzo(a,h)anthracene ¹⁹	_	0.0038 µg/L					
Indeno(1,2,3-cd)pyrene ¹⁹		0.0038 µg/L					
Total Group II Polycyclic Aromatic Hydrocarbons ²⁰	100 μg/L						
Naphthalene ²⁰	2	20 μg/L					
E. Halogenated Semi-Volatile Organic Compounds							
Total Polychlorinated Biphenyls ²¹	0.000064 μg/L						
Pentachlorophenol	1	.0 μg/L					

Parameter ²	Effluen	Effluent Limitation ^{3,4}						
rarameter-	TBEL ⁵	WQBEL ⁶						
F. Fuels Parameters								
Total Petroleum Hydrocarbons ²²	5	.0 mg/L						
Ethanol ²³	Rej	port mg/L						
Methyl-tert-Butyl Ether ²⁴	70 μg/L	20 μg/L in MA						
tert-Butyl Alcohol		ıg/L in MA ıg/L in NH						
tert-Amyl Methyl Ether ²⁴		g/L in MA ug/L in NH						

Table 2 Footnotes:

^a Activity Category I:

all parameters in contamination type A. Inorganics; any present in contamination type B. non-halogenated VOCs; if present in contamination type C. halogenated VOCs; any present in contamination type D. non-halogenated SVOCs; if present in contamination type E. halogenated SVOCs; and any present in contamination type F. fuels parameters.

^b Activity Category II:

all parameters in contamination type A. Inorganics; any present in contamination type B. non-halogenated VOCs; any present in contamination type C. halogenated VOCs; any present in contamination type D. non-halogenated SVOCs; if present in contamination type E. halogenated SVOCs; and if present in contamination type F. fuels parameters.

¹ The following abbreviations are used in Table 2, above:

^a TBEL = technology-based effluent limitation

^b WQBEL = water quality-based effluent limitation

^c mg/L = milligrams per liter

 $^{^{}d}$ avg = average

 $^{^{}e} \mu g/L = micrograms per liter$

f FW = freshwater

^g SW = saltwater

² The sample type required for all parameters is grab. Grab samples must be analyzed individually and cannot be composited. See Appendix IX for additional definitions.

³ The effluent limitation and/or monitor-only requirement for any parameter listed applies to any site if the given parameter is present at that site. The effluent limitations and monitor-only requirements also apply to Activity Categories as follows:

- ^c Activity Category III-G: all parameters in contamination type A. Inorganics; and if present in contamination type B through F.
- ^d Activity Category IV-G, V-G, VI-G, VII-G, VIII-G: if present in contamination type A through F.
- ^e Activity Category III-H, IV-H, V-H, VI-H, VII-H, VIII-H: all parameters in contamination type A through F apply.
- ^f When "if present" is noted above, the effluent limitation and/or monitor-only requirement for a parameter in the Contamination Type applies to a site only if the given parameter is known or believed present at that site. When "any present" is noted above, the effluent limitations and/or monitor-only requirements for all parameters in the Contamination Type apply to a site when at least one parameter in that Contamination Type is known or believed present at that site, unless otherwise specified below. See Part 1.1 for additional definitions.
- ⁴ The limitation type for all parameters is monthly average. See Appendix IX for additional definitions.
- ⁵ For any parameter with a single effluent limitation, that effluent limitation applies to a site if that parameter is applicable to that site. For any parameter with both a TBEL and a WQBEL, the TBEL applies to a site, at a minimum, if that parameter is applicable to that site.
- ⁶ For any parameter with both a TBEL and a WQBEL, the WQBEL applies to a site if: 1) *The operator* determines that the WQBEL for a parameter calculated in accordance with Appendix V or VI applies; or 2) EPA or the appropriate State determines that a WQBEL is necessary to meet water quality standards. The calculation of WQBELs shall be as follows: 1) A dilution factor may be used to calculate the WQBEL for a parameter, if allowable and approved by the appropriate State prior to the submission of the NOI to EPA; 2) The calculations are completed in accordance with the instructions provided in Appendix V for sites located in Massachusetts or Appendix VI for sites located in New Hampshire; 3) The WQBEL calculations are included in the NOI submitted to EPA; and 4) The calculated WQBEL is confirmed by EPA in writing. In the event of a calculation error, the operator will be informed of any corrected WQBEL when notified of permit coverage by EPA. Operators are encouraged to use the additional resources provided by EPA at https://www.epa.gov/region1/npdes/rgp.html to follow the calculation methodologies for effluent limitations in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.

⁷ This parameter is expressed as ammonia nitrogen. The minimum level (ML) for analysis must be less than or equal to 0.1 mg/L. See Appendix VII for additional definitions.

⁸ Sites located in Massachusetts must report concentrations of chloride. Sites located in New Hampshire may be subject to §401 certification requirements by the State of New Hampshire, including a numeric effluent limitation for chloride.

⁹ Effluent limitations for TRC only apply if TRC is present or if discharges are likely to contain residual chlorine (e.g., potable water is in use or chlorine is a chemical used for and/or byproduct of treatment). The TBEL applies to all discharges subject to a TRC effluent limitation. The WQBELs are shown with zero dilution. The FW or SW WQBELs are calculated as follows:

^a11 μg/L x approved dilution factor for discharges to freshwater waterbodies ^b7.5 μg/L x approved dilution factor for discharges to saltwater waterbodies

If the FW or SW limitation for TRC as calculated above is less than the TBEL for TRC, the FW or SW limitation for TRC applies. The compliance level for TRC is $50 \,\mu g/L$.

 10 The TBEL and WQBEL for this parameter is expressed on the basis of total recoverable metal in the water column. The WQBEL is shown with zero dilution. For the antimony WQBEL in NH, EPA anticipates that the applicable revised WQC found in Env-Wq 1700 shall be incorporated into the RGP for sites in New Hampshire, once final. Based on the proposed revision for this value, $640 \mu g/L$, EPA expects to change the WQBEL from 4.3 mg/L to $640 \mu g/L$.

¹¹ The WQBEL for this parameter is expressed on the basis of dissolved metal in the water column. The WQBEL is shown with zero dilution. The WQBEL shall apply in the form of total recoverable metal in the water column. The WQBEL must be adjusted using the calculation methodology included in Appendix V for sites located in Massachusetts or Appendix VI for sites located in New Hampshire. For the saltwater cadmium WQBEL in NH, EPA anticipates that the applicable revised WQC found in Eny-Wq 1700 shall be incorporated into the RGP for sites in New Hampshire, once final. Based on the proposed revision for this value, 7.9 μg/L, EPA expects to change the WQBEL from 9.3 μg/L to 7.9 μg/L.

¹² This parameter is hardness-dependent in freshwater. The WQBEL shown assumes a hardness of 100 mg/L CaCO₃. Hardness-dependent metals WQBELs must be adjusted for actual hardness using the calculation methodology included in Appendix V for sites located in Massachusetts or Appendix VI for sites located in New Hampshire. The hardness-dependent calculation requirement does not apply to saltwater discharges.

¹³ The effluent limitations for chromium VI assume this metal is reduced to chromium III as a result of treatment. This metal is not hardness-dependent in freshwater.

 14 The effluent limitations for cyanide only applies if this parameter is present. The TBEL is shown as total cyanide. The WQBEL is shown as free cyanide per liter. However, total cyanide must be reported. The compliance level for total cyanide is 5 $\mu g/L$.

¹⁵ Total BTEX is the sum of: benzene (CAS No. 71432); toluene (CAS No. 108883); ethylbenzene (CAS No. 100-41-4); and (m,p,o) xylenes (CAS Nos. 108-88-3, 106-42-3, 95-47-6, and 1330-20-7). The Volatile Petroleum Hydrocarbon (VPH) method cannot be used for analysis of this parameter.

 16 The effluent limitation for 1,4-dioxane only applies if this parameter and/or 1,1,1 trichloroethane is present. 1,4-dioxane analysis must achieve a ML less than or equal to 50 μ g/L. See Appendix VII for additional definitions.

¹⁸ Total Phthalates is the sum of: diethylhexyl phthalate (CAS No. 117-81-7); butyl benzyl phthalate (CAS No. 85-68-7); di-n-butyl phthalate (CAS No. 84-74-2); diethyl phthalate (CAS No. 84-66-2); dimethyl phthalate (CAS No. 131-11-3); di-n-octyl phthalate (CAS No. 117-84-0). The effluent limitations for total phthalates and the individual phthalate, diethylhexyl phthalate, only apply if these parameters are present. For the diethylhexyl phthalate WQBEL in NH, EPA anticipates that the applicable revised WQC found in Env-Wq 1700 shall be incorporated into the RGP for sites in New Hampshire, once final. Based on the proposed revision for this value, 2.2 μ g/L, EPA expects to change the WQBEL from 5.9 μ g/L to 2.2 μ g/L.

 19 Total Group I PAHs is the sum of: benzo(a)anthracene (CAS No. 56-55-3); benzo(a)pyrene (CAS No. 50-32-8); benzo(b)fluoranthene (CAS No. 205-99-2); benzo(k)fluoranthene (CAS No. 207-08-9; chrysene (CAS No. 218-01); dibenzo(a,h)anthracene (CAS No. 53-70-3); indeno(1,2,3-cd)pyrene (CAS No. 193-39-5). The compliance level for each individual PAH is 0.1 μ g/L using a test method in 40 CFR §136 with selected ion monitoring. The extractable petroleum hydrocarbon (EPH) method cannot be used for analysis of this parameter.

²⁰ Total Group II PAHs is the sum of: acenaphthene (CAS No. 83-32-9); acenaphthylene (CAS No. 208-96-8); anthracene (CAS No. 120-12-7); benzo(g,h,i)perylene (CAS No. 191-24-2); fluoranthene (CAS No. 206-44-0); fluorene (CAS No. 86-73-7); naphthalene (CAS No. 91-20-3); phenanthrene (CAS No. 85-01-8); pyrene (CAS No. 129-00-0). The EPH method cannot be used for analysis of this parameter.

 21 Total PCBs is the sum of the following aroclors: PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, and PCB-1260. The compliance level for total PCBs is 0.5 μ g/L. The effluent limitation for total PCBs only applies if one or more of these parameters are present.

²³ The monitor-only requirement for ethanol only applies if ethanol is present (e.g., discharges are likely to contain ethanol at a site where a release of a petroleum product that contains ethanol or where ethanol has been used or stored). Ethanol analysis must achieve a ML less than or equal to 0.4 mg/L. See Appendix VII for additional definitions.

²⁴ The effluent limitation for this parameter only applies if this fuel additive/oxygenate is present (e.g., discharges are likely to contain this fuel additive/oxygenate at a site where a release of a petroleum product that contained this additive/oxygenate occurred or where oxygenates/additives have been used or stored).

2. Effluent Flow Limitations

Effluent flow shall be limited and monitored as specified below.

¹⁷ The effluent limitation for EDB only applies if this parameter is present.

²² The VPH and EPH methods cannot be used for TPH analysis.

Table 3: Effluent Flow Limitations¹

Effluent Flow ²	Effluent Limitations		
Elliuent Flow-	Design Flow BMP ³	$1.0~\mathrm{MGD^4}$	

Table 3 Footnotes

¹ Effluent flow limitations apply to all discharges. The limitation type for effluent flow is daily maximum. Effluent flow shall be the sum of the recorded discharge volume for each day (i.e., 24 hours) that effluent is discharged.

² Effluent flow shall be measured after treatment using a continuous measurement flow meter (i.e., a device that records the instantaneous gallons per minute (gpm) and total gallons discharged). If an operator demonstrates that use of a meter is infeasible and such a change is provided to the operator in writing, effluent flow shall be based on an estimate. An estimate of effluent flow shall be determined by the operation time and design flow of the treatment system in use at a site, or the flow rate and dimensions of the outfall at a site, if no treatment system is in use, unless otherwise instructed by EPA and/or the appropriate State. An operator must provide justification in the NOI or through a subsequent Notice of Change (NOC) submitted to EPA for a site if the use of a meter is infeasible.

³ Effluent flow shall not exceed the design flow rate of any treatment system in use at a site, determined by the component of the treatment system with the most restricted flow and as reported in the NOI submitted to EPA for that site. Additional Design Flow BMP requirements are included in Part 2.5.2, below.

⁴ Effluent flow shall not exceed 1.0 MGD, unless an effluent flow limitation greater than 1.0 MGD is approved by EPA and the appropriate State on a case-by-case basis. Effluent flow shall not exceed the flow of receiving water, or alter the structural characteristics of the receiving water. Flow control measures must be used if necessary to dissipate energy and control erosion or scouring during discharge.

2.2 Water Quality-Based Effluent Limitations and Requirements

- 1. The discharge shall not cause a violation of the water quality standards of the receiving water.
- 2. The discharge shall be adequately treated to ensure that the receiving water(s) remain free from:
 - a. Pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum, form a visible sheen or other visible pollutants.
 - b. Color, odor, taste, or turbidity in concentrations that would render them unsuitable for their designated use, unless such concentrations are naturally occurring.
 - c. Oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or become toxic to aquatic life.

3. Toxics Control

- a. The discharge shall not contain any pollutant or combination of pollutants in toxic amounts or in concentrations or combinations which are toxic to humans, aquatic life, or wildlife, or which would impair the uses designated by the classification of the receiving waters;
- b. The discharge shall not contain any pollutant or combination of pollutants in concentrations or combinations which violate any applicable water quality standard; and
- c. If a discharge contains any pollutant which is not limited by this general permit and the operator is otherwise eligible for coverage under this general permit, the operator must specifically disclose the pollutant and concentration in the Notice of Intent to request authorization to discharge that pollutant. EPA and the applicable State may authorize the discharge of additional pollutants on a case-by-case basis, including effluent limitations when necessary, provided that such a discharge does not violate Section 307 or 311 of the CWA or applicable State water quality standards.
- 4. EPA may impose additional effluent limitations on a case-by-case basis, or require an operator to obtain coverage under an individual permit, if information in the NOI, required reports, or from other sources indicates that the discharges are not controlled as necessary to meet water quality standards. If additional effluent limitations, including monitor-only requirements, are required, EPA will state the reasons for the additional effluent limitations, and will specify the monitoring and reporting requirements.

2.3 Massachusetts General Permit Limitations and Conditions

In addition to the Effluent Limitations and Monitor-Only Requirements included in Part 2.1 and Part 2.2, above, each outfall shall be limited and monitored as specified below.

1. pH Limitations for Discharges in Massachusetts

Table 4: pH Limitations for Discharges in Massachusetts¹

Receiving Water Class ²	Effluent Limitations ³
Freshwater ⁴	6.5 to 8.3 SU
Saltwater ⁵	6.5 to 8.5 SU

Table 4 Footnotes

¹ pH effluent limitations apply to all discharges.

² There shall be no change from natural background conditions that would impair any use assigned to the class of the receiving water.

³ The limitation type for pH is range. The sample type required for pH is grab. Grab samples shall be analyzed using EPA Method 4500-H⁺-B 2000 or other EPA-approved methods in 40 CFR §136.

2. Temperature Limitations for Discharges in Massachusetts

Table 5: Temperature Limitations for Discharges in Massachusetts¹

Receiving Wate	r Class	Effluent Limitation ^{2,3}	ΔT Limitation ⁴
Class A Warm Water Fishery		83°F	≤1.5°F
Class A	Cold Water Fishery	68°F	≤ 1.5°F
	Warm Water Fishery	83°F	≤5°F
Class B	Cold Water Fishery	68°F	≤3°F
Class B	Lakes and Ponds	83°F Warm Water Fishery	≤3°F
		68°F Cold Water Fishery	in epilimnion
Class SA		85°F 80°F (mean)	≤ 1.5°F
Class SB	July to September	85°F 80°F (mean)	≤ 1.5°F
	October to June	85°F 80°F (mean)	≤4°F

Table 5 Footnotes

3. Massachusetts State Permit Conditions

a. This discharge permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are

⁴ The pH of the effluent shall be in the range of 6.5 to 8.3 standard units (SU) and not more than 0.5 SU outside of the naturally occurring range for freshwater classes.

⁵ The pH of the effluent shall be in the range of 6.5 to 8.5 SU and not more than 0.2 SU outside of the naturally occurring range for saltwater classes.

¹ Temperature effluent limitations apply on a case-by-case basis if heat is indicated as a pollutant in the NOI submitted to EPA, or if EPA and/or the State determine a discharge is likely to contain residual heat.

² The limitation type for temperature is daily maximum. The sample type required for temperature is grab. Grab samples shall be analyzed using EPA Method 2550-B-2000 or other EPA-approved methods in 40 CFR §136.

³ The effluent shall not exceed the maximum temperature noted in Table 5, above for the class of the receiving water. There shall be no change from natural background that would impair any uses assigned to this class including those conditions necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.

⁴ The rise due to a discharge shall not exceed the change in temperature (ΔT) noted for each class in Table 5, above. Change in temperature from background shall be determined by subtracting the temperature of the effluent from the temperature of the receiving water measured a point immediately upstream of a discharge(s) zone of influence at a reasonably accessible location.

hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chapter 21 §43, except where exempted under 310 CMR 40.0042(2) of the Massachusetts Contingency Plan. Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event that any portion of this permit is declared invalid, illegal or otherwise issued in violation of State law, such permit shall remain in full force and effect under federal law as an NPDES permit issued by the EPA. In the event that this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts, except where exempted under 310 CMR 40.0042(2) of the Massachusetts Contingency Plan.

- b. An authorization to discharge under this General Permit, where the activity discharges to a municipal or private storm drain owned by another party, does not convey any rights or authorization to connect to that drain. If the storm sewer system is within an urbanized area, the applicant must notify the MS4 operator of the proposed discharge.
- c. At any time MassDEP determines that additional requirements are necessary to protect water quality and in lieu of requiring a discharger covered under a general permit to obtain an individual permit (314 CMR 3.06(8)), MassDEP may require a discharger to undertake additional control measures, BMPs, or other actions. MassDEP may exercise its authority to require the discharger to take these actions by imposing a condition in the general permit to that effect, or by taking an enforcement action against the discharger, or by any other means. Any such conditions shall be supplied to the permittee in writing.

2.4 New Hampshire General Permit Limitations and Conditions

In addition to the Effluent Limitations and Monitoring Requirements included in Part 2.1 and Part 2.2, above, each outfall shall be limited and monitored as specified below.

1. pH Limitations for Discharges in New Hampshire

Table 6: pH Limitations for Discharges in New Hampshire¹

Receiving Water Class	Effluent Limitations ^{2,3}
Class B	6.5 to 8.0 SU

Table 6 Footnotes

¹ pH effluent limitations apply to all discharges.

2. Temperature Limitations for Discharges in New Hampshire

Table 7: Temperature Limitations in New Hampshire¹

Receiving Water Class		Effluent Limitation ^{2,3}	
Class B	Warm Water Fishery	83°F	
	Cold Water Fishery	68°F	

Table 7 Footnotes

¹ Temperature effluent limitations apply on a case-by-case basis if heat is indicated as a pollutant in the NOI submitted to EPA, or if EPA and/or the State determine a discharge is likely to contain residual heat.

3. New Hampshire State Permit Conditions

- a. This NPDES permit is issued by the EPA under Federal law. Upon final issuance by the EPA, the NHDES may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13. Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of the permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal, or otherwise issued in violation of State law, such permit shall remain in full force and effect under federal law as a NPDES permit issued by the EPA.
- b. An operator may request a change in the permitted pH range of 6.5-8.0 standard units (SU) if the operator can demonstrate to NHDES: 1) that the range should be widened due to naturally occurring conditions in the receiving water; or 2) that the naturally occurring receiving water pH is not significantly altered by the authorized discharge. The scope of any demonstration project must receive prior approval from NHDES. The upstream or background sampling location identified by the operator shall be approved by NHDES prior to the initiation of sampling. In addition, the upstream and effluent sampling is to occur as close in time as possible, but not greater than 1 hour

² The limitation type for pH is range. The sample type required for pH is grab. Grab samples shall be analyzed using EPA Method 4500-H⁺-B 2000 or other EPA-approved methods in 40 CFR §136.

³ The pH of the effluent shall be in the range of 6.5 to 8.0 standard units unless a different range is allowed in accordance with Part 2.4.3.b and 5.1.2.c.

² The limitation type for temperature is daily maximum. The sample type required for temperature is grab. Grab samples shall be analyzed using EPA Method 2550-B-2000 or other EPA-approved methods in 40 CFR §136.

³ The effluent shall not exceed the maximum temperature noted in Table 7, above for the class of the receiving water. Any stream temperature increase associated with the discharge(s) shall not be such as to appreciably interfere with the uses assigned to the receiving water.

- apart. In no case, shall the above procedure result in pH limits less restrictive than 6.0–9.0 SU. Written approval from NHDES must be submitted to EPA for consideration of this change (see Part 5.1, below).
- c. The operator shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:13).
- d. Pursuant to New Hampshire Statute RSA 485-A:13I(c), any person responsible for a bypass or upset at a wastewater facility shall give immediate notice of a bypass or upset to all public or privately owned water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge regardless of whether or not it is on the same receiving water or on another surface water to which the receiving water is tributary. Wastewater facility is defined at RSA 485-A:2XIX as the structures, equipment, and processes required to collect, convey, and treat domestic and industrial wastes, and dispose of the effluent and sludge. The operator shall maintain a list of persons, and their telephone numbers, who are to be notified immediately by telephone. In addition, written notification, which shall be postmarked within 3 days of the bypass or upset, shall be sent to such persons.
- e. An authorization to discharge under this general permit, where the activity discharges to a municipal or private storm drain owned by another party, does not convey any rights or authorization to connect to that drain.
- f. Persons filing a NOI for a new discharge that will last for one year or more will be required to supply NHDES with additional water quality data for the discharge and the receiving water. The data must be collected during both low flow and high flow (spring/autumn) conditions in accordance with an approved Scope of Work and Sampling/Analysis Plan. NHDES recommends that applicants meet with staff of the Wastewater Engineering Bureau at least one year prior to the date of the commencement of the discharge.
- g. At any time that NHDES determines that additional water quality certification requirements are necessary to protect water quality, an individual discharger may be required to meet additional conditions to obtain coverage or to continue coverage under this general permit. Any such conditions shall be supplied to the operator in writing.

2.5 Special Conditions

1. Best Management Practices Plan (BMPP)

Operators must develop, implement, and maintain a BMPP for the discharges covered under this general permit.

- a. The BMPP shall provide a plan for compliance with the terms of this general permit and must document the implementation of control measures, including best management practices (BMPs), to meet the following non-numeric technology-based effluent limitations:
 - i. Minimize the potential for violations of the terms of this general permit, taking corrective actions, when necessary;

- ii. Minimize the number and quantity of pollutants and/or the toxicity generated, discharged, or potentially discharged at the site;
- iii. Minimize discharges of pollutants from the remediation activities, including: material storage areas, on-site control measures and materials, treatment and material handling areas, loading and unloading operations, and accidental leaks or spills, including implementation of material compatibility and good housekeeping practices; and
- iv. Use pollution control technologies when necessary to meet the effluent limitations and requirements in this general permit, including the proper operation and maintenance of any treatment system.
- b. The BMPP must include the following information, at a minimum:
 - i. Name and location of the site;
 - ii. Any necessary system schematics, drawings or maps, including up to date site plans with a detailed outfall diagram;
 - iii. Identification and contact information for the operator(s);
 - iv. Identification of potential sources of pollution;
 - v. Description of the specific control measures, including BMPs, the operator will take to reduce the pollutants associated with the following:
 - 1) Influent and effluent:
 - 2) Storage and handling areas;
 - 3) Site runoff;
 - 4) On-site transfer;
 - 5) Loading or unloading operations:
 - 6) Spillage or leaks;
 - 7) Sludge and waste disposal; and
 - 8) Drainage from material storage and handling areas.
 - vi. Specific control measures, including BMPs, used to meet the requirements of this general permit and including the specific BMPs required for all discharges in Part 2.5.2, below.
- c. The BMPP must be prepared in accordance with good engineering practices and must be a written document (hardcopy or electronic). The BMPP may either be a standalone document or may be incorporated into any other BMPP, Pollution Prevention Plan, Spill Prevention Control and Counter Measures (SPCC) Plan, or other plan developed for the site as required under other permits or programs. Operators must provide BMPP certification in the NOI submitted to EPA for a site as follows:
 - i. Operators with existing discharges without an existing BMPP seeking coverage under this general permit shall develop and implement the BMPP and shall certify as part of the NOI that a BMPP meeting the requirements of this general permit has been developed and implemented;
 - ii. Operators with existing discharges with an existing BMPP seeking coverage under this general permit shall revise the BMPP to meet the terms of this general permit and shall certify as part of the NOI that a BMPP meeting the requirements of this general permit has been developed and implemented;

⁹ Operators may refer to *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA-833-B-93-004, 1993).

- iii. Operators with emergency discharges shall certify as part of the NOI that the BMP requirements included in Part 2.5.2 were met during provisional coverage and, if discharges will continue, shall certify as part of the NOI that a BMPP meeting the requirements of this general permit has been developed and implemented; and
- iv. Operators initiating new discharges shall certify as part of the NOI that a BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.
- d. The operator must certify the BMPP as follows:
 - i. On or before January 15th each calendar year, or upon Notice of Termination (NOT) if a discharge lasts less than one year, the operator must prepare a statement certifying that the requirements of the BMPP were met for the previous calendar year, or for the duration of discharge if a discharge lasts less than a full calendar year;
 - ii. Each certification shall state whether the operation and maintenance activities were conducted, results recorded, and records maintained, and must indicate whether the discharges are in compliance with the requirements of the BMPP and meet the effluent limitations included in this general permit;
 - iii. The required certification statements must be maintained with a complete, up to date BMPP on site or at the location of the principal operator identified in the NOI and made available for inspection by EPA or the State;
 - iv. Any amendments to the BMPP resulting from any change which occurred at the site that increases the generation of pollutants, or the release or potential release of pollutants to the receiving water, or changes the operation and maintenance procedures covered by the BMPP must be explained in the certification for the reporting period in which the change(s) occurred;
 - v. Each certification must be signed in accordance with 40 CFR §122.22; and
 - vi. Failure to prepare the required certifications may result in permit termination and/or penalties imposed by EPA, the State, or both.

2. Best Management Practices (BMPs)

Operators must implement control measures, including the following best management practices (BMPs), to meet the effluent limitations and requirements in this general permit. The BMPs specified below are required for all operators.¹⁰

- a. An Effluent Flow BMP must include, at a minimum:
 - i. Flow control measures that prevent discharge(s) in exceedance of the design flow of the discharge (i.e., the maximum flow through the component with the lowest limiting capacity); and
 - ii. Documentation of the method(s) for measuring effluent flow.
- b. A Preventative Maintenance BMP must include, at a minimum:
 - i. Documented procedures and protocols that ensure all control measures, including all treatment system components and related appurtenances used to achieve the limitations in this general permit remain in effective operating condition and do not result in leaks, spills, and other releases of pollutants;

¹⁰ Additional guidance for BMPs can be found in *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004).

- ii. A maintenance schedule for all treatment system components and related appurtenances used to meet the limitations of this general permit; and
- iii. Records of the completion of regular maintenance activities.
- c. A Site Management BMP must include, at a minimum:
 - Control measures that ensure proper management of solid and hazardous waste and prevent solids, sludge, or other pollutants removed in the course of treatment or control of water and wastewaters from entering Waters of the United States;
 - ii. Run-on and runoff management practices which divert, infiltrate, reuse, contain, or otherwise reduce extraneous uncontaminated waters and minimize the extent to which such uncontaminated waters commingle with remediation activity discharges; and
 - iii. Water quality control measures must ensure that the discharges covered by this general permit do not adversely affect existing water quality by preventing any erosion, stream scouring, or sedimentation, and/or any direct or indirect discharge which contributes additional pollutants.
- d. A Pollutant Minimization BMP must include, at a minimum:
 - i. Identification and assessment of the type and quantity of pollutants, including their potential to impact receiving water quality;
 - ii. Water quality control measures must ensure dilution is not used as a form of treatment, or as a means to achieve the limitations and requirements in this general permit; and
 - iii. Selection, design, installation and proper operation and maintenance of pollution control technologies necessary to meet the limitations and requirements in this general permit. The treatment technologies may include, but are not limited to any combination of the following: ¹¹
 - 1) Adsorption/Absorption
 - 2) Advanced Oxidation Processes
 - 3) Air Stripping
 - 4) Granulated Activated Carbon (GAC)/Liquid Phase Carbon Adsorption
 - 5) Ion Exchange
 - 6) Precipitation/Coagulation/Flocculation
 - 7) Separation/Filtration
- e. An Administrative Controls BMP must include, at a minimum:
 - i. Documentation of the site security procedures appropriate for the treatment and other systems related to the NPDES discharge(s);
 - ii. Documentation of employee training conducted at least annually (or once, for discharges lasting less than one year) for site personnel who have direct or indirect responsibility for ensuring compliance with this general permit;
 - iii. Procedures for initiating corrective action and completing within a reasonable timeframe: evaluation, and revision (i.e., repair, modification, or replacement), if necessary, of any control measure used at the site if the control measure is identified as missing, installed incorrectly, or ineffective in

¹¹ Descriptions of these treatment technologies can be found in the Federal Remediation Technology Roundtable *Remediation Technologies Screening Matrix and Reference Guide, Version 4.0 (2007)* available at http://www.frtr.gov/scrntools.htm.

ensuring the discharge meets applicable water quality standards and/or effluent limitations and requirements in this general permit. The following actions are required upon discovery of a violation of a permit limitation or requirement, at a minimum:

- 1) The discharge must stop immediately, unless the operator is otherwise instructed by EPA and/or the appropriate State;
- 2) The operator must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is achieved;
- 3) Notification must be provided to EPA and to the appropriate State via telephone, e-mail or other verbal or written means in accordance with Part 4.6.3.b or c within twenty-four (24) hours; and
- 4) The cause of the permit violation must be identified and corrective action must be initiated within seventy-two (72) hours, if necessary, prior to resuming discharge in accordance with Part 4.3, or Part 4.1.2 when a treatment system is not in use, unless otherwise instructed by EPA and/or the appropriate State.
- iv. A schedule for and record of routine inspections conducted at least monthly by site personnel who have direct knowledge of the remediation activity at the site, the control measure(s) in use at the site, and the ability to assess the effectiveness of any control measure(s) in use at the site to meet the limitations and requirements of this general permit. Routine inspections must, at a minimum:
 - 1) Assess the influent, effluent, treatment system, and remediation activity areas, including the outfall, where practicable;
 - 2) Identify any uncontrolled leaks, spills or discharges; and
 - 3) Conduct visual inspection for indicators of pollution, including, but not limited to: objectionable aesthetic properties including color, odor, clarity, floating solids, settled solids, suspended solids, foam, and oil sheen.
- f. Quality Assurance/Quality Control (QA/QC) BMP must include, to the maximum extent practicable:
 - i. A description of applicable monitoring requirements;
 - ii. A map and/or treatment system diagram indicating the location of each monitoring point with a geographic identifier (i.e., latitude and longitude coordinates):
 - iii. Specifications for the number of samples, type of sample containers, type of preservation, holding times, type and number of quality assurance field samples (i.e., matrix spiked and duplicate samples and sample blanks), sample preparation requirements (e.g., sampling equipment calibration, clean sampling procedures), and sample storage and shipping methods, including EPA QA/QC and chain-of-custody procedures;¹²
 - iv. Name(s), address(es), and telephone number(s) of the laboratories used by the operator;

¹² Described in *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5).

- v. Specifications for analytical methods, analytical detection and quantitation limits for each required parameter, and laboratory data delivery and documentation requirements;
- vi. A schedule for review of sample results, which must be reviewed by the operator no more than seventy-two (72) hours from receipt of the results; and vii. A description of data validation and data reporting processes.
- g. Materials Management BMP must include, at a minimum:
 - Good housekeeping practices and/or control measures that maintain areas that are potential sources of pollutants, including, but not limited to: contaminated soil and groundwater and treatment system chemicals, additives, materials or appurtenances;
 - ii. Material compatibility practices and/or control measures must ensure safe handling, use and storage of materials including, but not limited to chemicals and additives (e.g., algaecides/biocides, antifoams, coagulants, corrosion/scale inhibitors/coatings, disinfectants, flocculants, neutralizing agents, oxidants, oxygen scavengers, pH conditioners, surfactants and bioremedial agents, including microbes);
 - iii. For any chemical and/or additive used or stored at a site, operators must document, at a minimum:
 - 1) Product name, chemical formula, and manufacturer of the chemical or additive;
 - 2) Purpose or use of the chemical or additive;
 - 3) Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical or additive;
 - 4) The frequency (e.g., hourly, daily), duration (e.g., hours, days), magnitude (i.e., frequency as maximum and average concentration), and method of application for the chemical or additive;
 - 5) Any material compatibility risks for storage of the chemical or additive;
 - 6) If available, the vendor's reported aquatic toxicity (NOAEL and/or LC₅₀ for aquatic organism(s)); and
 - 7) A description of the material management control measures employed (e.g., inventory, containment devices, protected storage building(s) and/or cabinet(s)) and any measures taken to ensure material compatibility.
 - iv. Spill prevention practices and spill control measures, including other handling and collection methods, when necessary (e.g., containment devices), must reduce spills and leaks from the treatment system and the release of chemical and/or additives in use at a site. The following actions are required upon detection of a leak, spill, or other release containing a hazardous substance or oil, such as visual observation of a visible sheen, at a minimum:
 - 1) The discharge must stop immediately;
 - 2) Notification must be provided to EPA in accordance with Part 4.6.3.b or c within twenty-four (24) hours; 13

¹³ State, tribal, or local requirements may necessitate additional notification to local emergency response, public health, and/or drinking water supply agencies.

- 3) The source of the leak, spill or other release must be identified and corrective action must be taken in accordance with Part 2.5.2.e, above, if necessary, prior to resuming discharge, unless instructed otherwise by EPA and/or the appropriate State; and
- 4) When a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs, the operator must document a description of the release, the circumstances leading to the release, the date of the release, a description of any corrective actions taken and the date such corrective actions are completed.

3. Conditions for Discharges of Chemicals & Additives

- a. An operator shall not discharge any chemical or additive, including, but not limited to: algaecides/biocides, antifoams, coagulants, corrosion/scale inhibitors/coatings, disinfectants, flocculants, neutralizing agents, oxidants, oxygen scavengers, pH conditioners, surfactants and bioremedial agents, including microbes, which was not reported in the NOI submitted to EPA for a site or provided through a subsequent NOC submitted to EPA.
- b. Upon authorization to discharge, chemicals and/or additives which have been disclosed to EPA and the appropriate State may be discharged up to the frequency and level disclosed, provided that such discharge does not violate Section 307 or 311 of the CWA or applicable state water quality standards.
- c. EPA and/or the appropriate State may request additional information to provide authorization to discharge chemicals and/or additives, including but not limited to: WET testing.
- d. To request authorization to discharge chemicals and/or additives in the NOI submitted to EPA for a site, or in a subsequent NOC, an operator must submit the following information in writing, at a minimum, in accordance with Appendix IV, Part 2 of this general permit:
 - i. All information required in Part 2.5.2.g.iii, above;
 - ii. An explanation which demonstrates that the addition of such chemicals:
 - 1) Will not add any pollutants in concentrations which exceed permit effluent limitations;
 - 2) Will not exceed any applicable water quality standard; and
 - 3) Will not add any pollutants that would justify the application of permit conditions that are different from or absent in this permit; or
 - 4) An operator may demonstrate through sampling and analysis using sufficiently sensitive test methods that 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 chemicals and/or additives.

4. Conditions for Pipeline and Tank Dewatering

In addition to meeting the BMP requirements for all discharges, above, discharges from pipeline and tank dewatering must meet the following requirements:

a. Discharges of tank bottom water are prohibited;

- b. Pipeline(s), tank(s) or similar structures and appurtenances must be pre-cleaned to remove scale, solids, and residues unless these structures are used only for water storage; 14
- c. Water quality control measures must be implemented if potable water, groundwater or surface waters other than the receiving water will be discharged that prevent lower quality waters being transferred to higher quality waters;
- d. Discharges of chemicals and/or additives used for tank or pipeline cleaning, repair or installation are prohibited unless in accordance with Part 2.5.3, above; and
- e. Discharges of sludge generated in the dewatering of the pipelines or tanks is prohibited.

PART 3 NOTICE OF INTENT (NOI)

3.1 Obtaining Coverage under this General Permit

- 1. To obtain authorization to discharge under this general permit, an operator must:
 - a. Have a discharge type described in Part 1.1, above;
 - b. Have a discharge located in the areas listed in Part 1.2, above;
 - c. Meet the eligibility requirements in Part 1.3 and Part 1.4, above;
 - d. Submit a complete and accurate Notice of Intent (NOI) in accordance with the requirements of this part, below; and
 - e. Receive a written authorization to discharge from EPA.¹⁵
- 2. Operators with one or more discharges eligible for coverage under this general permit must submit a NOI to EPA prior to the initiation of such discharge(s), except emergency discharges, as noted in Part 1.5, above. The NOI must be complete (i.e., contain all of the information required in the suggested NOI format included in Appendix IV, Part 1), accurate (i.e., prepared in accordance with the instructions provided in Appendix IV, Part 1), and signed by the operator in accordance with the signatory requirements of 40 CFR §122.22. In the event EPA and/or the appropriate State determines a NOI is incomplete, EPA will notify the operator of the information required for completeness and specify a timeframe for submission of the information. EPA may request additional information, including analytical data, as authorized under CWA §308(a), 33 U.S.C. §1318(a), when the information is necessary to adequately review the NOI and make a determination of coverage.

3.2 NOI Options

For purposes of this general permit, the NOI consists of either the suggested NOI format in Appendix IV, Part 1 of this permit or another form of official correspondence containing all of the information required in the NOI instructions in Appendix IV, Part 1 of this general permit. All NOIs submitted after **December 21, 2020** must be submitted electronically.

¹⁴ Discharges resulting from the hydrostatic testing of pipelines or tanks must follow the procedures detailed in the American Petroleum Institute 653 Standard and/or applicable State regulations.

¹⁵ See footnote 7, above.

- 1. Under 310 CMR 40.0000, as a matter of *state law*, this general permit only applies to discharges that are not subject to the Massachusetts Contingency Plan (MCP). Therefore, sites subject to the MCP are not required to submit a copy of the NOI to MassDEP, the State form (BRPWM12, or as revised), or pay an application fee for this general permit. Any operator with a site that is not subject to the MCP must submit the State form and fee to MassDEP when submitting a copy of the NOI to MassDEP. Municipalities are fee-exempt, but must send a copy of the transmittal form to MassDEP. ¹⁶ EPA's suggested NOI format is found in Appendix IV, Part 1.
- 2. The State of New Hampshire does not have a State application form. Operators of sites located in New Hampshire are encouraged to submit EPA's suggested NOI format, found in Appendix IV, Part 1, to NHDES.

3.3 NOI Timeframes

- 1. **Existing Discharges**: For any existing discharge (i.e., discharges in accordance with the 2010 Remediation General Permit that expired on September 9, 2015), the following applies:
 - a. Operators of existing discharges must submit a NOI to EPA, and the appropriate State, when required, for coverage under this general permit no later than ninety (90) days after the effective date of this general permit. For operators with authorization to discharge under the 2010 Remediation General Permit that submit a complete NOI under this general permit within the 90-day period, coverage under the 2010 Remediation General Permit remains administratively continued until EPA authorizes the discharge under this general permit, or notifies the operator of permit termination. For enforcement purposes, failure to submit a NOI within 90 days of the effective date of this general permit for an existing discharge will be considered to be discharging without a permit. A NOI is not required if the operator submits a NOT before the 90-day period expires. See Appendix IV, Part 1 and/or Part 3.
- 2. **Emergency Discharges**: For any emergency discharge, including discharges conducted in response to a public emergency (e.g., natural disaster, which includes, but is not limited to: tornadoes/hurricanes/tropical storms, earthquakes, mud slides, or extreme flooding conditions; or widespread disruption in essential public services), the following applies:
 - a. Operators of emergency discharges must submit a NOI to EPA, and the appropriate State, when required, **no later than fourteen (14) days after the discharges commence**. An operator is required to provide documentation in the NOI submitted to EPA to substantiate the occurrence of a public emergency.
- 3. **New Discharges**: For any discharge not considered an existing or emergency discharge, including sites that received authorization to discharge under the 2010 Remediation General Permit but subsequently submitted a NOT or sites covered under other discharge permits that wish to seek coverage under this general permit, the following applies:

¹⁶ For State forms, see http://www.mass.gov/eea/agencies/massdep/.

- a. Operators of new discharges must submit a NOI to EPA, the appropriate State, when required, and the municipality in which the proposed discharge is located at least seven (7) days prior to the commencement of discharge.
- 4. EPA will post NOIs received for a minimum of seven (7) days on EPA's RGP website. 17

3.4 NOI Requirements

- 1. For each eligible discharge, the NOI submitted to EPA for a site must include, in writing, all information required in the suggested NOI format, found in Appendix IV, Part 1, including:
 - a. General site information;
 - b. Receiving water information;
 - c. Source water information;
 - d. Discharge information;
 - e. Treatment system information;
 - f. Treatment chemical/additive information;
 - g. Determination of Endangered Species Act Eligibility;
 - h. Documentation of National Historic Preservation Act Requirements;
 - i. Supplemental Information; and
 - j. Signature Requirements.
- 2. The NOI must meet the monitoring requirements specified in Part 4, including monitoring locations, test methods and minimum level and detection limit requirements, Appendix VII, and Appendix IX, Standard Conditions, for the parameters required for the applicable activity category or categories.
- 3. Additional NOI monitoring is required, as specified in Part 4.2, below and Appendix IV, Part 1.
- 4. All operators must meet the requirements of Appendix I, regarding obligations under the Endangered Species Act, and Appendix III, regarding obligations under the National Historic Preservation Act.
- 5. The NOI must be signed by the operator(s) of the site, as defined in Part 1, above, in accordance with the signatory requirements of 40 CFR §122.22.
- 6. All operators must submit a NOI to the appropriate State in accordance with Part 4.6, when required, as noted in Appendix IV, Part 1, prior to the initiation of discharges.
- 7. The operator must provide certification that the following notifications have been given prior to the initiation of such discharge(s):
 - a. All operators must notify the municipality in which the proposed discharge will be located. The operator must provide a copy of the NOI to the municipality, if

¹⁷ Available at: https://www.epa.gov/region1/npdes/rgp.html.

- requested. Authorization to discharge under this general permit does not convey any authorization from a municipality.
- b. All operators intending to discharge to a municipal or non-municipal storm sewer system must notify the owner of this system, and must obtain permission to discharge to this system prior to initiating discharges. An operator must include a description of any requirements imposed by the owner of the municipal or non-municipal storm sewer system to which they are proposing discharge and certify that these conditions will be complied with. Authorization to discharge under this general permit does not convey any rights or authorization to connect to a municipal or non-municipal storm sewer system.
- c. Where there is separate ownership and/or different operators of the area where discharges to be covered under this general permit will occur and the area associated with discharges covered by other discharge permit(s) (e.g., EPA's Construction General Permit and EPA's Multi-Sector General Permit), the operator seeking authorization to discharge under this general permit must certify that notification has been given to the owner/operator of the area associated with the activities covered by the other discharge permit(s) in the NOI submitted to EPA for that site.

3.5 When the Director May Require Application for an Individual NPDES Permit

The Director may require any operator authorized by or requesting coverage under this general permit to apply for and obtain an individual NPDES permit. Any interested person may petition the Director to take such action. Instances where an individual permit may be required include the following:

- 1. A determination under 40 CFR §122.28(b)(3), including:
 - a. A change has occurred in the availability of the demonstrated technology of practices for the control or abatement of pollutants applicable to the point source(s);
 - b. Effluent limitation guidelines are promulgated for the point source(s) covered by this permit;
 - c. A Water Quality Management Plan or Total Maximum Daily Load containing requirements applicable to such point source(s) is approved and inconsistent with this permit;
 - d. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary; and
 - e. The discharge(s) is a significant contributor of pollutants.
- 2. The discharger is not in compliance with the conditions of this general permit.
- 3. The discharge(s) is in violation of State water quality standards for the receiving water.
- 4. Actual or imminent harm to aquatic organisms, including ESA or human health, is identified.

- 5. The discharge adversely impacts any federally-managed species for which critical habitat (under ESA) or EFH has been designated.
- 6. The point source(s) covered by this general permit no longer:
 - a. Involves the same or substantially similar types of operations;
 - b. Discharges the same types of wastes;
 - c. Requires the same effluent limitations or operating conditions; or
 - d. Requires the same or similar monitoring.
- 7. In the opinion of the Director, is more appropriately controlled under an individual or alternate general permit.

If the Director requires that an individual permit be issued, the operator will be notified in writing that an individual permit is required, and will be given a brief explanation of the reasons for this decision. When an individual NPDES permit is issued to an operator otherwise subject to this general permit, the applicability of this permit to that operator is automatically terminated upon the effective date of the individual permit.

3.6 When an Individual Permit May Be Requested

Any operator may request to be excluded from the coverage under this general permit by applying for an individual NPDES permit. When an individual NPDES permit is issued to an operator otherwise subject to this general permit, the applicability of this permit to that owner or operator is automatically terminated on the effective date of the individual permit.

3.7 EPA Determination of Coverage

Any operator may request to be covered under this general permit but the final authority rests with EPA. Coverage under this general permit will not be effective until EPA has reviewed the NOI, made a determination that coverage under this general permit is authorized, and has notified the operator in writing of its determination. The effective date of coverage will be the date indicated in the authorization to discharge provided by EPA in writing. Any additional State conditions will be provided in writing.

Any operator authorized to discharge under the RGP will receive written notification from EPA. Failure to submit to EPA a NOI to be covered and/or failure to receive from EPA written notification of permit coverage means that the operator is not authorized to discharge under this general permit. An operator that is denied permit coverage by EPA is not authorized under this general permit to discharge to Waters of the United States.

PART 4 MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

In addition to any monitoring, record-keeping and reporting requirements specified in Parts 1, 2 and 3, above, and in the Standard Conditions of this general permit (Appendix IX), the following monitoring, record-keeping and reporting requirements apply to discharges covered under this general permit. EPA may notify the operator of additional monitoring requirements. Any such

notice will briefly state the reasons for the monitoring and will specify the monitoring and reporting requirements.

4.1 Monitoring Requirements

Sampling of the influent, effluent and/or receiving water must yield data representative of the discharge under authority of Section 308(a) in accordance with 40 CFR §122.41(j), §122.44(i), and §122.48. The sample type for all monitoring locations is grab. Each grab sample must be analyzed and cannot be composited.

1. Monitoring Locations

- a. **Influent** (i.e., the untreated influent) samples shall be taken at a consistent point defined by geographic coordinates in the NOI (i.e., latitude and longitude), immediately prior to treatment of the water, before entering any treatment system component. If the influent sampling location as defined has not been established prior to submittal of the NOI, the operator must provide a detailed description of the sample location(s) selected such that an inspector from EPA or the State could replicate the sample upon site inspection. The following requirements apply:
 - i. Influent samples must be collected from areas of contamination, when known;
 - ii. The influent sample must ensure that the highest concentrations of pollutants that may be treated and/or discharged are represented;
 - iii. If a monitoring well is used as the sampling location for the influent, the monitoring well must be located within the maximum extent of contamination.
 - iv. If influent is generated from multiple areas of a site across which contamination types and/or concentrations can vary, the operator must collect additional samples such that the data provided are representative of the expected influent characteristics, and each location must be defined; 18
 - v. If the influent concentrations are unknown or vary widely across a site, additional samples must be collected that are representative of the expected variability, and each location must be defined.¹⁹
- b. **Effluent** (i.e., the treated effluent) samples shall be taken at a consistent point defined by geographic coordinates in the NOI (i.e., latitude and longitude), following all treatment, immediately prior to discharge to the receiving water, private or municipal separate storm sewer system, or, if the treated effluent is commingled with another discharge, prior to such commingling.
- c. **Receiving water** samples shall be taken at a consistent point defined by geographic coordinates in the NOI (i.e., latitude and longitude), from a reasonably accessible location, upstream or otherwise immediately outside of the zone of influence of the discharge or other site activities that could affect water quality.

¹⁸ Operators of such sites are encouraged to contact EPA in accordance with Part 4.6.3 for assistance in influent sample design.

¹⁹ See footnote 18, above.

2. Monitoring Frequency

- a. The routine monitoring frequency for discharges covered under this general permit is monthly (i.e. at least one sample per each calendar month) for both influent and effluent, as follows:
 - i. Beginning no more than thirty (30) days from the effective date of permit coverage for existing discharges, no more than thirty (30) days following the end of provisional coverage for emergency discharges, and no more than thirty (30) days following completion of the treatment system startup monitoring requirements for new discharges (Part 4.3.2) or treatment system interruption or shutdown monitoring requirements for discharges that have been interrupted (Parts 4.3.3 and 4.3.4);
 - ii. Continuing a minimum of six (6) months and ten (10) samples, prior to submission of any request for modification of this monitoring frequency in accordance with Part 5.1 below; and
 - iii. Continuing thereafter for the term of this general permit, or until Notice of Termination, whichever occurs first, unless modified by EPA in writing.
- b. The monitoring frequency specified applies to all discharges covered under this general permit unless sampling would not otherwise be required (e.g., during a treatment system interruption as in 4.3.2, below), or unless otherwise specified (e.g., certain short-term discharges as in Part 4.4, below).
- c. Changes to the specified monitoring frequency must be approved by EPA in writing through a Notice of Change. See Appendix IV, Part 2.

3. Test Methods

- a. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative test methods approved by EPA, in accordance with the procedures in 40 CFR §136, unless specifically prohibited in this general permit. Test methods which can be used for analysis of the parameters included in this general permit are summarized in Appendix VII.
- b. All analyses must be conducted using a sufficiently sensitive test method in accordance with 40 CFR §122.44(i)(1)(iv) and as specified in Part 4.1.4, below.

4. Minimum Levels and Detection Limits

- a. For the purposes of this general permit, the minimum level (ML) for analysis is the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for a pollutant or pollutant parameter, representative of the lowest concentration at which a pollutant or pollutant parameter can be measured with a known level of confidence.
- b. For the purposes of this general permit, the detection limit (DL) is the lowest concentration that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method during routine laboratory operating conditions (i.e., the level above which an actual value is reported for an analyte, and the level below which an analyte is reported as non-detect).
- c. Operators must achieve the MLs for analysis specified in in Appendix VII of this general permit and the following requirements:

- i. Analysis of influent, effluent and/or receiving water samples shall use test methods with a ML at or below the level of the effluent limitation²⁰ for the given parameter, or the applicable water quality criterion for a parameter with a monitor-only requirement;
- ii. The DL must be less than or equal to the ML for an analyte using a sufficiently sensitive test method. When an analyte is not detected, the operator must report results using the data qualifier signifying less than the DL reported for that analyte (i.e. $<0.1 \mu g/L$, if the DL reported for an analyte is $0.1 \mu g/L$);
- iii. Where the sample concentration of an analyte is above the ML, any of the test methods listed for that analyte in Appendix VII may be used, unless otherwise noted; and
- iv. Where the ML for the approved test methods are above the permit effluent limitations, the test method that has the lowest ML of the analytical methods in 40 CFR §136 must be used.
- d. When a parameter is required to be reported as a total value, the total value must be calculated by adding the measured concentration of each individual compound noted for that parameter. If the measurement of an individual compound analyzed for a total value is less than the DL and the test method and minimum level meet the requirements in this Part and Appendix VII, the operator shall use a value of zero for that compound in the total value calculation.

5. Existing Data Substitution

Existing data substitution is allowed for the purposes of preparing a NOI and for the purposes of meeting the monitoring requirements included in this general permit if the following requirements are met:

- a. Sampling and analysis must have been conducted pursuant to: Massachusetts Regulations 310 CMR 40.0000, the Massachusetts Contingency Plan (Chapter 21E); New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; the 2010 Remediation General Permit; or other existing data if allowed by EPA on a case-by-case basis;
- b. Sampling and analysis must meet the monitoring requirements specified in Part 2 and Parts 4.1.1 through 4.1.4, above, and, for data submitted with a NOI, Part 4.2, below;
- c. For data submitted with a NOI, the date of analysis for the existing data may not be greater than twelve (12) months for existing discharges or six (6) months for new discharges;
- d. For data submitted to meet reporting requirements, the date of analysis for the existing data must approximately coincide with other sampling and analysis conducted for the general permit; and
- e. Existing data must be submitted in accordance with Part 4.6.1, below, and meet the requirements specified in Part 2.5.2.f, above, and Part 4.6.2, below.

²⁰ When a compliance level is specified for an effluent limitation, the sufficiently sensitive test method ML shall be no greater than the compliance level.

- 6. Whole Effluent Toxicity (WET) Testing
 - a. Activity Categories I and II must conduct one (1) acute WET test:²¹
 - i. No later than thirty (30) days following authorization to discharge for existing discharges;
 - ii. No later than twelve (12) months following initiation of discharges for new discharges if discharges are expected to last twelve (12) months or more; and
 - iii. If requested by EPA and/or the appropriate State on a case-by-case basis for short-term discharges, including emergency discharges.
 - b. Activity Categories III, IV, V, VI, VII, and VIII must conduct WET testing if requested by EPA and/or the appropriate State on a case-by-case basis.
 - c. If the result of any WET test indicates toxicity (i.e., a $LC_{50} < 100\%$), notification must be provided within twenty-four (24) hours to EPA in accordance with Part 4.6.3.c and to the appropriate State via telephone, e-mail or other verbal or written means in accordance with Part 4.6.3.b or c.
 - d. If EPA and/or the appropriate State determine that a discharge may cause or contribute to an excursion above applicable water quality standards, EPA and/or the appropriate State may require additional WET testing, limitations and/or requirements as authorized at 40 CFR §122.44(d)(1)(v). If additional WET requirements apply, EPA will provide the reasons for the additional requirements to the operator in writing, and will specify the monitoring and reporting requirements and/or limitation.
 - e. Results of the WET requirements specified above must be submitted in accordance with Part 4.6.1, below, and must meet the QA/QC requirements specified in Part 2.5.2.f, above, and Part 4.6.2, below. The results of WET testing above its required frequency must also be submitted to EPA (see Appendix IX, Standard Conditions); and
 - f. If any parameter is analyzed in accordance with Attachment A for the requirement in this Part, the WET test result may be reported for any parameter for which monitoring is required in Part 4.1.2, above, or elsewhere in Part 4. A duplicate sample is not required.

4.2 NOI Monitoring Requirements

Samples collected and analyzed for the purposes of a NOI submitted for coverage under this general permit must be representative of the proposed discharge(s) and must meet the monitoring requirements specified in Part 2 and Part 4.1, above. Samples must be collected in accordance with the instructions included in Appendix IV, Part 1, and as required below.

- 1. Analysis for a minimum of one (1) **influent** sample is required for:
 - a. Activity Category I for:
 - i. all parameters in contamination type A. Inorganics;
 - ii. any present in contamination type B. non-halogenated VOCs;
 - iii. if present in contamination type C. halogenated VOCs;
 - iv. any present in contamination type D. non-halogenated SVOCs;

²¹ Acute Whole Effluent Toxicity Testing must be completed in accordance with USEPA Region 1 Freshwater Acute Toxicity Test Procedure and Protocol (February, 2011) for discharges to freshwater and Marine Acute Toxicity Test Procedure and Protocol (July 2012) for discharges to saltwater, including estuaries. See Attachment A.

- v. if present in contamination type E. halogenated SVOCs; and
- vi. any present in contamination type F. fuels parameters.
- b. Activity Category II for:
 - i. all parameters in contamination type A. Inorganics;
 - ii. any present in contamination type B. non-halogenated VOCs;
 - iii. any present in contamination type C. halogenated VOCs;
 - iv. any present in contamination type D. non-halogenated SVOCs;
 - v. if present in contamination type E. halogenated SVOCs; and
 - vi. if present in contamination type F. fuels parameters.
- c. Activity Category III-G for:
 - i. all parameters in contamination type A. Inorganics; and
 - ii. if present in contamination type B through F
- d. Activity Category IV-G, V-G, VI-G, VII-G, VIII-G for:
 - i. if present in contamination type A through F.
- e. Activity Category III-H, IV-H, V-H, VI-H, VII-H, VIII-H for:
 - i. all parameters in contamination type A through F.
- f. All Activity Categories:
 - i. pH, temperature, and hardness (freshwater receiving waters only);
 - ii. Any parameter listed in Part 2.1.1, if present, but not otherwise specified in this Part for the Activity Category that applies to a site;
 - iii. Any parameter listed in Part 2.1.1 if it is unknown whether the given parameter is present or absent; and
 - iv. Any parameter present that is not included in this general permit.
- g. When "if present" is noted in Part 4.2.1, above, the monitoring requirement for a parameter in the Contamination Type applies to a site only if the given parameter is known or believed present at that site. When "any present" is noted in Part 4.2.1, above, the monitoring requirement for all parameters listed in the Contamination Type apply to a site when at least one parameter listed for that Contamination Type is known or believed present at that site.
- 2. Analysis is required for a minimum of one (1) receiving water sample for:
 - a. All activity categories: pH, temperature, hardness (freshwater receiving waters), salinity (saltwater receiving waters), and ammonia; and
 - b. All activity categories for total recoverable antimony, total recoverable arsenic, total recoverable cadmium, total recoverable chromium III and VI, total recoverable copper, total recoverable iron, total recoverable lead, total recoverable mercury, total recoverable nickel, total recoverable selenium, total recoverable silver, total recoverable zinc, if present and if a dilution factor applies.
- 3. Results of the NOI monitoring requirements specified above must be submitted to EPA as an attachment to the NOI in accordance with Appendix VIII, and must meet the QA/QC requirements specified in Part 2.5.2.f, above, and the reporting requirements specified in Part 4.6.2, below.
- 4. The results of sampling for any parameter above its required minimum must be submitted to EPA as an attachment to the NOI.

- 5. EPA and/or the appropriate State may require additional NOI monitoring on a case-by-case basis. If additional monitoring is required, EPA and/or the appropriate State will briefly state the reasons for the monitoring, and will specify the monitoring and reporting requirements.
- 6. Where an operator conducts any of the monitoring specified above prior to the submission of a NOI, additional samples are not required, so long as the monitoring requirements specified in Part 2.1 and elsewhere in Part 4, are met, including Part 4.1.5 for existing data substitution.

4.3 Treatment System Monitoring Requirements

All operators must perform treatment system monitoring when a treatment system is in use at a site. Treatment system monitoring requirements for startup, interruption and shutdown are specified below.

1. Treatment System Startup

- a. The operator must perform the following sampling and analysis for all parameters required for the applicable activity category or categories as specified in Part 2.1, above, when a discharge is either initiated for the first time, or upon the re-initiation of discharge following a treatment system interruption lasting ninety (90) or more consecutive days, unless otherwise specified:
 - i. During the first week of discharge, operators must sample the **influent and effluent** two (2) times: one (1) sample of the influent and one (1) sample of
 the effluent must be collected on the first day of the discharge; and one (1)
 sample of the influent and one (1) sample of the effluent must be collected on
 one additional non-consecutive day within the first week of discharge;
 - ii. During the first week of discharge, samples must be analyzed in accordance with 40 CFR §136 unless otherwise specified in this general permit with a maximum five (5)-day turnaround time and results must be reviewed no more than forty-eight (48) hours from receipt of the results of each sampling event. After the first week, samples may be analyzed with up to a ten (10)-day turnaround time and results must be reviewed no more than seventy-two (72) hours from receipt of the results;
 - iii. If the treatment system is operating as designed and achieving the effluent limitations in this general permit, sampling of the **influent and effluent** shall be as follows, thereafter:
 - 1) 1/Week for three (3) additional weeks beginning no earlier than twenty-four hours following the sampling required in Part 4.3.2.a.ii, above;
 - 2) 1/Month in accordance with Part 4.1.2, above for the remaining term of the permit; and
 - 3) Adjusted for any monitoring frequency reduction approved by EPA in writing.
- b. If the treatment system is shut down during startup or interrupted as a result of a problem, including when discharge concentrations for any parameter exceeds effluent

limitations, corrective actions must be taken in accordance with Part 2.5.2.e, above and as follows:

- i. Upon system restart and/or re-initiation of discharge, the operator shall collect one (1) sample with a maximum five (5)-day turnaround time and results must be reviewed no more than forty-eight (48) hours from receipt of the results of the sampling event;
- ii. If the problem has been corrected, the operator may resume with treatment system startup as specified in Part 4.3.1.a.iii, above, or routine monitoring specified in Part 4.1.2 following a treatment system interruption; and
- iii. If the problem persists, the operator must immediately halt discharge again and notify EPA and the appropriate State via telephone, e-mail or other verbal or written means in accordance with Part 4.6.3.b or c within twenty-four (24) hours of the need to cease discharge a second time; discharge may resume upon completion of corrective actions unless otherwise directed by EPA and/or the State contact.

2. Treatment System Interruption

- a. In addition to the requirements for certain upset and/or bypass conditions specified in Appendix IX, Standard Conditions, if the operator has any indication of treatment system upset or violation of effluent limitations, corrective actions must be taken in accordance with Part 2.5.2.e, above.
- b. If the discharge has been interrupted for ninety (90) or more consecutive days, the same monitoring requirements apply as specified in Part 4.3.1.a.i and Part 4.3.1.b, above, upon treatment system re-start.
- c. If the discharge has been interrupted less than ninety (90) consecutive days, the same monitoring requirements apply as specified in Part 4.3.1.b, above, upon treatment system re-start.

3. Treatment System Shutdown

- a. The operator must perform the following monitoring for all parameters required for the applicable activity category or categories as specified in Part 2.1.1, above, prior to permanent treatment system shutdown (i.e., termination), and must submit the results with the NOT, in accordance with Part 5.2, below, and Appendix IV, Part 3.:
 - i. During the final week of discharge, operators must sample the **influent and effluent** two (2) times: one (1) sample of the influent and one (1) sample of
 the effluent must be collected on the last day of the discharge; and one (1)
 sample of the influent and one (1) sample of the effluent must be collected on
 one additional non-consecutive day within the last week of discharge; and
 - ii. Samples must be analyzed in accordance with 40 CFR §136 unless otherwise specified in this general permit with up to a ten (10)-day turnaround time and results must be reviewed no more than seventy-two (72) hours from receipt of the results, or upon confirmation that additional sampling prior to treatment system shutdown is not necessary.
- b. Where an operator collects any portion of the information specified above no more than three (3) months prior to treatment system shutdown, an additional sample is not required, so long as the information was collected in accordance with the monitoring

- requirements of this general permit or otherwise meets the requirements for existing data substitution in Part 4.1.5, above; and
- c. In the event the treatment system has been interrupted for more than ninety (90) consecutive days prior to treatment system shutdown, existing data may be substituted for the data required for the submission of a NOT from equivalent monitoring conducted nearest in time to NOT submission, so long as the requirements in Part 4.1.5, above, are otherwise met.

4.4 Short-Term Discharge Monitoring Requirements

For the purposes of this general permit, discharges lasting twelve (12) months or less (e.g., emergency discharges, immediate response actions, pump tests, temporarily containerized waters and dewatering of pipelines and tanks), which are then terminated and will not be re-started are considered "short-term discharges". The monitoring requirements for short-term discharges are as follows:

- 1. Discharges from Dewatering of Pipelines and Tanks
 - a. The operator must take a minimum of five (5) grab samples, including:
 - i. For **influent**, the operator must take one (1) sample of the source water during the fill process, except when infeasible. A representative sample the source water may be used for influent if sampling during the fill process is infeasible;
 - ii. For tanks, the operator shall take a minimum of one (1) **in-process** sample representative of the tank water following maintenance or testing, but before draining. If the tank contents are likely to undergo phase separation or stratification, multiple samples from multiple depths within the water column must be collected and composited. The operator shall analyze and review the in-process sample prior to discharge. If the analysis demonstrates that the tank water does not meet the effluent limitations in this general permit, the operator shall not discharge the tank water unless treatment reduces the pollutant levels below the effluent limitations established in this general permit;
 - iii. For pipelines, the operator shall take one (1) **in-process** sample of the pipeline water following depressurization. The operator shall analyze and review the in-process sample prior to discharge. If the analysis demonstrates that the pipeline water does not meet the effluent limitations in this general permit, the operator shall not discharge the pipeline water unless treatment reduces the pollutant levels below the effluent limitations established in this general permit; and
 - iv. For **effluent**, the operator must take one (1) sample of the discharge during the first 10% of discharge, one (1) sample of the discharge at the approximate midpoint of discharge, and one (1) sample of the discharge during the last 10% of discharge. If at any time the analysis demonstrates that the discharge does not meet the effluent limitations and requirements in this general permit, corrective action must be taken in accordance with Part 2.5.2.e, above prior to resuming discharge, unless instructed otherwise by EPA and/or the appropriate State.

- 2. Short-Term Discharges Other than Those from Dewatering of Pipelines and Tanks
 - a. For any short-term discharge lasting twenty-four (24) hours or less:
 - i. The operator must take a minimum of one (1) representative sample of the **influent and effluent**;
 - ii. Samples must be analyzed in accordance with 40 CFR §136 or by other methods authorized by this general permit with no more than a ten (10) day turnaround time and results must be reviewed within seventy-two (72) hours of the date of receipt of the sample results; and
 - iii. The monitoring frequencies specified in Part 4.1.2 and Part 4.3 do not apply.
 - b. For any short-term discharge lasting seven (7) days or less:
 - i. The operator must take a minimum of two (2) samples of the **influent and effluent**: one (1) sample of the influent and one (1) sample of the effluent must be collected on the first day of discharge; and one (1) sample of the influent and one (1) sample of the effluent must be collected on one additional non-consecutive day within the first week of discharge;
 - ii. Samples must be analyzed in accordance with 40 CFR §136 or by other methods authorized by this general permit with no more than a ten (10) day turnaround time and results must be reviewed within seventy-two (72) hours of the date of receipt of the sample results; and
 - iii. The monitoring frequencies specified in Part 4.1.2 and Part 4.3 do not apply.
 - c. For any short-term discharge lasting more than seven (7) calendar days but not more than twelve (12) months, sampling must proceed as follows:
 - i. Operators must perform treatment system monitoring in accordance with Part 4.3.1.a.i, above, when a treatment system is in use at a site;
 - ii. If a treatment system is not in use at a site, operators must perform monitoring as follows:
 - 1) The operator must take a minimum of two (2) representative samples of the **influent and effluent**: one (1) sample of the influent and one (1) sample of the effluent must be collected on the first day of discharge; and one (1) sample of the influent and one (1) sample of the effluent must be collected on one additional non-consecutive day within the first week of discharge; 2) The operator must take a minimum of one (1) sample of the **influent and effluent** weekly for three (3) additional weeks beginning no earlier than twenty-four hours following the sampling required in Part 4.4.2.c.ii.1. above; and
 - 3) The operator must take a minimum of one (1) sample of the **influent and effluent** monthly in accordance with Part 4.1.2, above, until Notice of Termination, beginning no earlier than twenty-four hours following the sampling required in Part 4.4.2.c.ii.2, above.
 - iii. During the first week of discharge, samples must be analyzed in accordance with 40 CFR §136 unless otherwise specified in this general permit with a maximum five (5) day turnaround time and results must be reviewed no more than forty-eight (48) hours from receipt of the results of each sampling event. After the first week, samples may be analyzed with up to a ten (10) day turnaround time and results must be reviewed no more than seventy-two (72) hours from receipt of the results.

- d. Where the monitoring frequencies specified in Part 4.4, above, are duplicative of the monitoring required elsewhere in this general permit, duplicate sampling is not required; and
- e. The reporting requirements specified in Part 4.6.1.a do not apply.

4.5 Record-Keeping Requirements

- 1. Records Content: Operators must include the following records (hardcopy or electronic) pertaining to coverage under this general permit:
 - a. Data used to complete the NOI for this general permit;
 - b. Sample collection information, including: the date, exact location, and time of sampling or measurement; the name of the individual(s) who performed the sampling or measurement; and the sample chain of custody for each sample;
 - c. Analytical laboratory reports for each sample analysis, which: identifies the sample(s), the target analyte(s), the test method(s), the dates collected and analyzed, the analytical result(s), the detection limit for each analyte, and the names of the laboratory and individual that conducted the analysis; includes a legible copy of the signed sample chain of custody; and indicates if all appropriate QA/QC procedures were met and were within acceptable limits;
 - d. Documentation for the development, implementation and maintenance of the BMPP, including certifications;
 - e. Discharge monitoring data in the suggested format included in Appendix VIII, or other format containing all of the information included in Appendix VIII;
 - f. Any records of monitoring instrumentation, field monitoring, and visual observations (e.g. portable organic vapor monitoring, turbidity meter, visible sheen observations);
 - g. Any records of system operation and maintenance; and
 - h. Any records of site inspections and employee training.
- 2. On-Site Records: The following records (hardcopy or electronic) must be maintained onsite and/or with the operator to be made available upon inspection and/or request by EPA or the appropriate State:
 - a. A complete copy of this general permit;
 - b. A copy of EPA's authorization to discharge and any subsequent modifications, if applicable;
 - c. Copies of any information submitted to EPA, the appropriate State, and the municipality in which the site is located;
 - d. Copies of any correspondence received from EPA, the appropriate State, and the municipality in which the site is located regarding permit coverage; and
 - e. A copy of the BMPP.
- 3. Retention of Records: Operators must retain the records specified above for a minimum of three (3) years from the date of the sample, measurement, report or notice, whichever applies. This period may be extended at the request of EPA or the appropriate State.

4.6 Reporting Requirements

- 1. Discharge Monitoring Reports
 - a. **For discharges lasting twelve (12) months or more**, in addition to the reporting requirements found in Appendix IX, Standard Conditions, of this general permit, the operator shall submit the following information to EPA and the appropriate State: i. Submittal of DMRs and the Use of NetDMR
 - 1) **Beginning the effective date of the authorization to discharge** the operator must record all monitoring data collected to comply with this general permit;
 - 2) Beginning the first full calendar month following twelve (12) months after the effective date of the authorization to discharge, the operator shall begin reporting monitoring data in DMRs to EPA and the State, due no later than the 15th day of the month following the completed reporting period; the reporting periods for this general permit consist of each calendar month, inclusive;
 - 3) All DMRs must be submitted electronically using NetDMR, unless, in accordance with Part 4.6.1.a.iii, below, the operator is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs. NetDMR is a web-based tool that allows operators to electronically submit DMRs and other required reports via a secure internet connection;²² the operator must continue to use NetDMR after beginning to do so.
 - 4) The operator must utilize an appropriate No Data Indicator (NODI) Code(s)²³ in instances where monitoring data have not been obtained or are otherwise not required. Commonly applicable NODI Codes for this general permit include, but are not limited to:
 - (A) "C" if no discharge occurs during a required sample frequency;
 - (B) "A" if an operator is exempted from the requirement to sample for a parameter, such as when EPA approves, in writing, sample frequency reduction and/or elimination;
 - (C) "2" if operation is shut down, such as during a treatment system interruption; and/or
 - (D) "9" if an effluent limitation is conditional and does not apply during a required sample frequency (e.g., TRC effluent limitation applies only if a discharge is likely to contain residual chlorine such as when a chemical additive containing chlorine is being used).
 - ii. Submittal of Reports as NetDMR Attachments
 - 1) When the operator begins submitting DMR reports to EPA electronically using NetDMR, the operator shall electronically submit other reports to EPA as NetDMR attachments rather than as hard copies, unless otherwise specified in this general permit. Because the due dates for reports described in this general permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted

²² NetDMR is currently accessed from: http://www.epa.gov/netdmr.

²³ DMR instructions are currently accessed from: http://www3.epa.gov/region1/npdes/dmr.html.

to EPA using NetDMR with the next DMR due following the particular report due date specified in this general permit.

iii. Submittal of NetDMR Opt-Out Requests

1) NetDMR opt-out requests must be submitted in writing to EPA for written approval at least 60 days prior to the date a site would be required under this general permit to begin using NetDMR. This demonstration shall be valid for 12 months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the operator submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to EPA at the following address:

Attn: NetDMR Coordinator
U.S. Environmental Protection Agency, Water Technical Unit 5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

b. For discharges lasting less than twelve (12) months, the operator is not subject to the DMR reporting requirements defined in Part 4.6.1.a, above, but remains subject to the monitoring requirements of this general permit, the reporting requirements in 4.6.2 through 4.6.6, below, the requirements found in Appendix IX, Standard Conditions, and the requirements of a NOI, NOC and NOT. Information that must be submitted with an operator's NOI, NOC and NOT is defined in Appendix IV, Part 1, Part 2 and Part 3 of this general permit, respectively. Also see and Part 3, above, and Part 5, below.

2. Analytical Reports

a. Operators shall submit a copy of the laboratory analytical report(s) for each sampling event, concurrent with the submittal of discharge monitoring data in accordance with Part 4.6.1, as applicable. The laboratory case narrative shall include a copy of the laboratory analytical reports for each sample analysis, which: identifies the sample(s), the target analyte(s), the test method(s), the dates collected and analyzed, the analytical result(s), the detection limit for each analyte, and the names of the laboratory and individual(s) that conducted the analysis; includes a legible copy of the signed sample chain of custody; and indicates if all appropriate QA/QC procedures were met and were within acceptable limits.

3. Notification Requirements

- a. As required in 40 CFR §122.44(f), all operators must notify EPA as soon as they have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant (see 40 CFR §401.15) which is not limited in this general permit which exceeds:
 - i. The notification level of in 40 CFR §122.42; or
 - ii. Any other notification level established in accordance with 40 CFR §122.44(f) and State regulations.
- b. Written notifications required in this general permit, unless otherwise specified, shall be made to both EPA and to the appropriate State. Written notifications shall be made

- in accordance with Part 4.6.4 and Part 4.6.5 or 4.6.6, as applicable, below, unless otherwise specified.
- c. Verbal notifications required in this general permit, unless otherwise specified, shall be made to both EPA and to the appropriate State. This includes verbal notifications which require reporting within 24 hours (e.g., see Appendix IX Parts B.4.c.(2), B.5.c.(3), and D.1.e). Verbal notifications shall be made to:
 - i. The EPA and appropriate State contacts listed on EPA's website for this general permit²⁴; and
 - ii. EPA's Office of Environmental Stewardship at: 617-918-1510 for Verbal Notifications required under Appendix IX, if Part 4.6.1.a applies.

4. EPA Region 1 Addresses

- a. Submittal of Notifications and Reports to EPA/OEP
 - i. The following notifications and reports described in this general permit shall be submitted to the EPA/OEP RGP Coordinator in the EPA Office Ecosystem Protection (OEP): ²⁵
 - 1) Notice of Intent (NOI);
 - 2) Notice of Change (NOC);
 - 3) Notice of Termination (NOT);
 - 4) Written notifications required in this general permit; and
 - 5) Reports and DMRs in electronic format, if NetDMR is not required (i.e., if Part 4.6.1.a does not apply).
 - ii. These notifications and reports shall be submitted to EPA/OEP electronically at NPDES.Generalpermits@epa.gov, or, where an operator is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes submittal in electronic format, in hard copy form:

U.S. Environmental Protection Agency Office of Ecosystem Protection EPA/OEP RGP Coordinator 5 Post Office Square - Suite 100 (OEP06-01) Boston, MA 02109-3912

- b. Submittal of Notifications and Reports to EPA/OES
 - i. The following notifications and reports shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission, if Net DMR is required (i.e., if Part 4.6.1.a applies):
 - 1) NetDMR Opt-Out Requests;
 - 2) DMRs and transmittal record of DMRs submitted, when a NetDMR Opt-Out Request has been approved; and
 - 3) Written notifications required under Appendix IX.
 - ii. This information shall be submitted to EPA/OES at the following address:

U.S. Environmental Protection Agency

²⁴ See footnote 17.

²⁵ See footnote 17.

Office of Environmental Stewardship (OES) Water Technical Unit 5 Post Office Square, Suite 100 (OES4-SMR) Boston, MA 02109-3912

5. MassDEP Address

a. Massachusetts sites must submit copies of all notifications and reports required in Part 4.6.4.a, above, to the MassDEP RGP Coordinator, ²⁶ or, where an operator is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes submittal in electronic format, in hard copy form:

Massachusetts Department of Environmental Protection Bureau of Water Resources 1 Winter St. 5th Floor Boston, MA 02108

- b. Massachusetts sites must submit copies of all notifications and reports required in Part 4.6.4.b, above, to the appropriate regional office as follows:
 - i. Massachusetts Department of Environmental Protection Central Region 8 New Bond Street

Worcester, Massachusetts 01606

ii. Massachusetts Department of Environmental Protection - Northeast Region 205B Lowell Street

Wilmington, Massachusetts 01887

iii. Massachusetts Department of Environmental Protection - Southeast Region 20 Riverside Drive

Lakeville, MA 02347

iv. Massachusetts Department of Environmental Protection – Western Region 436 Dwight Street

Springfield, MA 01103

6. NHDES Address

a. New Hampshire sites must submit copies of all notifications and reports to the NHDES RGP Coordinator, ²⁷ or, where an operator is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes submittal in electronic format, in hard copy form:

New Hampshire Department of Environmental Services Water Division, Wastewater Engineering Bureau 29 Hazen Drive, P.O. Box 95 Concord, NH 03302-0095

²⁷ See footnote 17.

²⁶ See footnote 17.

PART 5 ADMINISTRATIVE REQUIREMENTS

5.1 Notice of Change (NOC)

Operators covered under this general permit may request a change to certain conditions through submission of a NOC to EPA and the appropriate State, when required, prepared in accordance with the instructions provided in Appendix IV, Part 2, and signed in accordance with 40 CFR §122.22.

- 1. For the purposes of this general permit, a NOC may consist of either:
 - a. The suggested NOC format in Appendix IV, Part 2 of this general permit; or
 - b. Other form of official correspondence containing all of the information included in the NOC suggested format in Appendix IV, Part 2 of this general permit.
- 2. Eligible changes, which are not otherwise major permit modifications as provided for under 40 CFR §122.62, may consist of:
 - a. Request for reduction in monitoring requirements: Certain monitoring requirements may be reduced upon demonstration of compliance if the eligibility requirements for reduction are met. Written approval by EPA is required for this change to be effective. Prior to receiving written approval, the operator must continue to monitor the parameters required in this general permit at the frequency specified in this general permit. This request requires supporting rationale and monitoring data as follows:
 - i. To be eligible for a reduction in treatment system monitoring (Part 4.3) or short-term monitoring (Part 4.4) due to technical infeasibility, the operator must provide justification for each parameter for which reduction is being requested that must include a proposed monitoring frequency;
 - ii. To be eligible for a reduction in **influent** monitoring (Part 4.1.2), the operator must provide monitoring data for a minimum of six (6) consecutive months and ten (10) samples for each parameter for which reduction is being requested;
 - iii. To be eligible for a reduction in **effluent** monitoring (Part 4.1.2), the operator must provide monitoring data for a minimum of six (6) consecutive months and ten (10) samples for each parameter for which reduction is being requested;
 - iv. Monitoring data must be submitted in support of requests for reduction of monitoring frequency in Part 5.1.2.a.ii and iii, above. Monitoring data submitted in support of this request must be in compliance with the monitoring and reporting requirements of this general permit, including the QA/QC requirements specified in Part 2.5.2.f, above, and must be attached in accordance with the instructions in Appendix VIII;
 - v. The discharge must be in compliance with the effluent limitation for any parameter for which a reduction is requested in Part 5.1.2.a.ii and iii, above; and

- vi. A proposed monitoring frequency must be included for each parameter for which a reduction is requested in Part 5.1.2.a.ii and iii, which shall be no less than once per year for any parameter.
- b. Request for a change in the site-specific effluent flow limitation: A NOC must be submitted if effluent flow increases, a change in flow conditions will decrease the daily maximum effluent flow by more than 25 percent, or an operator believes use of a flow meter is infeasible. Written approval by EPA is required for this change to be effective. Prior to receiving written approval, the operator must continue to limit effluent flow as required in this general permit at the frequency specified in this general permit. Written rationale provided in the NOC for this request must indicate:
 - i. The effluent flow will not exceed 1.0 MGD;
 - ii. The design flow of the treatment system will not be exceeded;
 - iii. WQBEL calculations for any limited parameter that applies to the discharge that is based on effluent flow; and
 - iv. Certification that any revised effluent limitation or monitoring requirement will be complied with.
- c. Request for a change in pH range for sites in New Hampshire: A NOC must be submitted to request a change in pH range due to naturally occurring conditions in the receiving water or where the naturally occurring source water is unaltered by the remediation activities. An operator must request and receive approval from NHDES for a change in pH range prior to submitting a NOC to EPA. See Part 2.4.3.b, above. Supporting documentation from the State must be provided with the NOC. Written approval by EPA is required for this change to be effective.
- d. Request for a change in authorized pollutants or pollutant parameters: A NOC must be submitted if: 1) A parameter limited in this general permit that is not included in an operator's authorization to discharge is identified; 2) The concentration of any parameter present in the effluent differs significantly from the influent, once effluent sampling begins; and/or 3) a WQBEL change is required or is otherwise requested. Written approval by EPA is required for this change to be effective. Additional effluent limitations and/or monitoring requirements may apply. Changes in a pollutant or pollutant parameter not limited in this general permit require a new NOI or an individual NPDES permit.
- e. Request to discharge chemical(s) and/or additive(s): A NOC must be submitted when an operator intends to discharge a chemical or additive that was not disclosed in the NOI submitted for a site. Written approval by EPA is required for this change to be effective. Monitoring data submitted in support of this request must be in compliance with the monitoring and reporting requirements specified in this general permit, including the QA/QC requirements specified in Part 2.5.2.f, and must be attached in accordance with the instructions in Appendix VIII. Written rationale provided in the NOC for this request must include:
 - i. All information required in Part 2.5.2.g.iii, above; and
 - ii. An explanation as required in Part 2.5.3.b.i through iii, above; or
 - iii. Monitoring data that demonstrates that each of the 126 priority pollutants are non-detect in discharges with the addition of the requested chemicals and/or additives. All data submitted in support of this request must be in compliance with the monitoring and reporting requirements of this general permit,

including the QA/QC requirements specified in Part 2.5.2.f, above, and must be attached in accordance with the instructions in Appendix VIII.

- f. Notification of change to administrative information: This includes, but is not limited to: expected date of initiation of discharge; a change in the address for an owner or operator; a change in contact information for an owner or operator; and a change in ownership, so long as the operator authorized to discharge under this general permit remains unchanged. A requested change to administrative information is automatic unless EPA notifies the operator otherwise. Examples of when EPA is likely to provide such notification is when EPA intends to revoke and reissue coverage under this general permit or intends to issue an individual permit. For a change in operator, a new NOI is required. For a change in ownership, the new owner must submit:
 - i. Written notification to EPA no more than thirty (30) days following the date of ownership change; and
 - ii. Written notification containing the new ownership information, the specific date for ownership change, and an acknowledgement of permit responsibility, coverage, and liability.
- g. Notification of a change in discharge location: Notification may be provided in a NOC for a change in discharge location so long as the receiving water identified in the NOI remains unchanged. Supporting documentation for this notification must indicate the new discharge location. A change in discharge location is automatic unless EPA notifies the operator otherwise. For a change in receiving water, a new NOI is required.
- h. Notification of a change in activity area: Notification may be provided in a NOC for a change in activity area so long as the receiving water identified in the NOI and the operator authorized to discharge under this general permit remain unchanged, and any change in treatment or discharge location are either included in the NOC, or are unchanged. Supporting documentation for this notification must indicate the new activity area. A change in activity area is automatic unless EPA notifies the operator otherwise. For a change in receiving water and/or operator, a new NOI is required.
- i. Notification of a change to a treatment system or process: Notification may be provided in a NOC for a change to a treatment system or process that adds or removes any major component. Written rationale for this notification must indicate:
 - Why the addition or removal is necessary, including when necessary to meet an
 effluent limitation in this general permit, or to meet a State permit condition;
 and
 - ii. The discharge will meet the effluent limitations in this general permit with the addition or removal.
- j. Notification of a discharge interruption planned or encountered which will extend greater than ninety (90) days. Written rationale for this notification must indicate:
 - i. The reason(s) for the interruption of discharge;
 - ii. When the discharge ceased or will cease;
 - iii. When the discharge will be re-initiated; and

- iv. An acknowledgment that the additional monitoring required for system re-start will be conducted and routine sampling will be resumed as specified in the RGP.
- 3. Attach a brief narrative statement that describes the change. Include any written rationale or supporting documentation for the change, if required, or if otherwise being provided.
- 4. Attach monitoring data, if required, or if otherwise being provided, in accordance with the instructions in Appendix VIII.

5.2 Notice of Termination (NOT)

All operators covered under this general permit must submit a written NOT to EPA, and the appropriate State, when required, in accordance with Part 4.6, above, signed in accordance with 40 CFR §122.22 and in accordance with the instructions provided in Appendix IV, Part 3.

- 1. A NOT is required when one or more of the following conditions have been met:
 - a. All discharges covered under the RGP have been terminated;
 - b. Coverage under an individual or other general NPDES permit has been obtained;
 - c. There is a change in operator; or
 - d. Authorization to discharge has expired and coverage under a new general permit will not be requested.
- 2. For purposes of this general permit, the NOT may consist of either:
 - a. The suggested NOT format in Appendix IV, Part 3 of this general permit, or
 - b. Another form of correspondence containing all of the information included in the NOT suggested format in Appendix IV, Part 3 of this general permit.
- 3. A NOT must be submitted no later than thirty (30) days following the identification of the condition(s) requiring a NOT.
- 4. A NOT must include the following general site information:
 - a. The NPDES permit number assigned by EPA;
 - b. The name of the site and the street address (or a description of location using approximate geographic coordinates if no street address is available) for which the notification is submitted;
 - c. The name, address and telephone number of the owner of the site;
 - d. The name, address and telephone number of the operator of the site, if different from the owner;
 - e. Discharge identification (i.e., the outfall number), the discharge location (i.e., longitude and latitude), and the receiving water(s).
- 5. A NOT must include the following discharge information:
 - a. Indicate that all discharges have been permanently terminated.
 - b. Indicate the reason for the termination (e.g., completion of construction project, remediation completion, termination of temporary discharge).

- c. Indicate the date of the initiation of discharge, the date of the termination of discharge, the daily maximum effluent flow, and frequency of discharge.
- d. Attach a summary of all monitoring results from the initiation of discharge through termination, including the results of monitoring requirements included in Part 4.3 of the RGP, when required for treatment system start-up(s), interruption(s), and shutdown, in accordance with the instructions in Appendix VIII.
- 6. Failure to submit a NOT shall result in continuation of general permit coverage until expiration, including continuation of all monitoring, record-keeping and reporting requirements.

5.3 Continuation of this General Permit after Expiration

If this general permit is not reissued prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and in effect as to any individual operator. However, EPA cannot provide written notification of coverage under this general permit to any operator who submits a NOI to EPA after the permit's expiration date. Any operator who was granted general permit coverage prior to the expiration date will automatically remain covered by the continued general permit until the earlier of:

- 1. Reissuance of this general permit, at which time the operator must comply with the NOI requirements of the new general permit to maintain authorization to discharge;
- 2. The operator's submittal of a NOT;
- 3. Issuance of an individual permit for the operator's discharges; or
- 4. A formal decision by EPA not to reissue the general permit, at which time the operator must seek coverage under an individual permit or other general NPDES permit.

PART 6 STANDARD CONDITIONS

The Standard Conditions are included in Appendix IX.

PART 7 ADDITIONAL PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES

If required, this section is reserved and will be completed following the State certification process and the public notice period.